

FINAL YEAR PROJECTS 2021



Department of Software Engineering
Mehran University of Engineering and Technology



Editor
Chairman
Software

Compiled By
Yusra Khoso

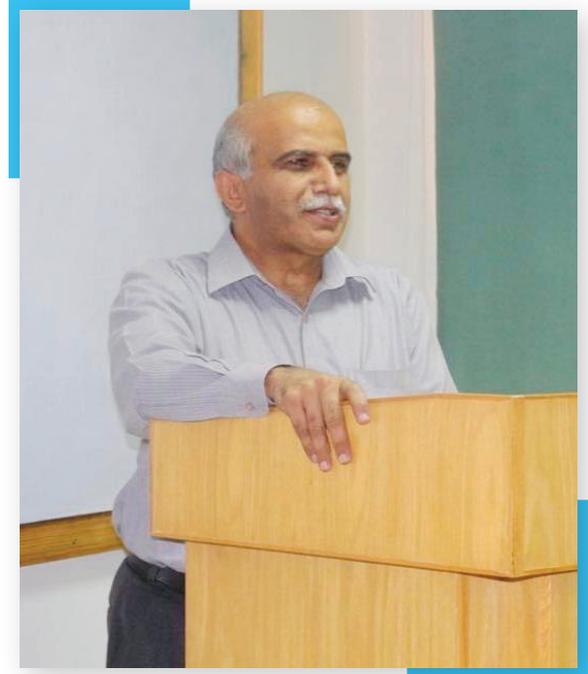
Designed By
Misbah Qureshi
Rohaat Iftikhar
Shumaila Brohi

MESSAGE FROM THE DEAN

It is matter of great pleasure to address on the occasion of publication of Final Year Project (FYP) Catalogue by Software Engineering Department. This catalogue showcases the state-of-the-art projects in the field of Software Engineering addressing the problems currently faced by our society.

Software Engineering field is growing at an exponential rate and touched the lives of millions of people around the globe. It is to be proudly mentioned that the department of Software Engineering is contributing significantly towards the growth and development of software at the graduate level, with focus on research, and innovation. The success of the department lies in the aspiration of student, the hard work pf outstanding faculty members and unwavering support of the leadership.

It gives me immense pleasure and satisfaction to see to see that the students of 17 SW Batch have made such wonderful and innovative projects which can greatly contribute towards the betterment of society of the society.



MESSAGE FROM THE CHAIRMAN

In the current era there is growing need for talented software engineers across the globe. Software engineering has deeply penetrated in almost every application domain ranging from insurance and banking to healthcare and national security.

Our department's vision is to produce professionals who have a mastery of principals, theory, practices and processes necessary to produce quality Software systems.



Department of Software Engineering prepares its students to proficiently apply their engineering and interpersonal skills to design develop, deploy and maintain software applications. The department also aspires to develop a capacity for innovation, research and a passion for lifelong learning is its graduates.

The final year students (17SW) of Software Engineering Department have applied tremendous efforts to build valuable final year projects catering solutions to diverse problems areas ranging from healthcare to business and commerce.

I would like to express my gratitude to all faculty members for their valuable suggestions and supervision to the final year students.

Learning Through Gaming

Abstract:

Learning through gaming takes advantage of gaming technology to make a fun, inspiring, and engaging virtual learning experience that facilitates located experiential learning.

Our project is about QuizUp Game which is a web-based application where users compete against each other. The user can play alone as well. The game will give questions and the user has to answer keeping speed in mind. This computer game can judge the level of the user and tweak questions accordingly. The user can play standalone or against the computer. As Quizzes contribute to the individual's growth of knowledge and the concept of quizup game is extremely famous in educated circles as well as in entertainment shows at this moment. The quiz game is designed to enhance the knowledge of user. In this game, the score is based on how the faster user is learning. Therefore, many algorithms are used such as Uphill, play Strike Pro which will increase the difficulty level in user's games so they can learn at a higher level.

The purpose of this project is to make users learn by answering the question of those categories chooses by that user. This project focuses on making interactive quizzes with a large amount of questions from different topics.

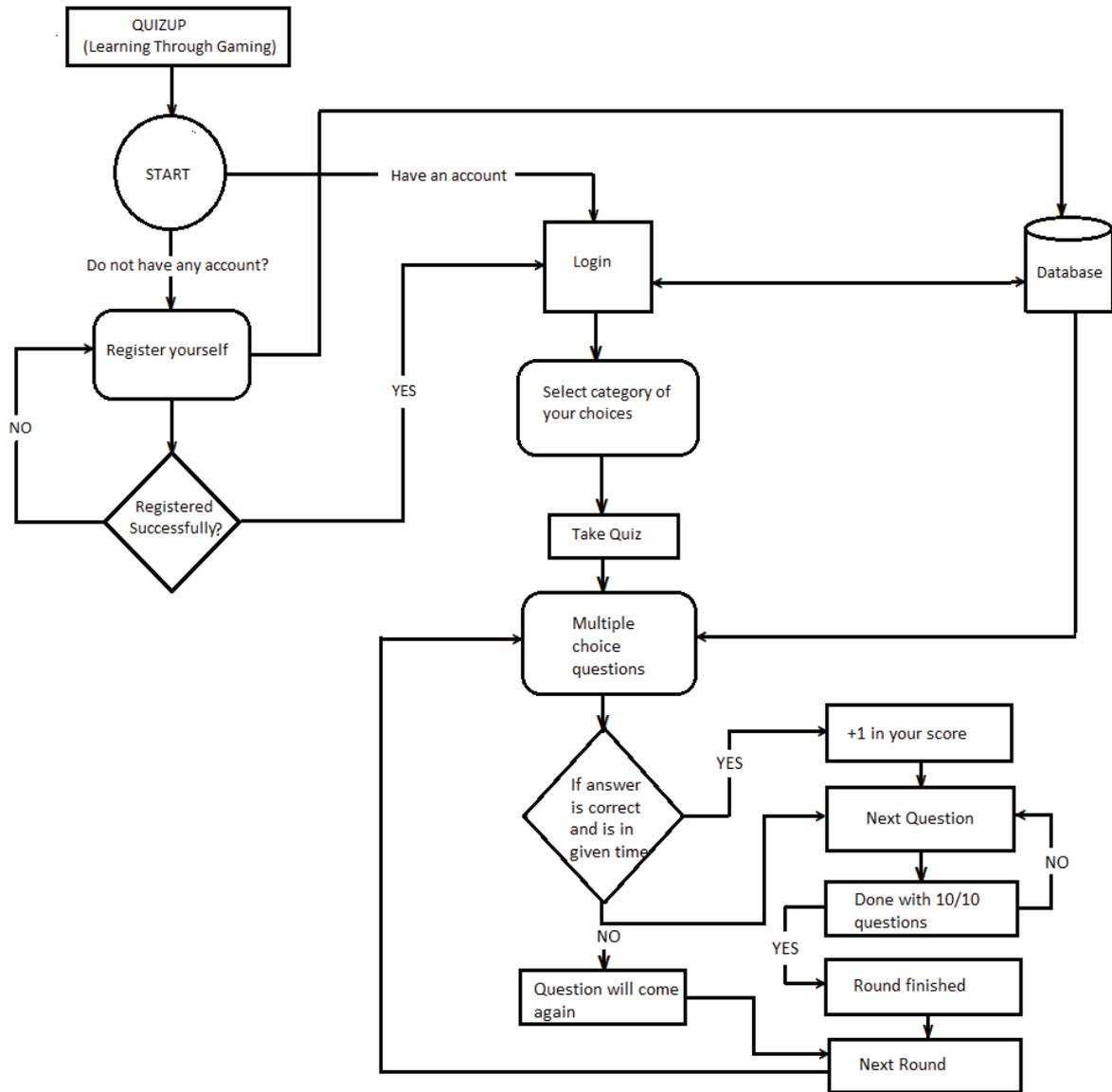
Technologies:

- ❖ HTML
- ❖ CSS
- ❖ JAVASCRIPT
- ❖ PYTHON

Group Members:

- | | | |
|--------------------|--------|--|
| ❖ Rakhee Rani (GL) | 17SW55 | rakheerani34@gmail.com |
| ❖ Ahmer Arain | 17SW70 | ahmerarain18@gmail.com |

System Work Flow Diagram:



Supervised By:

❖ Engr. Areej Fatima

Gender Classification in humans using GAIT Features

Abstract:

Today's world is evolving very fast. In this modern era, Gender Classification is getting huge importance because gender information can be used by expert and intelligent systems that are part of healthcare, smart spaces, and biometric-based access control applications. For example, operations of intelligent systems in a smart space can be customized based on gender information to provide an enhanced user experience. Classification of gender can be done in various ways, but we have chosen one of the most efficient method of classification using android application through appearance-based method based on GAIT features. In this method, we will be recognizing the gender through the live recording by using fixed camera and we will count the number of people entered in a closed place (like Museums, Auditoriums, Malls, and marriage halls etc.). The output will be displayed on the application. To classify the gender, we will use online available Gait datasets. Hence, we are proposing an effective solution which will help us to achieve the higher accuracy of gender by using silhouette images. As we have seen that the previous experiments were usually based on a model-based method which was inconvenient for humans because some tracking devices were used so it was providing less accurate result beside these the method was costly too. Therefore, we have decided to use appearance-based method which is convenient and more accurate for gender classification.

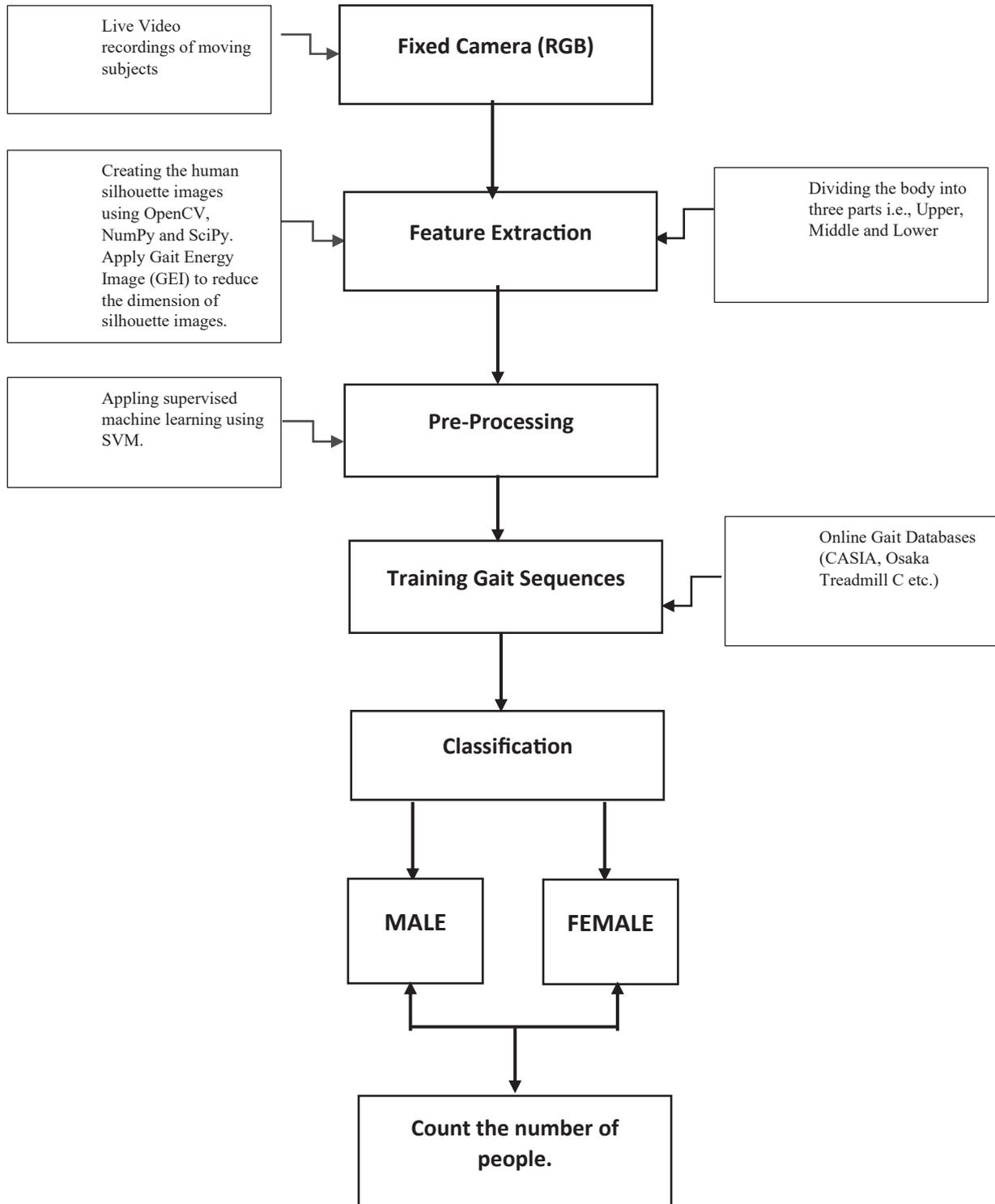
Technologies:

- ❖ Python (OpenCV, Numpy, Scikit-learn, Scipy)
- ❖ Supervised Machine Learning (support vector machine).

Group Members:

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System Workflow Diagram:



Supervised By:

❖ Dr. Sania Bhatti

To Design and Developed CMS based Web Solution

Abstract:

CMS, the project is all about content management. we make an online site based on CMS (Content Management System) that's used to oversee web stuff, permitting different supporters to form, alter and distribute. Preparation of website depends on requirement of content that in a website content of website may be easy or complex. Manage the content of website as per requirement and CMS content manager is enable to allows manage the all content that's create, editing, modify and after published A Content management system is a web application runs on web server that's provides ability to create website and study about working of database and displayed in a presentation on the set of templates in web application the strategy of web application is search content requirements and collect content that meets customer needs. The data in a CMS is regularly put away in a database and shown in an introduction layer based on a set of layouts. Most frameworks utilize a content that store in databases to store and modified, metadata and other data resources the framework needs. s. Our purpose is web content is contained of CSS, PMS Ielts and toefl Exams in which includes subjects with notes past papers and results datasheet according to preparation firstly user register on the website via email verification and after user have a different panels for doing preparation.

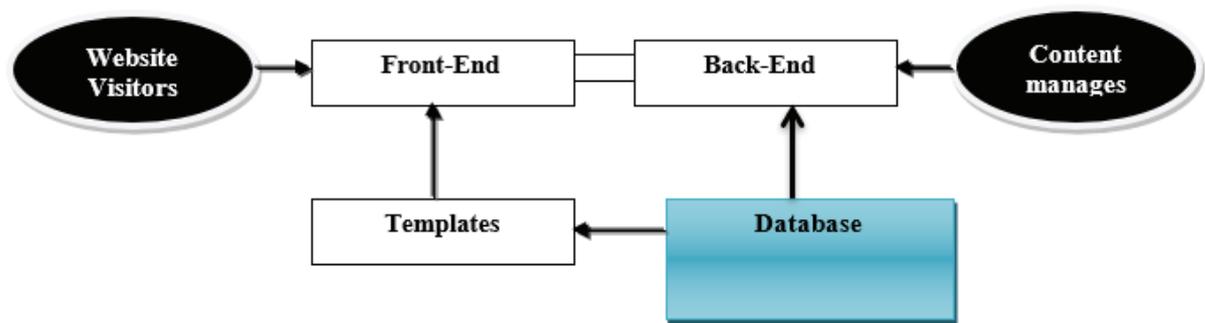
Technologies:

- ❖ Html
- ❖ Css
- ❖ Bootstrap
- ❖ JavaScript
- ❖ JQuery
- ❖ Php
- ❖ Mongo DB

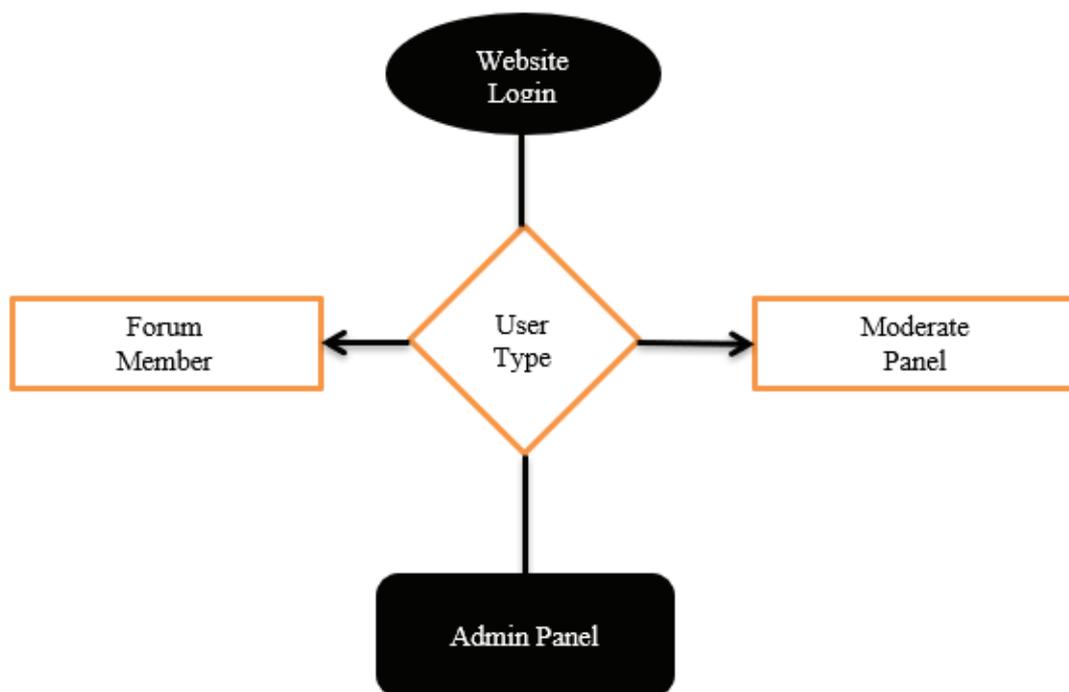
Group Members:

- ❖ Mohammad Younis (G.L) 17SW04 abromohammadyounis83@gmail.com
- ❖ Waqas Ali 17SW34 waqasahmed8008@gmail.com
- ❖ Samar Ali 17f16SW170 samarradhan@hotmail.com

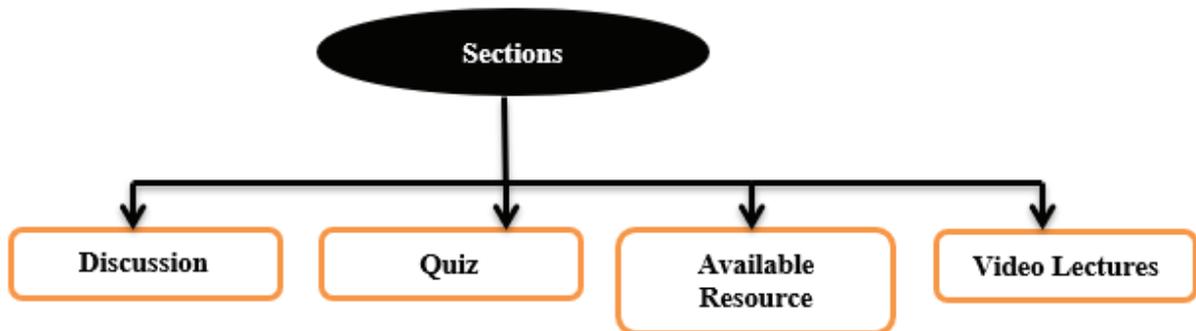
System Workflow Diagram:



For Login



Section:



Supervised By:

❖ Dr Qasim Arain

Learning through Exploration Reinforcement

Abstract:

Reinforcement learning is a way or a strategy in which machine learns from its own mistakes by taking certain action and checking its reward rather than learning from supervised labels. This project is based on applying reinforcement learning on a gaming environment which will learn by trial and error. The reinforcement model will play the game by the set of rules of the game hundreds of times, so it will learn from playing by the game and checking the game state every time it plays. The exact strategy of game cannot be coded and will be developed by the machine through exploration and reinforcement learning.

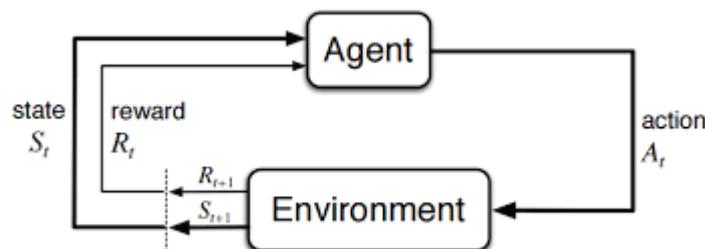
Technologies:

Python and Machine Learning.

Group Members:

- ❖ Mr Satia Pal (GL) 17SW05 17sw05@students.muett.edu.pk
- ❖ Mr Sandesh Kumar 17SW39 17sw39@students.muett.edu.pk

System Workflow Diagram:



Supervised By:

- ❖ Engr. Areej Fatima

To design and develop internet Censorship

Abstract:

Internet censorship as the name itself suggests that it is going to about to censor activities on the internet. It is about to hide the content which become reason of vulgarity and violence in our society. To keep the community environment clean and healthy it is necessary to keep community away from such content like the keywords which comes under hate speech, violence. Besides, the content, which is freaking inappropriate for a person, especially children. Parents will also be involved in this regard and will make parents able to limit the internet circle of their children. More specifically, there will be two ways to limit the activities on the internet. The first one will be by default the second one will be through parents or account holder. It works in bi-directional, from website to extension and extension to website. Both will be connected to each other and preferences, modifications can be made from the website. It will be necessary to add an extension into browser to implement the censorship. For this purpose, several languages and frameworks will come into use. Following is the short clue about those languages and framework.

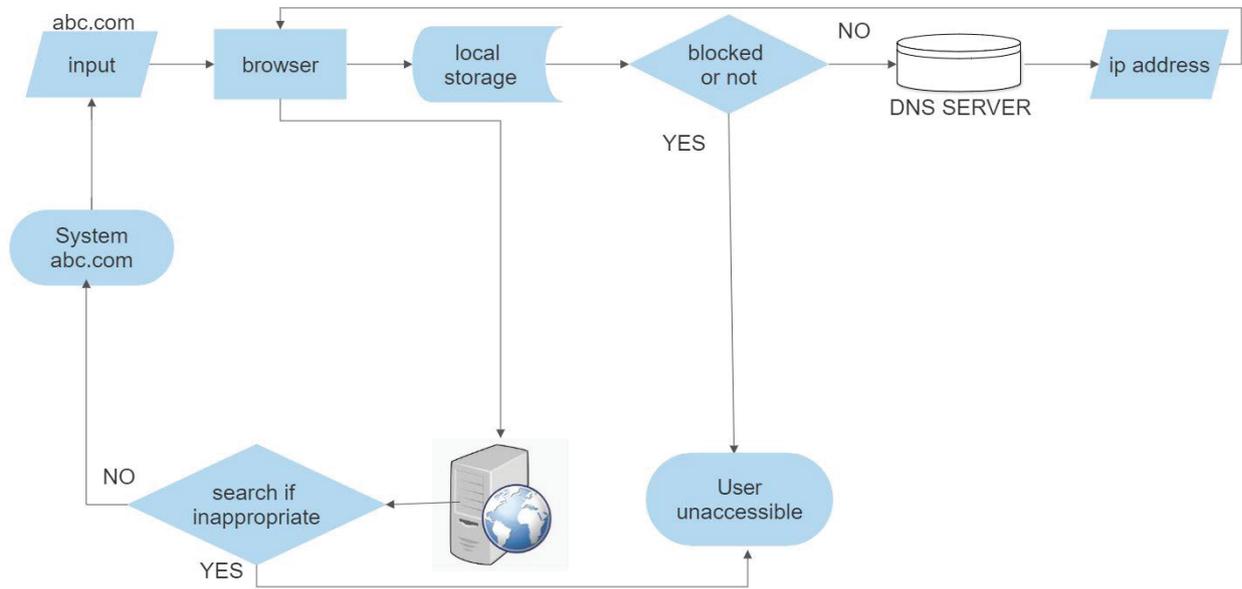
Technologies:

- ❖ JavaScript
- ❖ HTML
- ❖ CSS
- ❖ Bootstrap
- ❖ Oracle
- ❖ Python

Group Members:

- ❖ Mr. Hasnain Ali (GL) 17SW12 hasnainalimalick@gmail.com
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Flow Chart



Supervised By:

❖ Engr. Junaid Baloch

Treatment of Acrophobia using Virtual Reality

Abstract:

Acrophobia is a fear of heights that can cause anxiety and dizziness. This is not usually the normal fear of height but if a person having this disease will feel terrified when looking at any picture of heights or even thinking of this will cause fear. Usually, 1 out of 20 adults have this kind of phobia.

The virtual reality exposure therapy (VRET) has been used to treat acrophobia since 1995. Many other methods are available to treat this phobia, but the VR therapy was proved to have more effect and better results. In this therapy the patient has been sent to a simulation with the help of Virtual Reality glasses.

Nowadays, more frequent and easy way to do this treatment is with the help of agent-based mobile application and with a google cardboard VR. The mobile application has agent that guides the user within it is different stages like the beginner will get the beginning simulation experiences. Even it can ask questions in the start and at the end of the session to detect how much improvement has come to the patient's phobia.

Technologies: Android(Java),Unity

Group Members:

- ❖ Mr. Ali Sasoli (GL) 17SW20 alisasoli20@gmail.com
- ❖ Ms. Anmol 17SW54 anmolasghar313@gmail.com

Supervised By:

Dr. Isma Farah

Using Natural Language and Mixed Reality to Control a Drone (202014)

Abstract

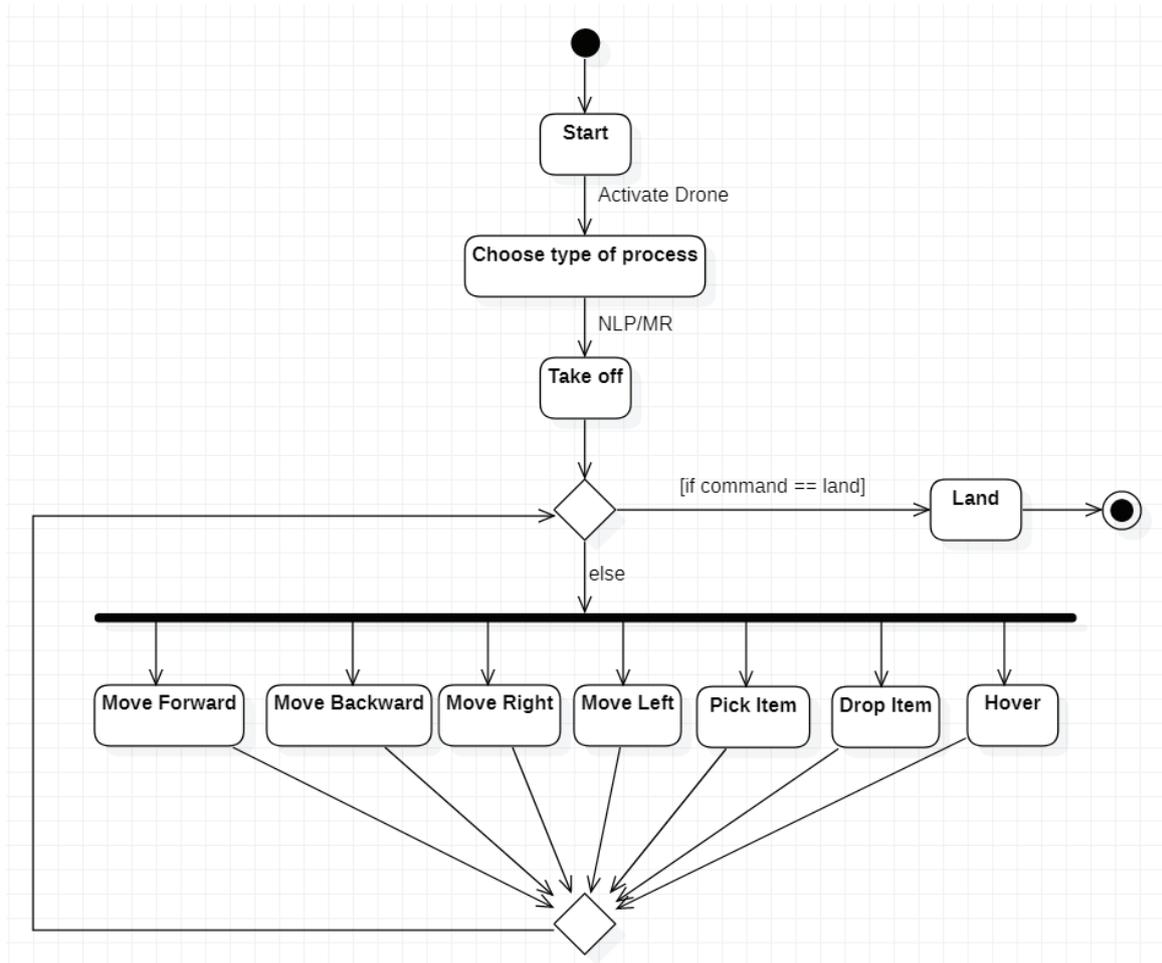
The growth of independence has made the availability of the drones to the common people. There are mostly non-technical, unskilled users that use simple inferior interfaces to control the drones. To make it easy for them to access and make use of such devices, a better top-of-the-line interface which can process Natural language and mixed reality to automate the device is required. The main objective or aim of the project is to develop an interface within a mixed reality framework that makes use of natural language training. The final product can be useful for many activities such as monitoring road traffic or delivering any sort of light or semi-light weighted object. Such a product is competent and harmless in today's era where people are not allowed to make unnecessary moves out of their homes and make direct contact with people.

Technologies: Java, Python, Machine Learning.

Group Members:

- ❖ Ms. EIFA MUGHAL (GL) 17SW21 eifamughal@gmail.com
- ❖ Mr. SARVECH ALI 17SW65 ali_sarvech@rocketmail.com

System Workflow Diagram:



Supervised By:

❖ Engr. Zubair Sangi

Tele Dentistry: A futuristic approach for telemedicine

Abstract:

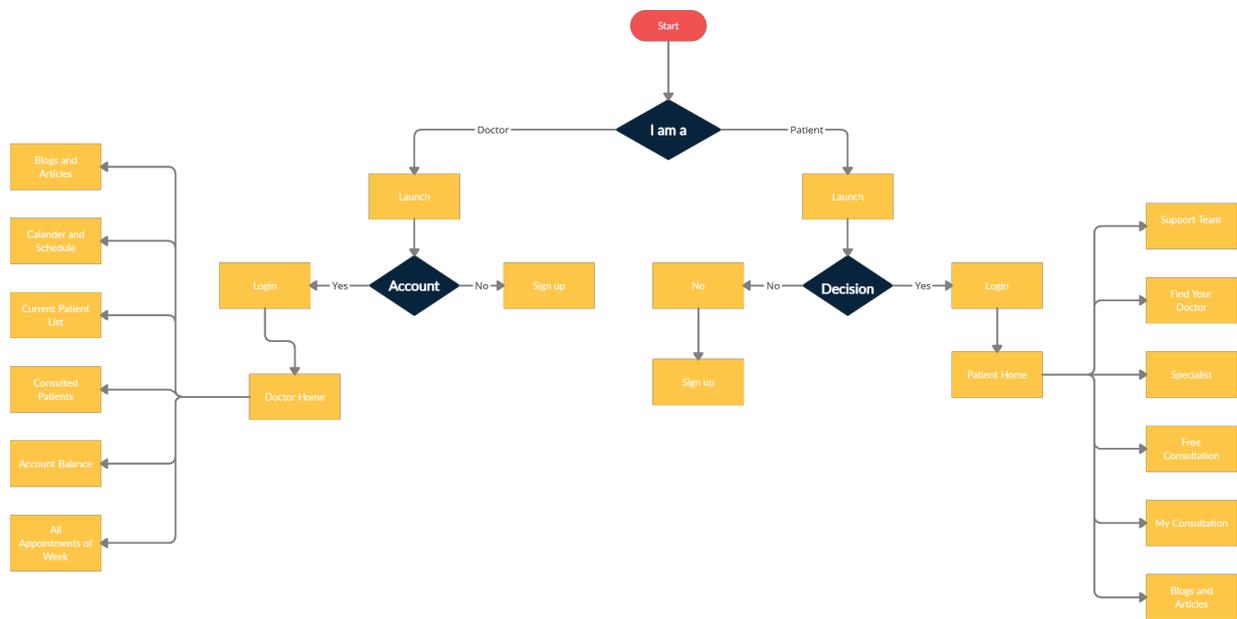
Health care is greatly transformed through computer marriage and telecommunications. Results in hospitals and doctors have already received several media attention, but relatively little is said about the impact of information technology on dentists. Tele-dentistry is the use of information technology and telecommunications dental care, consultation, education, and public awareness. This Mobile Application will ask series of questions and tell the patient whether they must come in Hospital, or it is sufficient to get prescription at their end. This project helps the patients to get distant diagnose. There are so many features in this project like, Audio/Video conferencing, View and Choose Doctor, Assessment, Calendar, Notification, Reminder, Login with Facebook/Google, Payment Gateway or Online send and receive payment, patient can upload their images, Review Rate-patient can give review to the doctor, Chat, Appointment Booking, Chatbot, Search and Filter Option, Geolocation, and Firebase which manage the Data flow.

Technologies: Java, Android Studio, Firebase

Group Members:

- ❖ Mr. Bhart Kumar (GL) 17Sw25 bharatkumar7006@gmail.com
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System Workflow Diagram:



Supervised By:

❖ Engr. Amrita

Gaming Using Hand Gestures

Abstract:

The main idea of this project is to develop controller free game that will function on hand gestures so that the player will not need to have games controller like keyboard or mouse. For this reason, Microsoft Kinect is used that detect player hand gestures in real time and the game will function accordingly. Kinect is a 2-step Microsoft detection action application used for the Xbox 360 personal action detection. It detects body movements and gestures. Unity3D will be used to design the game frame. With this effort people who want to play PC games don't need to buy expensive consoles but what they need is a Kinect sensor; and PC gamers can also enjoy this immersive experience of Kinect gaming. An action set designed for a specific PC game will be provided and then the game will function accordingly.

Technologies:

Unity3D

Microsoft Kinect V1

Microsoft Kinect SDK V1.8

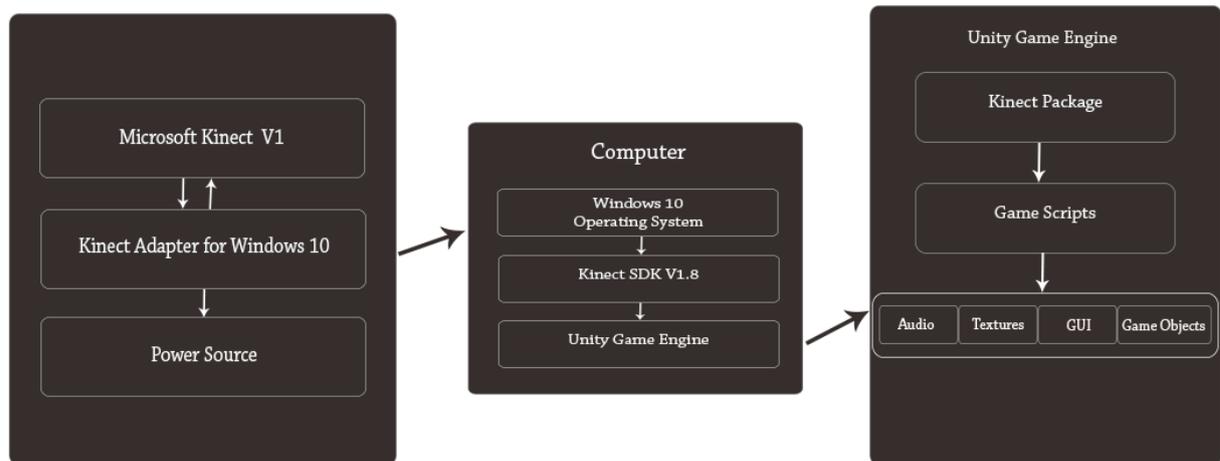
Microsoft Visual Studio 2017 Community

C# programming language

Group Members:

- ❖ Rashida Sohail (GL) 17SW27 rashdakhazada@gmail.com
- ❖ Uzair Abid 17SW113 uzairhussain207@gmail.com

System Workflow Diagram:



Supervised By:

❖ Engr. Shafiya Qadeer

Digital Contact tracing technique using smart phones

Abstract:

Contact tracing is the process of identification of all those people with whom infected patient might have contacted. Manual contact tracing is difficult to deal nowadays because we require more manpower and cost to identify people that come in contact with covid patient and then asking them to self-isolate in order to reduce further risk. To cut down manpower needed to manage this process, we will build digital contact tracing application that can be installed on smartphones. Individuals will download application and then app will use built-in sensors (Bluetooth) to trace nearby contacts/person. If app user is infected with covid-19, technology will identify close contacts and notify people whom they have been in contact with for last 15 days. We can trace nearby people using GPS or Bluetooth but since GPS greatly affects user privacy, gives less precision of results and consumes more resources of smartphone (like battery) as compared to Bluetooth which supports higher precision without affecting user privacy and battery life for that reason, we will be implementing contact tracing using Bluetooth.

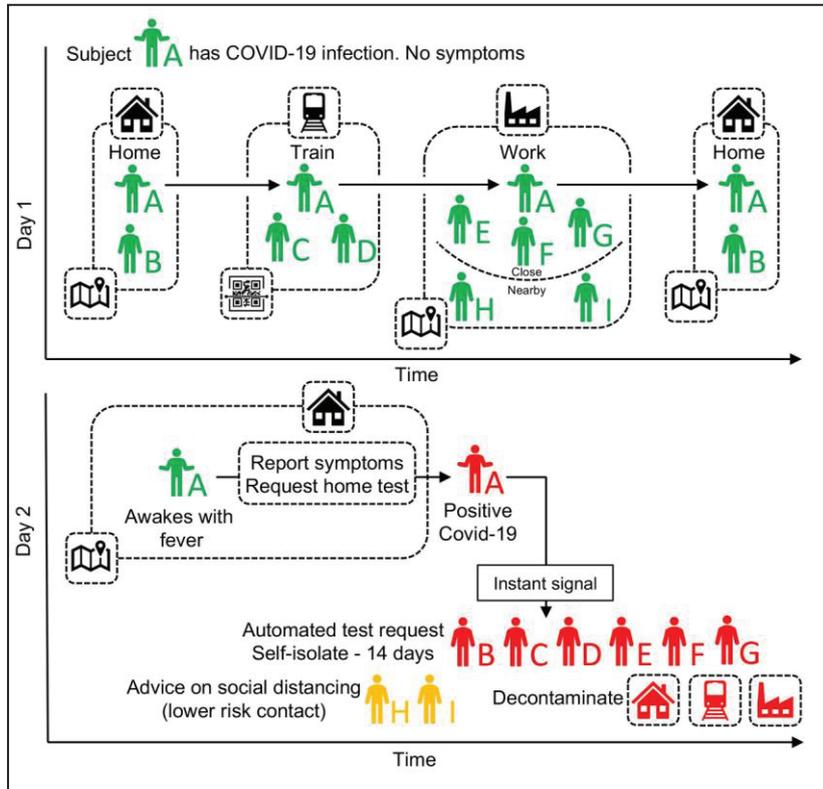
Technologies:

- ❖ Flutter
- ❖ Firebase

Group Members:

- ❖ Miss Unzilla Farhan (GL) 17SW29 17sw29@students.muett.edu.pk
- ❖ Mr Sagheer Ahmed 17SW13 Sagheerrajper619@gmail.com

System Workflow Diagram:



Supervised By:

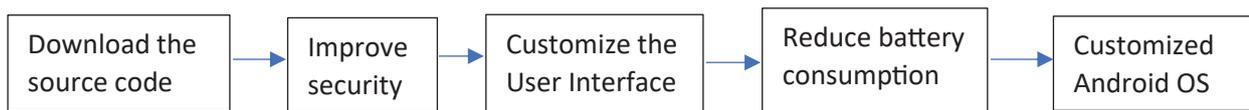
❖ Dr. Mohsin Ali

Customization of Android OS

Abstract:

Android is an open source mobile operating system. Its source code can be easily downloaded. OEMs(original equipment manufacturer) like Samsung and HTC make use of this code by customizing it and deploying their customized versions of android OS on their manufactured devices. Our final year project is to download and customize the source code of android in order to try and make our very own customized android operating system. Our customized OS will come with pre-installed google apps and an interactive UI that will help engage the user better while keeping the performance in mind. We will also focus on improving security and reducing battery consumption of android device.

Workflow Diagram:



Technologies:

Java, Android SDK, Android studio, Ubuntu OS

Group Members:

- ❖ Muhammad Taha Khan (GL) 17SW31 17sw31@students.muet.edu.pk
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Supervised By:

- ❖ Dr. Mohsin Ali

An alert and ranking system to identify high-risks patients

ABSTRACT

In healthcare, risks to patients are common and it is very crucial to be one step ahead of incident, where the life of a patient could depend on a quick response time and a finely tuned understanding of where something is going off.

Organizations need to specifically recognize people at elevated risks as early as possible to have the greatest chance of helping patients prevent long-term health complications that are expensive and difficult to manage. The healthcare industry is being transformed by the ability to record massive amounts of information about individual patients and to analyze that enormous volume of data collected using various data analytics techniques which is bringing a paradigm change to healthcare. Thus, more and more AI applications are being developed as they enhance the opportunity for healthcare providers to truly understand needs of the patients they work for, and with that awareness they can offer better insight, direction, and support for remaining well which in turn can promote better clinical decisions. It can also be inferred that using AI can eliminate failures that are inherent in human clinical practice.

Our project goal is to design a wearable device along with software interfaces that can help save high-risk patients' lives and identify them. It will use advanced machine learning algorithms to train a model based on different Kaggle data sets to evaluate and prioritize the severity of heart patients. We will primarily focus on this area and might later work on other domains as well. Heart disease is the most leading cause of death and therefore we have chosen this domain to work with initially. Cardiologists, these days use numerous imaging tests and invasive blood pressure measurements to investigate and track the seriousness of these diseases, so they can keep this project in their toolbox to assist them in their daily work. It would also be able to measure patients' temperature, heart rate and blood pressure using devices with sensors which will also be developed as the part of the project. The model will also be used anytime anything suspicious happens to alert the administrators. For instance, if a patient's heart rate increases, it denotes something serious and administrators will receive SMS or notification on their app to take some immediate action. Along with this, it would have ample built-in knowledge to prescribe some medications based on the questions answered by the patients such as chest pain, fatigue etc.

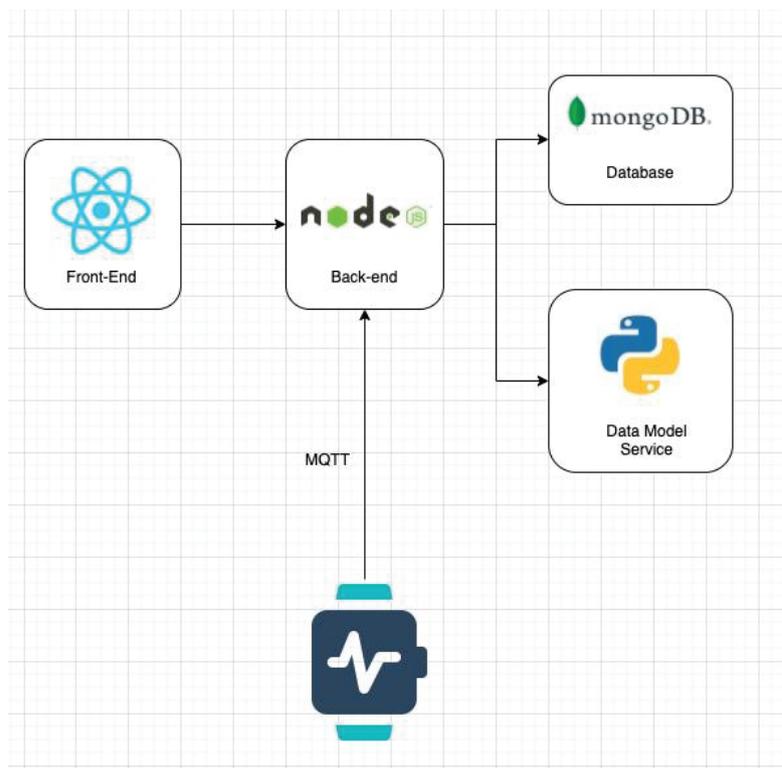
TECHNOLOGIES

- ❖ Python, Machine Learning, Data Science
- ❖ Arduino
- ❖ HTML5, CSS3, JavaScript, React.js, Node.js, PHP
- ❖ Flutter

GROUP MEMBERS

- ❖ Ms. Rida – GL 17SW32 - 17SW32@students.muet.edu.pk
- ❖ Ms. Zamira Junejo 17SW17 - 17SW17@students.muet.edu.pk

SYSTEM WORKFLOW DIAGRAM



SUPERVISED BY:

- ❖ Engr. Salahuddin Saddar

Sandboxing: Malware Analysis In Sandbox Environment

Abstract:

Safety is an important worry in modern world. Malware interrupt not only the progress of company but also present the risk of modifying the flow of data of the collaborator included. Very much of malware exceed not detected, because its nature in the company is frequently unfamiliar as it may do the cause damage to the system not within the physical appearance in the memory. The danger of analyzing its performance is too high on a dynamic system and might risk the flow of the system. The safest solution is malware analysis in a sandbox environment, which reduces the risk in the virtual environment. It helps to analyze the types of malware in a safe isolated environment that duplicate the end user's operating environment. Our solution aims at analyzing the execution of the suspicious windows executable file inside the sandbox environment using some different algorithms which train our solution, using application-based malware analyses.

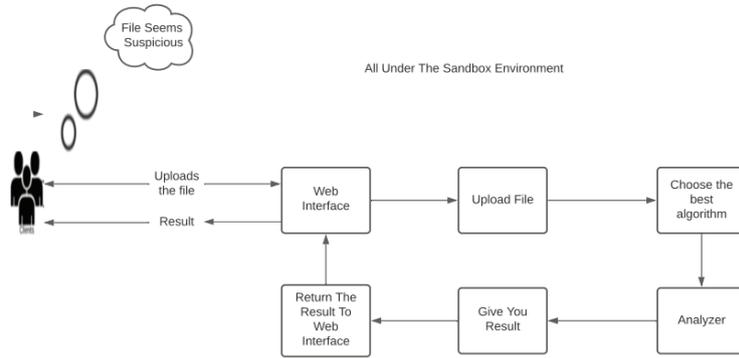
Technologies:

- ❖ Python
- ❖ Html
- ❖ Css
- ❖ JavaScript

Group Members:

- ❖ Mr. Talha Rehman (GL) 17SW35 talharehman.arain@gmail.com
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System Workflow Diagram:



Supervised By:

❖ Engr. Zahid Khakheli

To Design and Develop COVID'19 Expert System

Abstract:

COVID'19 is an acute infectious respiratory disease caused by infection with the coronavirus whose subtype is SARS-CoV-2, It is first detected in Wuhan city of China, in December 2019. Corona Virus Disease presents with fever and with upper respiratory symptoms, conspicuously with dry cough and often with dyspnea; asymptomatic courses and assertive other symptoms also may occur in different people. The coronavirus, or COVID-19, is inciting panic for several reasons. Even Scientists are not sure yet how This virus behaves and they have little history to go on.

The disease has resulted in about 71.6 million confirmed cases to date. As of December 2020, about 1.6 million individuals have died. Currently there are many vaccines available that can protect against Coronavirus Disease (COVID-19). Scientists are working over them for their accuracy but there is no specific treatment. It is usually symptomatic treatment that ambition at reducing symptoms.

consequently, people who are infected in covid are increasingly accountable the work of health care professionals, who are often not able to handle patient's information in a timely manner and in a comprehensive way.

So, in view of this dangerous situation, we are going to develop an Expert System. The main aim of this application is to develop an expert system for doctors that might suggest medicines after careful analysis of the symptoms entered by the physician as well as by patients(users). Moreover, after suggestion system would learn and keep the record of patient for future consultation.

Technologies:

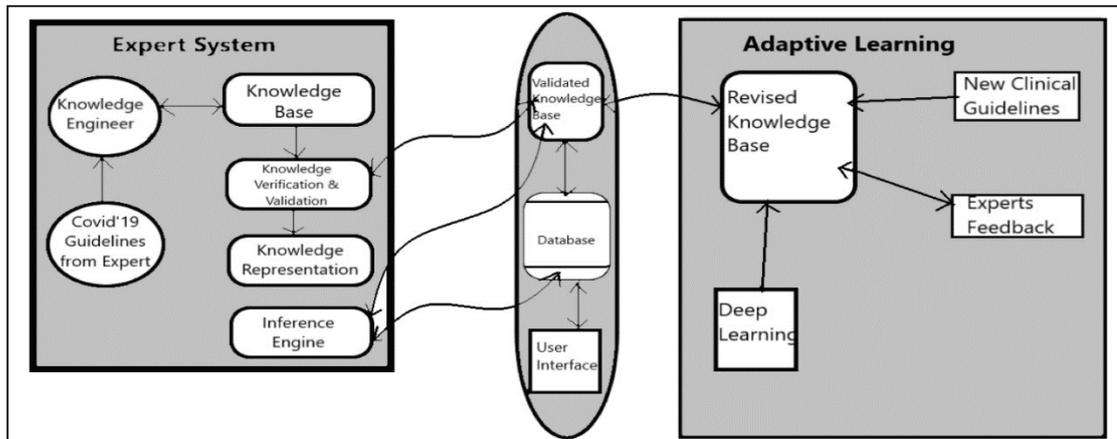
- ❖ Python
- ❖ Deep Learning
- ❖ HTML/CSS/Bootstrap
- ❖ Flask
- ❖ MongoDB-SQL.

Group Members:

- ❖ Tooba Farahim (GL) 17SW40
- ❖ Farhan Ali 17SW52

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Expert System Working Diagram:



Supervised By:

- ❖ Dr. Isma Farah

A Recommendation System for Learning Personalization based on Learning Style Identification

Abstract:

Creation of a recommendation system capable of identifying class of learners based on student data collected for a particular programming subject. The data will comprise of student previous knowledge, marks obtained by students in previous core subjects (programming), rubrics and any other relevant data. The project has two parts: identification of class of learners (slow learners, average learners, and efficient learners) and based on the identified class, suggestion of personalized course modules for improvement of student learning.

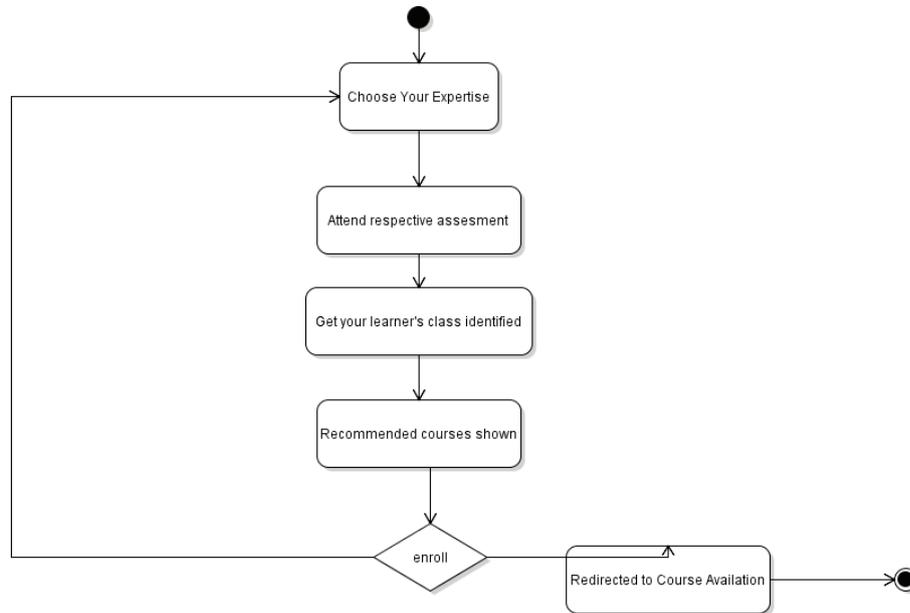
Technologies:

- ❖ Python (Django)
- ❖ React,
- ❖ Machine Learning
- ❖ Data Analysis

Group Members:

- ❖ Mr. Asad Ali (GL) 17SW45 asad.jatoi20@gmail.com
- ❖ Mr. Muzamil Nawaz 17SW73 mzmlnwz25@gmail.com

Flow-Chart:



Supervised By:

❖ Engr. Memoona Sami

Learning Students Identity Using Noisy Sensor Data

Abstract:

Nowadays, every device we are using or carrying around contains some kind of sensors. Sensors are used to understand the environment around the users and provide them the feasible experience and it is used to turn everything around us smart, efficient and more responsive to user. The fundamental building block is that we can use sensor data to understand who is present around us. A ubiquitous way to understand that is to exploit the unique vocal features of the students, present in the class interacting with each other. Although taking attendance of every student individually or enrolling them in a biometric database is time-consuming or not efficient for changes over time in students' data. To solve this issue, we are developing an algorithm to take the noisy voiceprints of students present in the class and identify the students' identity (from the data, for training the algorithm) without taking attendance individually. The algorithm will collect the voiceprints from the teacher's specific device mic and identify the students present in the class. This algorithm would not only saves time but also decline the need for saving the data of each student.

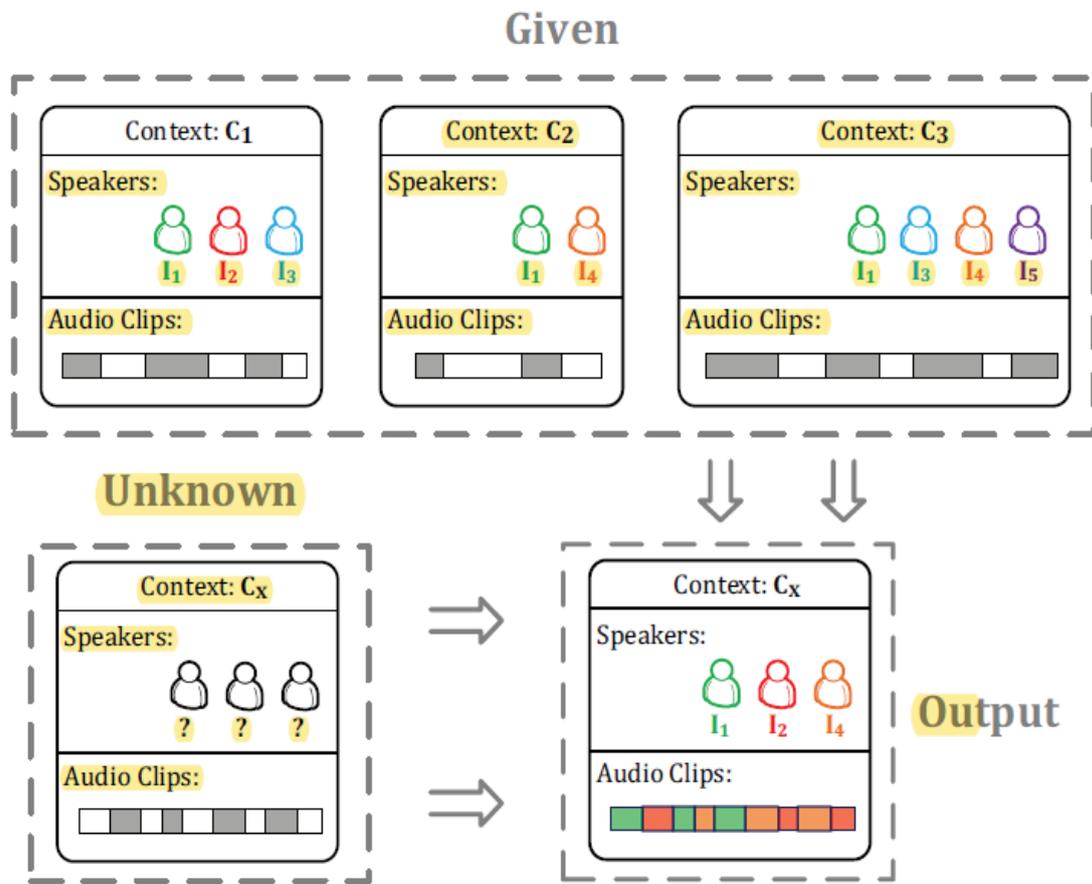
Technologies:

- ❖ **Python** (for data preprocessing, clustering and data-association of data)
- ❖ **Web Development** (for project interface)

Group Members:

- ❖ Abdul Samee 17SW50 17sw50@students.muet.edu.pk
- ❖ Jamee Raza 17SW24 17sw24@students.muet.edu.pk

System Workflow Diagram:



Supervised By:

- ❖ Engr. Rabia Iftikhar

Customized Course File Generator Application

Abstract:

In the academic setup, a course file is a document that contains all the necessary details concerning the course. The teachers are required to maintain a course file which contains data about course curriculum, Examination assessment and results, teaching plan, overall outcomes and objectives of the course. Creation and maintenance of a course file manually is quite time consuming as there is a lot of documents to be included and hours to be spent in.

In order to facilitate the teachers in preparation of the course file, this project will develop an online course file generator, which will streamline the whole process of preparing course files manually. Tutors will be able to generate the course files of their respective subjects with a single click, all they have to do is to choose what teaching material needs to be included in the course file and the application will produce a single pdf document containing all the required documents.

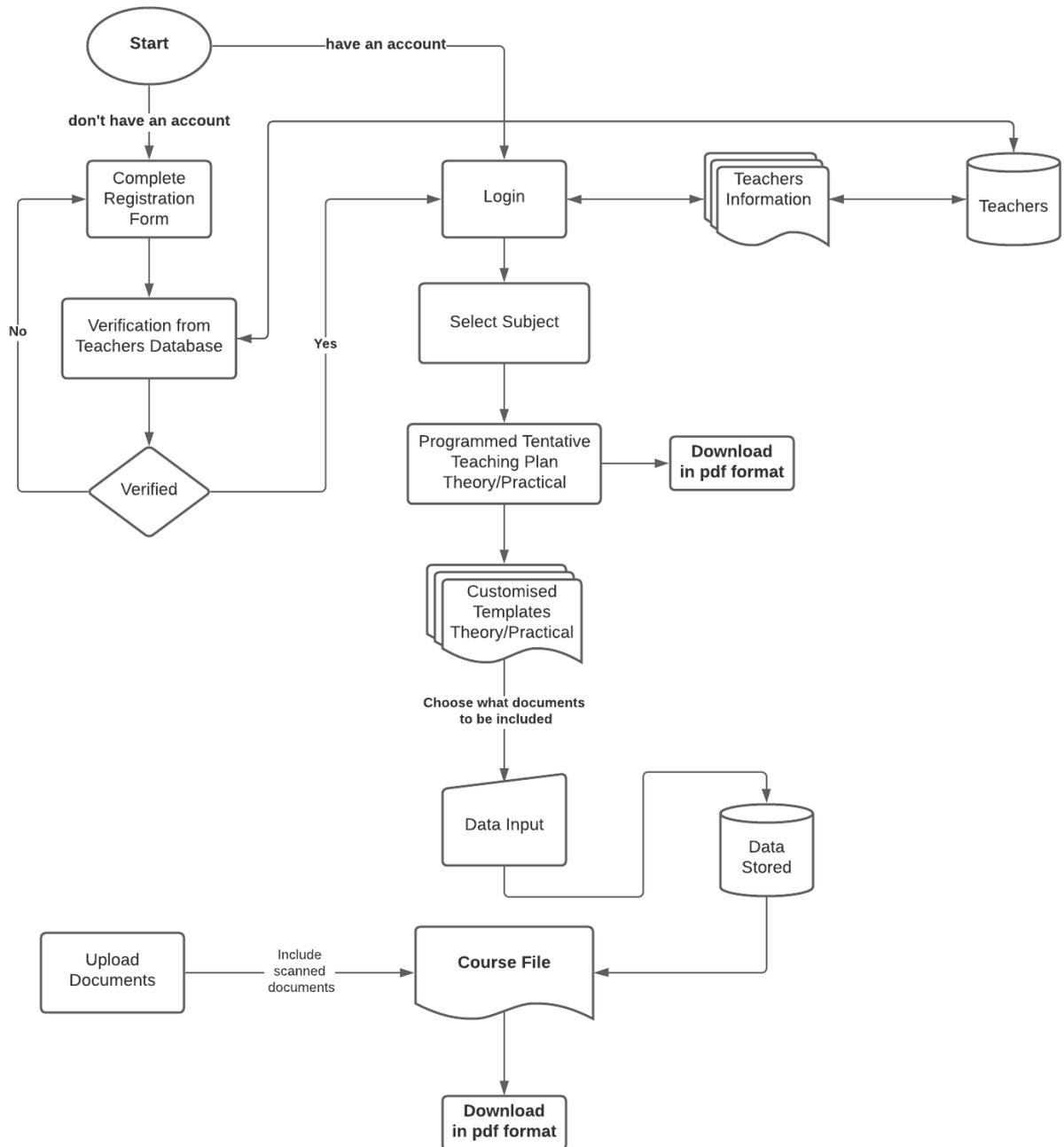
Technologies:

- ❖ HTML
- ❖ CSS
- ❖ JavaScript
- ❖ PHP
- ❖ MYSQL

Group Members:

- ❖ Ms. Sara Aftab (GL) 17SW51 saraaftab05@gmail.com
- ❖ Mr. Asad Rajput 17SW57 asadrajputt57@gmail.com

System Workflow Diagram:



Supervised By:

❖ Engr. Hira Noman

Augmented Reality based Physical Transformation

Abstract:

The system will be used for transforming physical spaces into augmented reality stores (for instance habitt, woodcraft). It will be designed for end users on both the seller and the customer side. Sellers will be given creative freedom in designing how the AR store is going to look like and the exact design is what the customer will see when the AR application is loaded.

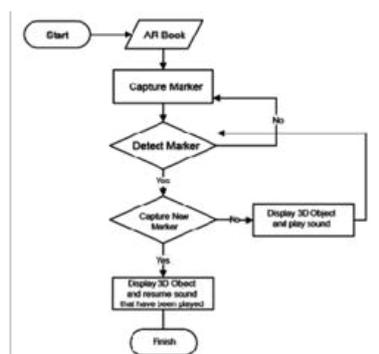
Technologies:

- ❖ Augmented Reality
- ❖ Unity
- ❖ C#

Group Members:

- ❖ Mr. Hamza Shaikh (GL) 17SW59 hamzaashaikh7@gmail.com
- ❖ Ms. Taj Fatima 17SW07 dainabhellar@gmail.com

System Workflow Diagram:



Supervised By:

- ❖ Dr. Sania Bhatti

Covid-19 test recommender with cough sensing

Abstract:

COVID-19 is a highly transmissible emerging infectious disease which is a global challenge that surpasses national, social, religious, and economic boundaries. The method for COVID-19 detection is reverse transcription polymerase chain reaction (RT-PCR) testing but this method is expensive and time consuming. Hence, there is a need for an additional diagnostic tool. In this project, we aim to develop a smartphone application that will take audio cough samples from users in real time and will test them for COVID-19 cough symptoms. Samples from COSWARA database will be used to train our system in-order to accurately identify potential patients. Based on the real time cough samples of users, our app will recommend them whether they should further go for a RT-PCR test or not.

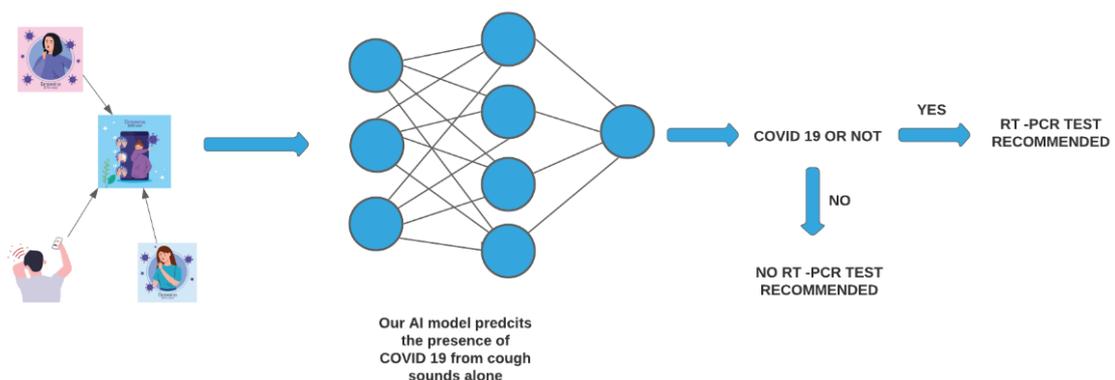
Technologies:

Python, Machine Learning and Android.

Group Members:

- ❖ Mushal Kumari (GL) 17SW61 mushalkumari99@gmail.com
- ❖ Azam Khan 17SW43 azamkhan64064@gmail.com

Diagram:



Supervised By:

- ❖ Engr. Mariam Memon

Image Tagging Tool for Computer Vision

Abstract:

Develop a software that will help tag objects in images that can help create data sets for machine learning. There are various data annotation tools already available like LabelImg, VGG image annotator, etc., however they lack accuracy in annotating objects with irregular shapes. Come up with some techniques to overcome the challenges faced by tagging tools already available.

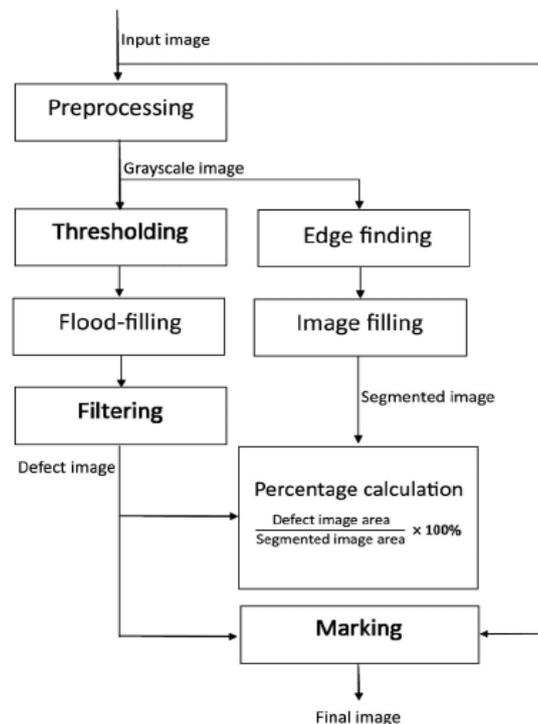
Technologies:

- ❖ Python
- ❖ Machine Learning

Group Members:

- ❖ Ms. Afshan Hanif (GL) 17SW64 afshanhanif53@gmail.com
- ❖ Mr. Aakash Nanwani 17SW108 aakashnanwani2@gmail.com

System Workflow Diagram:



Supervised By:

- ❖ Dr Naem Mahoto

Restaurant Recommender System based on Collaborative Filtering for Hyderabad Residents

Abstract:

The suggestion system or recommendation system is a subset of the information filtering system that guessed about the 'evaluation' or 'priority' that the user would feed an item. Key Human Needs These systems are designed to help consumers choose the best alternative based on their preferences. The recommendation system was designed to generate suggestions based on user-interested products or services. The major aim of this project will be to develop a restaurant recommender system based on Collaborative Filtering which will predict a user's interest in opting restaurants based on the scores generated and the correlation calculated between the users. This is unlike simple rating prediction-based recommender system.

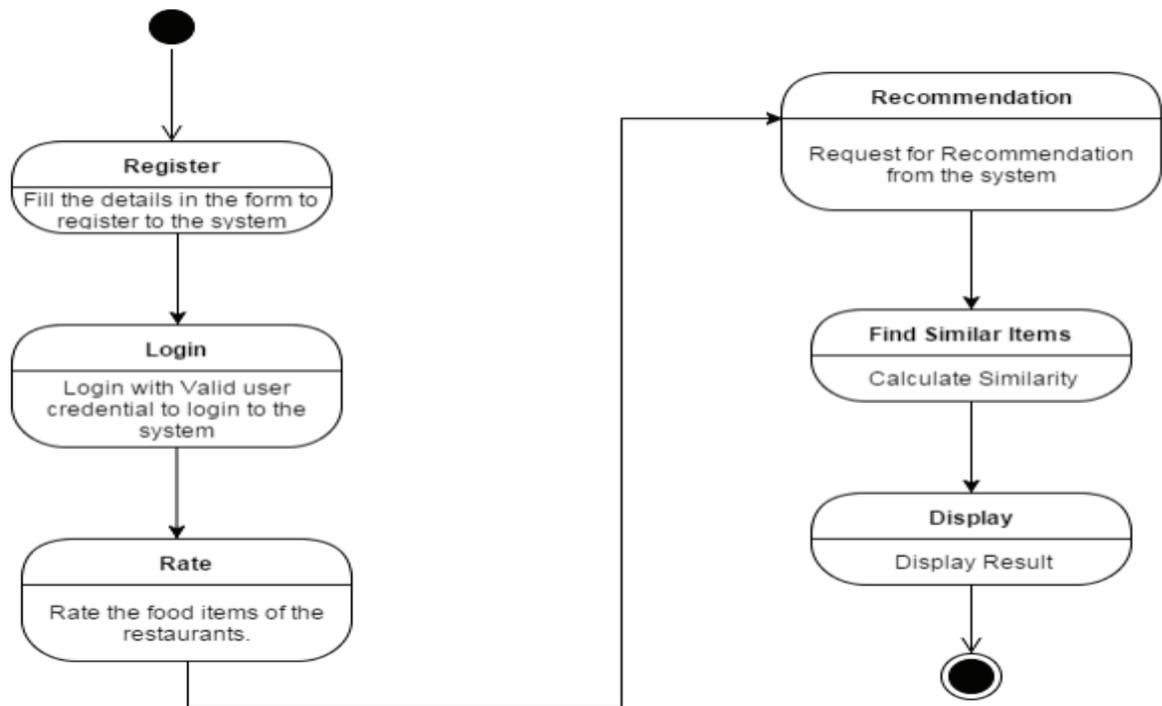
Technologies:

- ❖ Machine Learning
- ❖ Python.

Group Members:

- ❖ Duaa Ali (GL) 17SW75 duaaaliasghar28@gmail.com
- ❖ Quratulain 17SW115 ainyshaikh77@gmail.com

System Flow Diagram:



Supervised By:

❖ Engr. Hira Noman

Using NLP for analyzing Sentiments/Perceptions of Pakistani citizens on nationwide lockdown due to COVID-19 outbreak.

Abstract:

The universal pandemic is affecting billions of people around the world has encouraged the scientific community to come up with solutions that are based on computer aided technologies for prevention of COVID-19. Twitter aids in Sentiment Analysis as it is one of the most approved microblogging platforms. The tweets will be extracted from twitter using the hashtags like #LockdownPakistan #CoronaVirusPakistan etc with the use of Twint API. We will build a sentiment classifier that is able to determine positive, negative, and neutral sentiments of people about the lockdown and flatten the curve to support government in lockdown process. The hybrid approach will be used combining both rule-based NLP approach such as Tokenization, Stemming, Part-of-Speech Tagging, Parsing, Lexicons and automatic approach using Machine Learning Algorithms such as Naive Bayes, Linear Regression, Support Vector Machines.

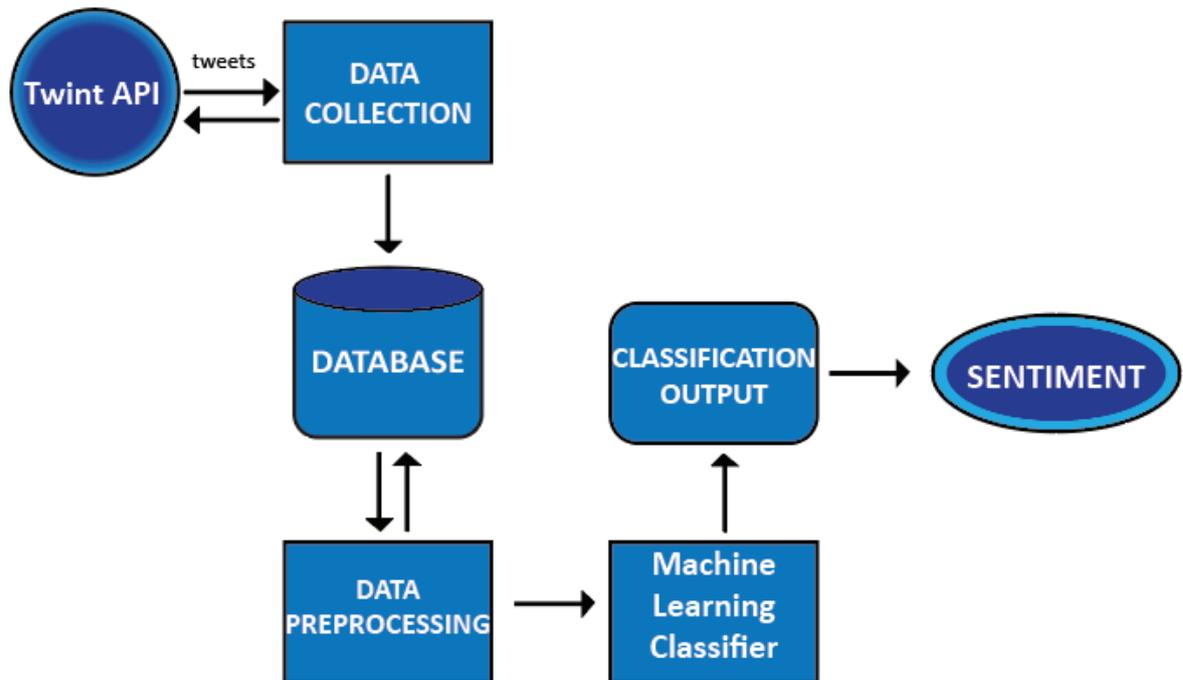
Technologies Used:

- ❖ Python
- ❖ Machine Learning Algorithms

Group Members:

- ❖ Laiba Hashmani (GL) 17SW78 hashmanilaiba@gmail.com
- ❖ Ramsha Touheed 17SW118 ramsha.touheed@gmail.com

System Workflow Diagram:



Supervised By:

❖ Engr. Amrita

To design and develop an Online bakery portal

Abstract:

Online System is the most comfortable and time-saving system in the world. Nowadays, Online Shopping is becoming a trend, and people preferred online shopping as compared to traditional shopping. Our project, which is an "Online Bakery Shop" is a software project that acts like a central database that contains various bakery products. The bakery shop is part of a large foodservice chain that provides desired food items to the customers.

In this world, there are many places where bakeries are far from homes. So, the online bakery shops provide advantages to those peoples who aren't able to go to those bakery shops that are far from their homes. The online bakery shops provide the customers an online shopping facility from their homes at any time. An online bakery shop allows customers to check for different bakery items that are available at the online bakery shop and then purchase online whenever they want. The customers may go through these items as per categories. If the user likes a product, he may add it to his shopping cart. And whenever the customers want to purchase those items, then they will be able to buy those items at any time.

Before buying any item, the user must register him/herself. The customers can sign up for free, then he/she select their favorite items and in last, they pay the charges through debit/credit card or cash on delivery.

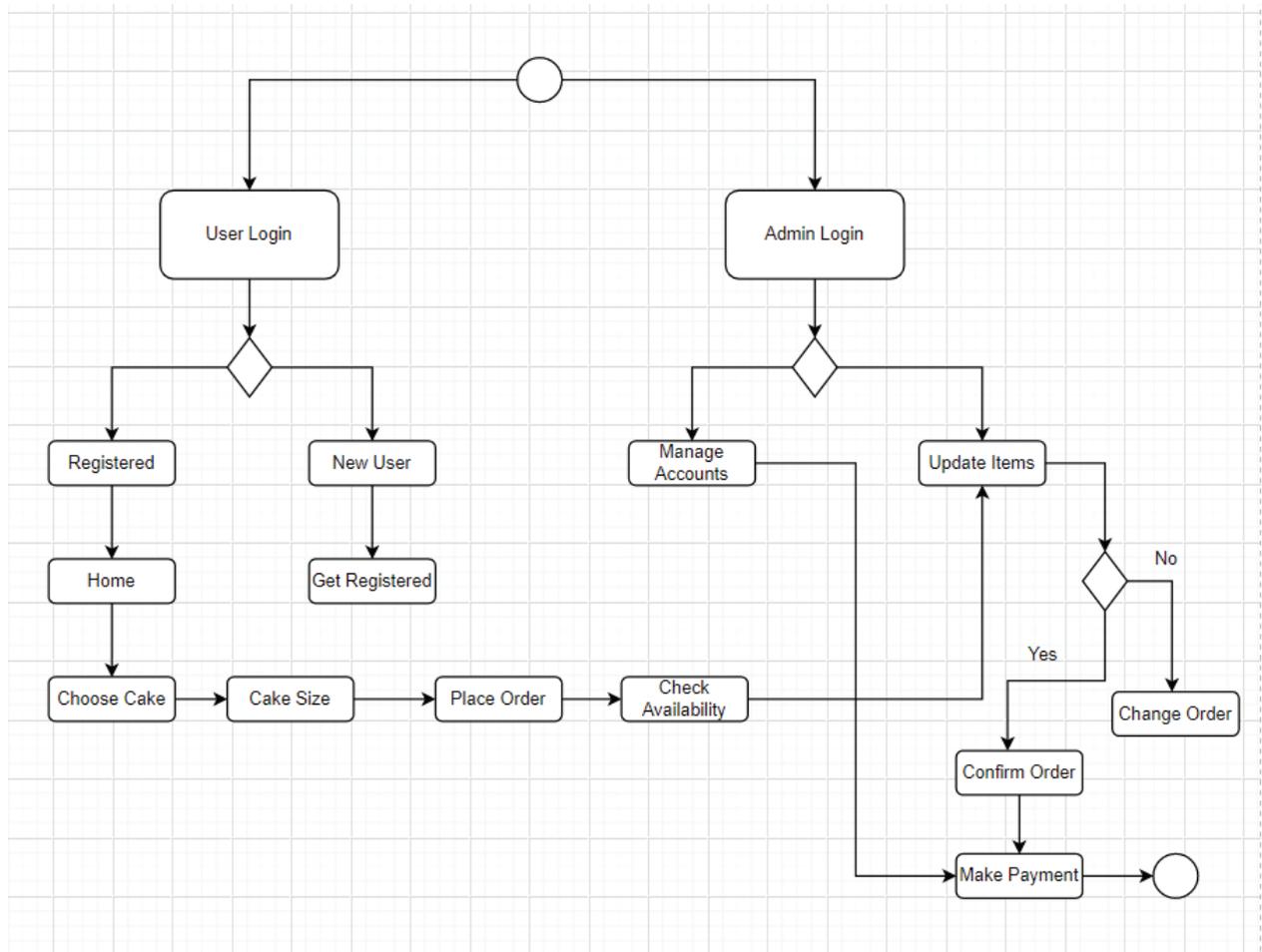
Technologies:

- ❖ HTML
- ❖ CSS, Bootstrap
- ❖ JS, PHP
- ❖ Laravel

Group Members:

- ❖ Bilal Ahmed (GL) 17SW102 bk057496@gmail.com
- ❖ Nimra 17SW62 nimraarain24june@gmail.com

System Workflow Diagram:



Supervised By:

❖ Dr. Qasim Arain

Identifying depression rate among undergraduate and masters students using machine learning.

Abstract:

Depression and symptoms of stress and anxiety are known to be common among university students in varied components of the globe and contains a serious and major impact on quality of life and educational outcome. Stress and Anxiety in young adults (most specifically students) negatively impacts their learning abilities. Various predictors are known in previous studies that are found to be concerning about depression among young adults ranging from personal factors to institutional and social factors. To address this grave issue, psychological state professionals need a scientific basis to plot methods to counter depression among undergraduate students. Social network will help us in data acquisition using web scrapping. This public data will help to analyze the data and identify depression rate among undergraduate and master's students.

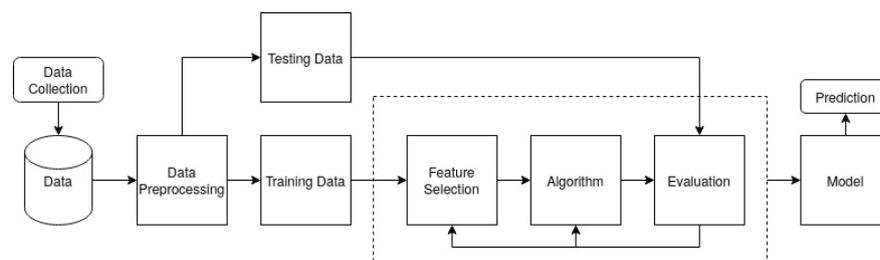
Technologies:

- ❖ Python
- ❖ Machine Learning

Group Members:

- ❖ Sabrina Tahir (GL) 17SW103 sabrinatahir7@gmail.com
- ❖ Mohammad Ahsan 17SW01 ahsankhanjunjua@gmail.com

System Workflow Diagram:



Supervised By:

- ❖ Engr Memoona Sami

Improving mobile battery life and performance with the help of cloud computing

Abstract:

Many mobile Applications frequently check for updates and wake themselves up when are not required mostly at fault. Applications wake the mobile phone up periodically during screen-off to do useful things then subsequently, they should let the phone go back to sleep. Our project is based on making a prototype mobile application that is based on battery saver and file cleanup that monitor some of the background events of power consuming applications and clears up the cache. To prevent turning off useful functions, the application learns which other apps and functions the user frequently access. As such, background activities are only suppressed on a per-app and usage basis depending on which apps are most commonly used. With the help of cloud computing, prototype application tends to detect the highly power-hungry components of a mobile applications, then use a cloud technique called code-offloading. With the help of code-offloading technique, firstly, the power-hungry components of the mobile-cloud hybrid applications are identified, then such applications are offloaded to the cloud and performed there, instead of on the device itself. As they are executed on the cloud instead of the mobile device, therefore, the battery power and other components of device are not used which keep power saved and prolongs the battery life and performance.

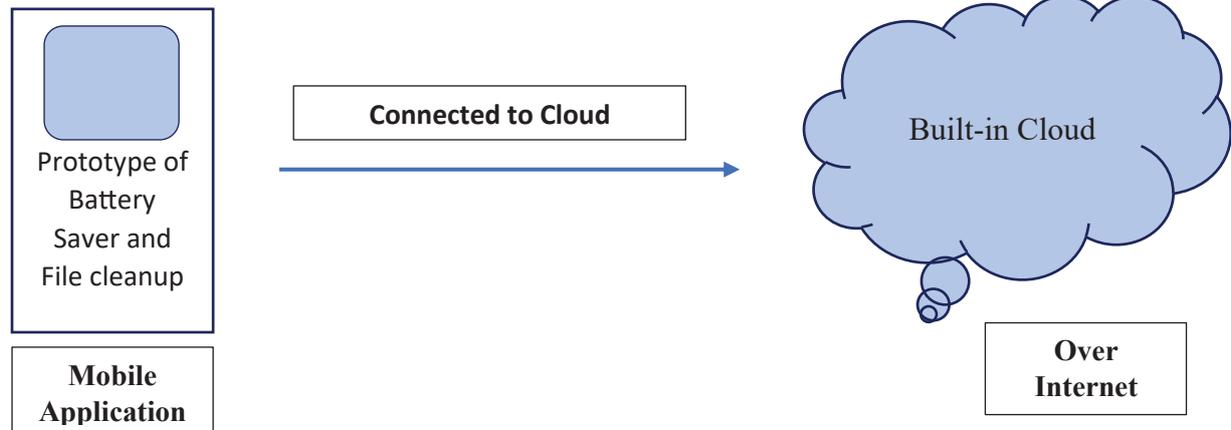
Technologies:

- ❖ Android Studio and Cloud Computing

Group Members:

- ❖ Dua Agha (GL) 17SW104 duaagha2@gmail.com
- ❖ Veena Kumari 17SW68 vina.mehrani@gmail.com

System Workflow Diagram:



Supervised By:

Engr. Shafiya Qadeer

Product Price and Availability Search Application

Abstract:

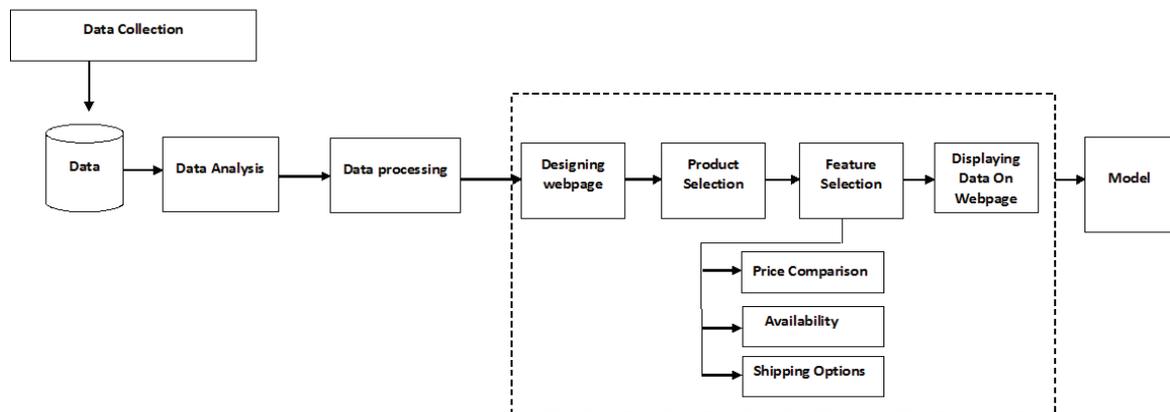
In this Era, the lifestyle of the people is different. People feel uncomfortable and time consuming to go into crowded markets. So, online shopping is valuable platform for consumer to directly buy goods, services etc. The Consumer faces a lot of problems and find it difficult to go through different online stores and search for the availability of their desired product. So, our purpose is to design such kind of website where we will collect data from different online store about several product and then display on our page so that the shopper can get each and every information regarding availability of product, comparison of price of the product, and shipping options if mentioned in their website. So, the consumer can easily buy their product.

Technologies: Html, CSS, Bootstrap4, JavaScript, PHP, MySQL

Group Members:

- ❖ Ms. Kashaf Arshad (GL) 17SW116 alinaarain950@gmail.com
- ❖ Mr. Wajahat Ali 17SW36 wali62963@gmail.com

System Workflow Diagram:



Supervised By:

- ❖ Engr. Shafiya Qadeer

Treatment of Acrophobia using Virtual Reality

Abstract:

Acrophobia is a fear of heights that can cause anxiety and dizziness. This is not usually the normal fear of height but if a person having this disease will feel terrified when looking at any picture of heights or even thinking of this will cause fear. Usually, 1 out of 20 adults has this kind of phobia.

Virtual reality exposure therapy (VRET) has been used to treat acrophobia since 1995. Many other methods are available to treat this phobia, but VR therapy was proved to have more effective and better results. In this therapy, the patient has been sent to a simulation with the help of Virtual Reality glasses.

Nowadays, a more frequent and easy way to do this treatment is with the help of an agent-based mobile application and with a google cardboard VR. The mobile application has an agent that guides the user within it is different stages like the beginner will get the beginning simulation experiences. Even it can ask questions at the start and at the end of the session to detect how much improvement has come to the patient's phobia.

We will develop a mobile application that initially asks some questions from the patient regarding his phobia and then it will open VR simulations according to the patient's mental stability. In the simulations, there will be various tasks like walking on the building ledge and many different tasks. Users can experience all these simulations with the help of Google Cardboard VR. In the end, some questions will be asked regarding the session experience and then the user will get the results that how much improvement he has got or still need some.

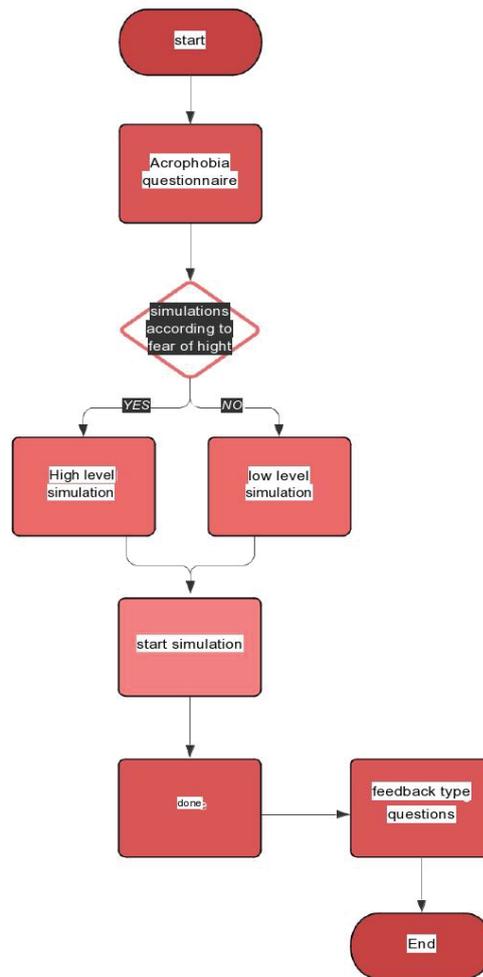
Technologies:

- ❖ Android(Java)
- ❖ Unity
- ❖ Google Cardboard VR

Group Members:

Mr. Ali Sasoli (GL) 17SW20 alisasoli20@gmail.com
Ms. Anmol 17SW54 anmolasghar313@gmail.com

Data Flow Diagram:



Supervised By:

❖ Dr. Isma Farah

E-COMMERCE WEBSITE

Abstract

The aim of this project is to improve the E-commerce website. Increase Sales and Help You Offer Better Purchases. We understand the magnitude of this project to design and develop an e-commerce technology website. To understand the scope of this project is to design and build a relevant (customer) e-commerce website. We need to develop more clothing-related websites. A wholesaler business gives you the ability to close the gap between retailers and manufacturers, allowing you to work within sales. Having a business plan for a supermarket company is important for many big reasons. First, it is important to get the money and the investment. It specifies the amount of money you will need to move out of the premises and how much money will be spent to make your company successful. A complete business plan is like preparing a road map for your company. Creating an e-commerce website that helps to sell a product of the market at a fair price and a transaction market, if anyone buys one product the price of the product is the sale price and if the price increase the price of the product is lower than the sale price. It helps the seller to buy online and sell the product in stores, the seller to buy the product at full prices. You get the best choice in style, size, fabrics and color.

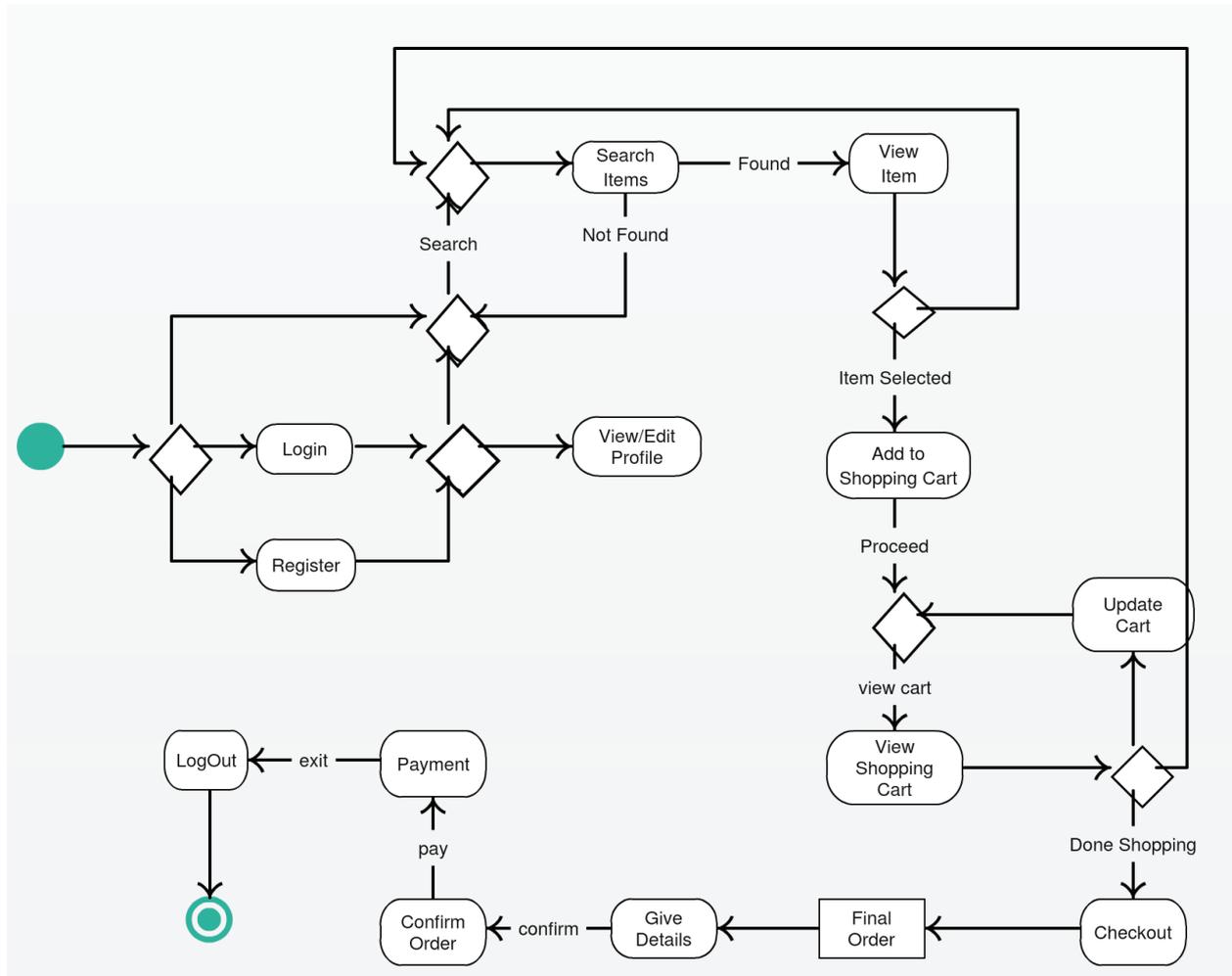
Technologies

- ❖ HTML
- ❖ CSS
- ❖ Bootstrap
- ❖ PHP
- ❖ MySql.

Group Members:

Mr. Samrat kumar(GL)	17SW67	17SW67@students.muet.edu.pk
Miss. Zunaira Anwar	17SW69	17SW69@students.muet.edu.pk

FLOW DIAGRAM:



Supervised By:

❖ Engr. Salahuddin Saddar

Walk with Environment

Abstract:

Walk with environment application aspires to facilitate blind people while they walk. Application will help blind people to walk with confidence and surety. A person always wishes to be independent so the application will be developed to help the blind people get independent, walk with new comfort level, and tries to contribute in making their life easy.

A Blind person can easily reach at a place like House etc. By the help of Google maps. What if they want to know where he/she is standing in his/her house? Is it a bedroom, kitchen? Which objects are around them? These things can easily be achieved by asking any person moving around but every time everyone is not present. Application makes user independent and helps them to get out of the emergency situations if no one is present to help.

Person can open the application by using their own voice and simply move around the camera slowly. In result Walk with Environment will generate an output with place name and objects present in that place will be provided. Like here a user can be standing at Library Studying room so in return the output will be It is “Library” and have Bookshelf’s, Books, Tables, Chairs, Air conditioner, Paintings, Vase, Fan, Computer, Lamp etc.

In other words, Walk with Environment goals to connect blind people with environment, let them know where they are inside a particular building and gets them know about objects present to enrich their experience and help them walk with self-confidence.

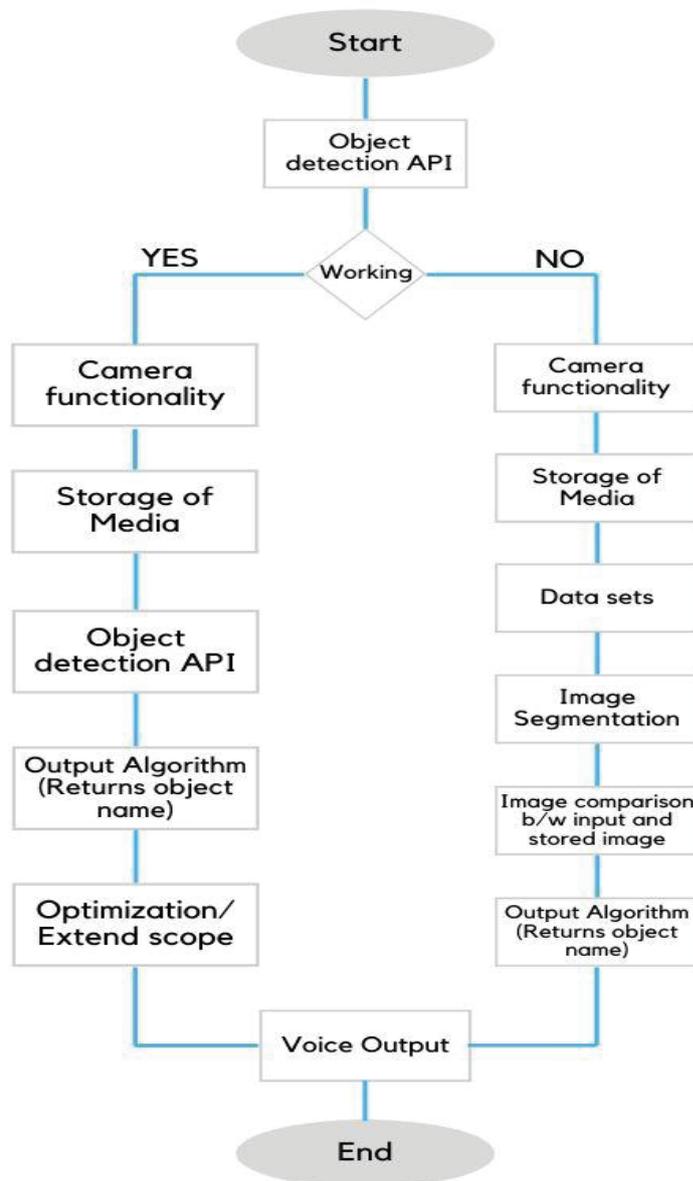
Technologies:

- ❖ Python
- ❖ Machine Learning
- ❖ Android
- ❖ Google APIs

Group members:

- ❖ Abdul Samad 17SW109 samadmemon991@gmail.com
- ❖ Saira Bano 17SW101 noonarisaira@gmail.com

System workflow diagram:



Supervised by:

Engr. Zubair Sangi

Extraction of Data from Graphs/Charts with Computer Vision

Abstract:

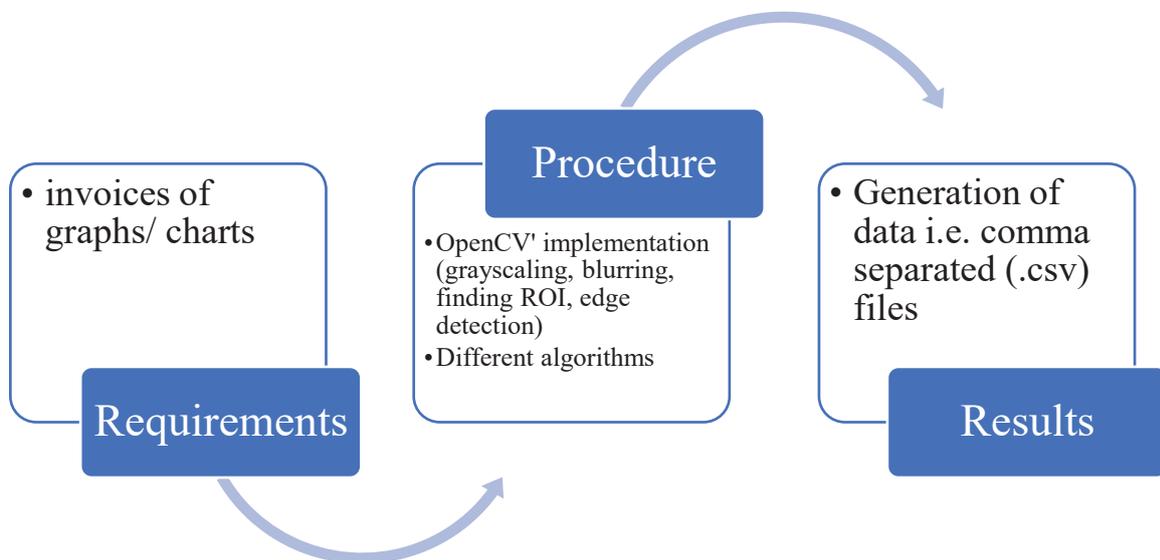
Researchers come across with graphical data almost on daily basis. Inferring results from them, which is the conventional benefit of graphs, is not merely the requirement rather data is needed for further research. In order to solve this problem of extracting data back from graphs and charts, we are building a software program that reverse engineer graphs and charts efficiently and generate .csv or .xls with numerical data. It would be web based application that takes images of graphs (invoices) and applies computer vision techniques to read multiple plots of different colors as well as x and y axis data to certain accuracy. Algorithms used are Convolution Neural Network, Hough Lines Transform.

Technologies: Python, OpenCV

Group Members:

- ❖ Miss Aneeqa Naeem (GL) 17SW28 17sw28@students.muet.edu.pk
- ❖ Miss Urooj 17SW105 17sw105@students.muet.edu.pk

System Workflow Diagram:



Supervised By:

- ❖ Dr. Mohsin Ali

Handicraft Bidding System

Abstract:

E-commerce has been growing rapidly in the world. It has become a necessity in our lives now. This project is about building a bidding system in a computerized environment, converting traditional physical auction system into e-Auctions. The main objective is to develop a bidding app where people can easily sell their things (handicrafts and other home-made things) especially those people who have enough talent, but they are not being noticed. The real local industry of handicrafts is declined rapidly due to low wages of the workers where wholesalers want to keep high profit margins resulting in decline of pure real handicrafts, this situation leads to replacement of original handicrafts to quicker fake handicrafts. This project will not only promote the local industry but also different cultures of Pakistan.

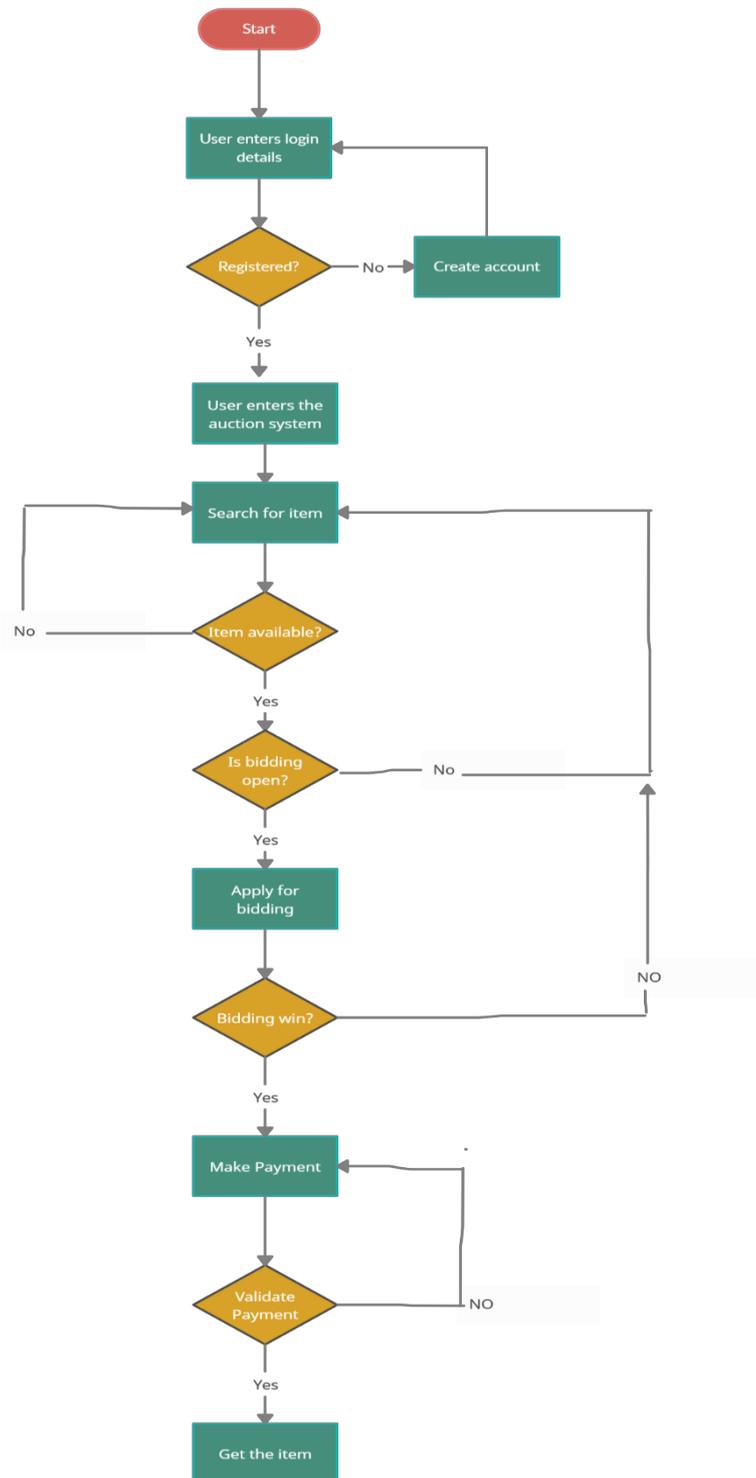
Technologies:

- ❖ Android
- ❖ Firebase

Group Members:

- ❖ Haseeb Ahmed (GL) 17SW16 haseebansari1000@gmail.com
- ❖ Israr Ali 17SW38 israralimasori@gmail.com

Flow Diagram:



Supervised By:

❖ Engr. Junaid Baloch

Personal Safety Application to handle hazardous situations

Abstract:

Safety is an alarming concern and has been the most important topic till date. Typically, Women and children safety matters a lot whether at home, outside the home, at school or working place. Nowadays ladies are facing more crimes like rape, domestic violence, or abuse. So, safety is our highest priority concerning the security of every single human being. These days people carry their smartphones with them everywhere, therefore it would be feasible to integrate an application in our smartphones so that everybody can access it efficiently. To tackle with current safety issues and provide protection through the application integrated inside smartphones will be the best option, according to today's generation.

The aim of this project will be to design and develop a fastest possible android app with to provide user friendly security system to women, children and anyone in the situation of danger. The App will be based on two modules i-e User and Guardian. The app will work with or without an Internet connection (i-e online and offline modes) to make it a systematic application, as availability of internet in hazardous situation is hardly possible. This application will be capable of sending SOS alerts to the registered contacts for security purposes. Trusted contacts will have the access to our live location on map in order to track the location and ensure that the family member has reached the destination safely. This application can also capture audio and videos files to send it to the emergency contacts along with an alert message. It also provides a way to connect quickly to the nearest possible hospitals and police stations in extreme emergency cases. Additionally, the noteworthy feature includes to track down a lost or stolen cellphone.

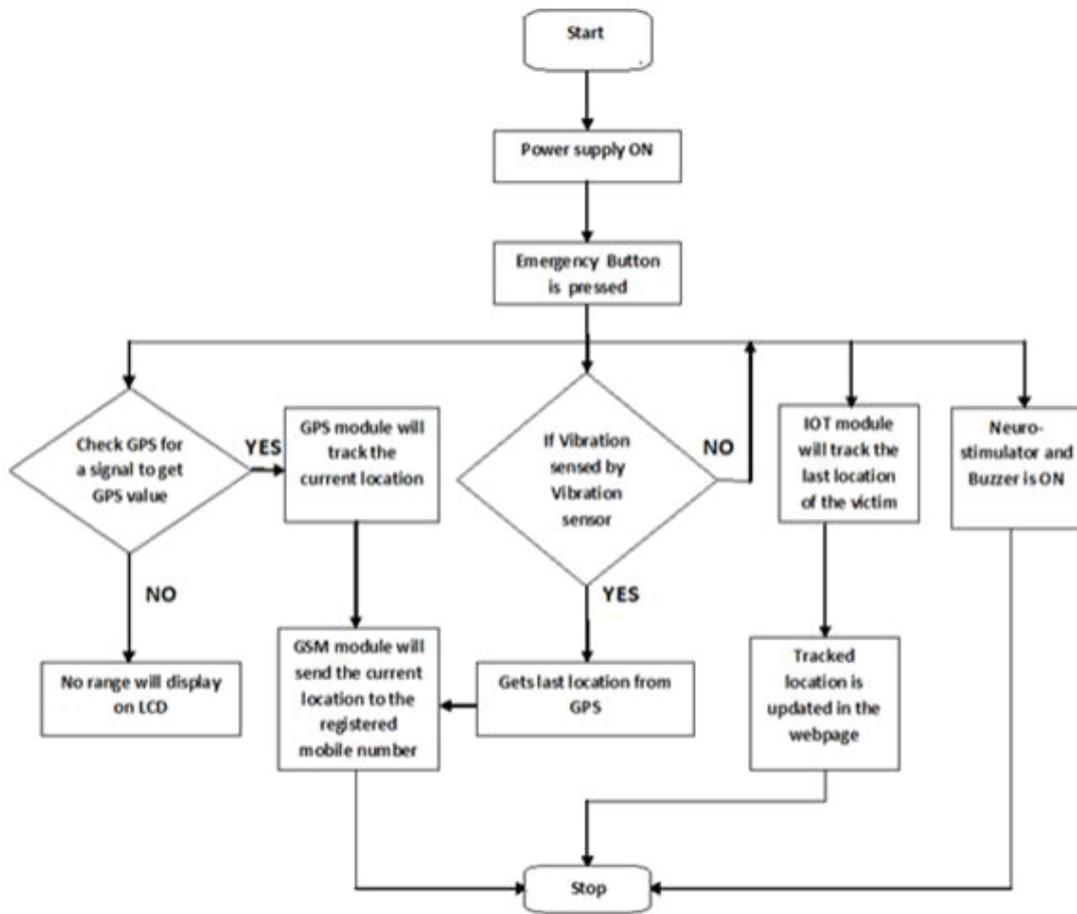
Technologies:

- ❖ Android
- ❖ google Map API's
- ❖ Java
- ❖ SQL
- ❖ XML
- ❖ sensors.

Group Members:

- ❖ Yasrab Memon (GL) 17SW41 yasrab7memon@gmail.com
- ❖ Pireh Shaikh 17SW110 pirehsweet12345@gmail.com

Flow Diagram:



Supervised By:

❖ Engr. Zahid Khakheli

(202010) Prediction of Myopia among students using Behavioral, Environmental and Hereditical features

Abstract:

As the study reveals, myopia has become a recurrent disease around the globe. The rate of nearsightedness is expanding step by step and indicating a pattern of more youthful age. Partial blindness (nearsightedness) is a typical vision condition in which you can see objects close to you clearly, whereas distant objects appear blurry. It happens when the state of your eye makes light beams twist (refract) inaccurately, centering pictures before your retina rather than on your retina. The significant point of this venture is to construct a framework that can anticipate the nearsightedness in youngsters depending on conduct information, way of life designs, dietary patterns, perusing and composing stance, climate, heredity, etc. Many factors are to be kept in mind as becoming successful in eliminating myopia in adolescents. This undertaking will be founded on a genuine dataset gathered from university students.

Group members:

- ❖ Tauqeer Ahmed 17sw72 17sw72@students.muet.edu.pk
- ❖ Ahmed Iqbal 17sw114 17sw114@students.muet.edu.pk

Technologies:

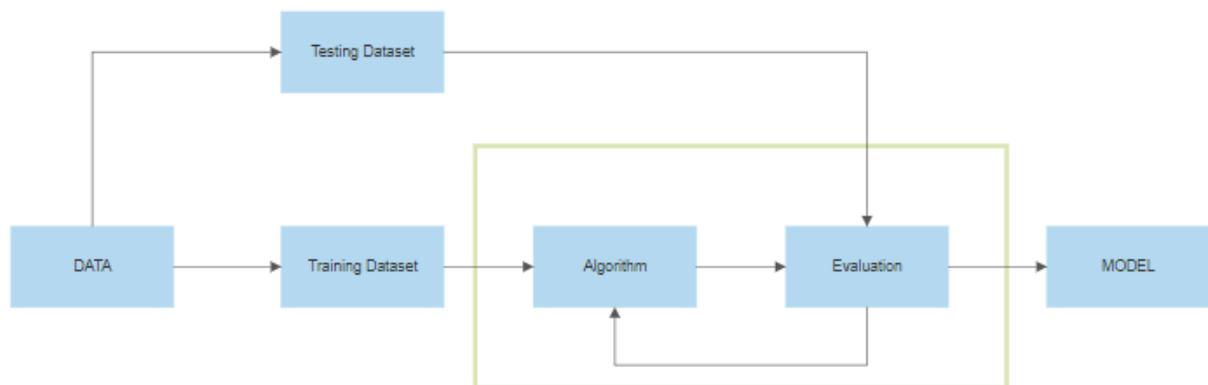
MUST:

- ❖ Python Programming Language
- ❖ TensorFlow, SciPy or Scikit-Learn
- ❖ NumPy
- ❖ Google Forms for Data Collection

OPTIONAL:

- ❖ Flutter (if there would be a mobile and web application)

Workflow:



Supervisor:

❖ Engr. Amrita

Personalized Recommender to suggest e-Books and Authors

Abstract:

Collaborative Filtering method in recommendation systems is used to procure recommendations based on the similarity of taste between users judged by their individual ratings. The similarity of user's taste is judged by a mathematical method, this is the pivotal component for CF algorithm to work. In this project we'll use Personalized Collaborative Filtering algorithm to recommend e-books based on user data.

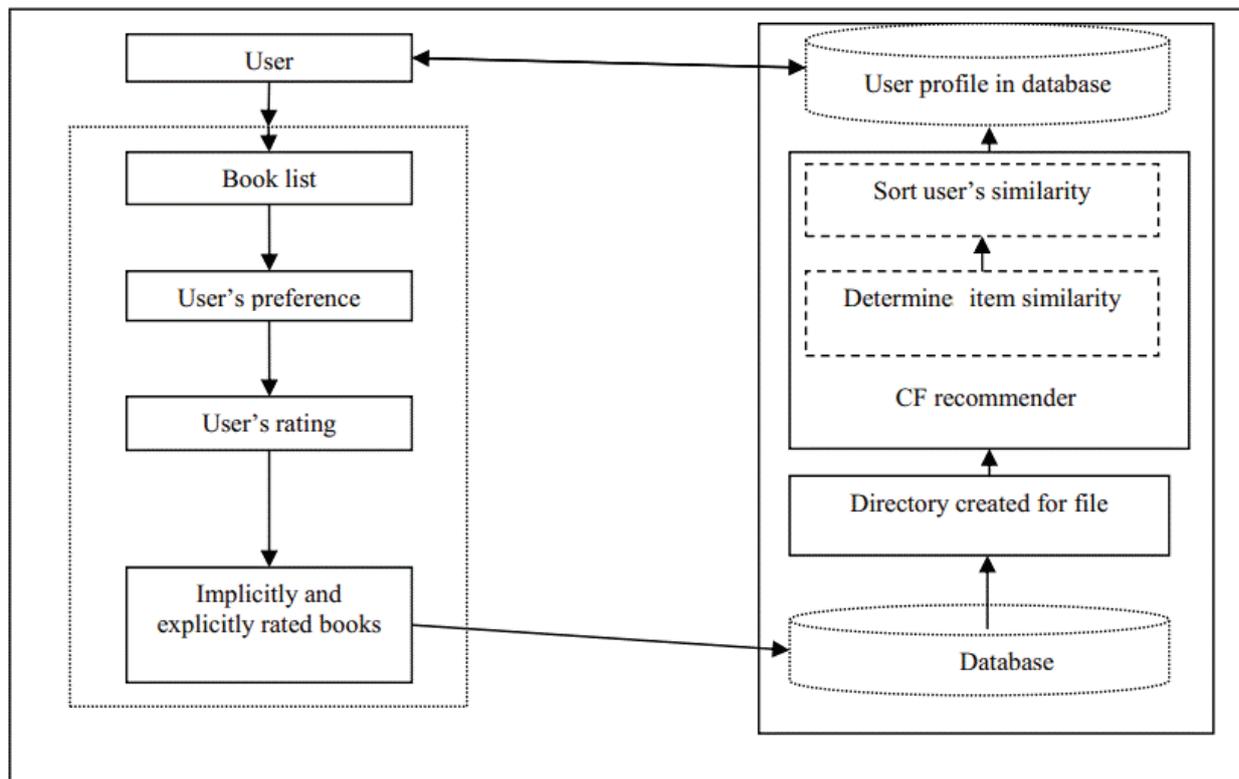
Technologies:

- ❖ Python (flask)
- ❖ Machine Learning
- ❖ HTML & CSS
- ❖ bootstrap
- ❖ javascript
- ❖ php

Group Members:

- ❖ Mr Ahsan Ali Laghari (GL) 17SW112 17sw112@students.muets.edu.pk
- ❖ Mr Israr memon 17SW14 17sw14@students.muets.edu.pk
- ❖ Mr shah muhammad 17-f16SW36 17f16sw36@students.muets.edu.pk

System Workflow Diagram:



Supervised By:

❖ Engr. Areej Fatima

Muntazim Application

Abstract:

Technology increases day by day and the world becomes technical. Technology provides an ease to everyone as everyone has smart devices in their homes, offices, and even in their hands like smartphones or digital watches. So why should people search for things manually? Why not make things which solve daily life problems of people within the seconds? We see e-commerce online sites where people search for their required things and order them, we see online food ordering apps where everyone can easily order their favorite food and so many other applications and websites. But people cannot book vendors online, cannot book salons online, cannot book venues online. To solve this problem, we will make a hybrid application that has all the features where the people can see the complete portfolio of the vendors and book them at a reasonable price and can see every venue without visiting that place by registering in the application and then ask for appointment with the vendor.

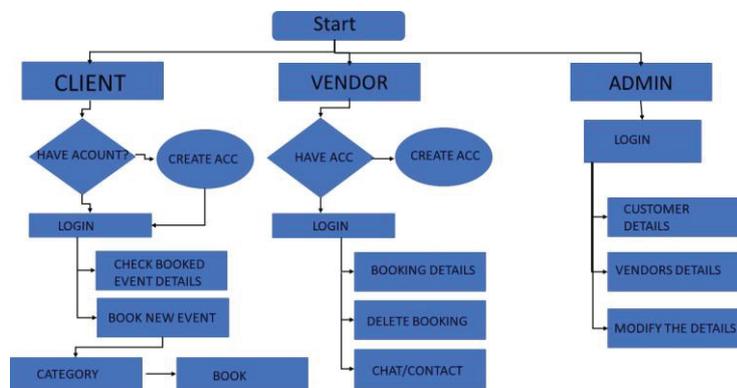
Technologies

- ❖ Python (Django framework)
- ❖ React Native
- ❖ SQL Database

Group members:

- | | | |
|---------------------|--------|--|
| ❖ Ahsan Qureshi(GL) | 17sw09 | 17sw09@students.muet.edu.pk |
| ❖ Mahnoor | 17sw63 | mahnoorrasool405@gmail.com |

SYSTEM WORKFLOW DIAGRAM:



SUPERVISED BY:

❖ Engr. Salahuddin Saddar

Feature-Based Semi-Supervised Learning to Detect Malware in Android

Abstract:

Malicious software's are extremely deleterious to an Android OS alike desktop OS. The more these devices grow, the more we have experienced the growth of Android malware. It does not only threaten the end user's privacy but also lessens the trust on security policies of Android devices. Frameworks and virus protection software can detect known malware signatures and although, recently, there have been advancements in detecting unknown malware signatures as well using supervised machine learning approaches, these methods require huge set of labeled data to train the machine. To solve this problem, we propose a framework that uses semi-supervised machine learning techniques on API call logs to identify malware in Android apps. In this approach, feature sub-set selection methods will be implemented to select suitable features, which will subsequently be utilized to develop an efficient malware detection model. Apart from that, statistical validation will also be performed to demonstrate the accuracy of our model in comparison to supervised machine learning based malware detection models.

Technologies:

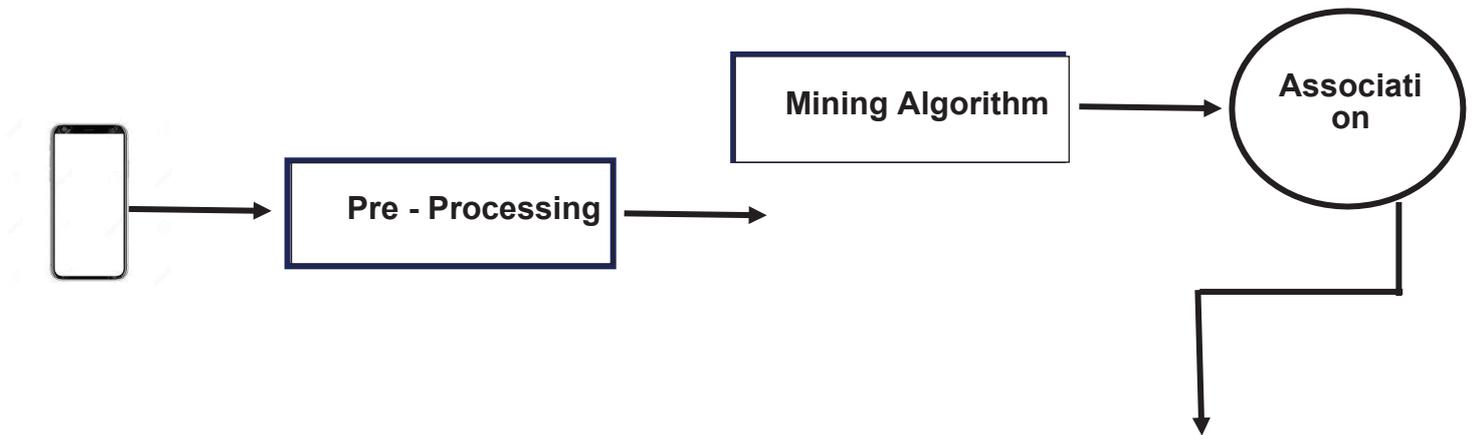
- ❖ Android Emulator, Android Apps
- ❖ JAVA
- ❖ Feature Selection Approaches
- ❖ Machine Learning Algorithms
- ❖ and Application Programming Interface calls.

Group Members:

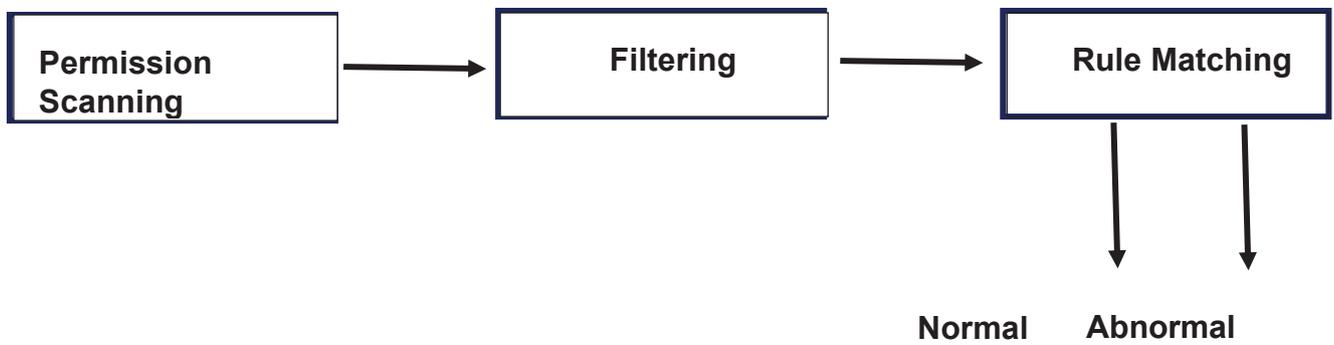
- ❖ Adil Ahmed Unar (GL). 17SW22, 17Sw22@students.muett.edu.pk
- ❖ Ghulam Hussain Daudpota. 17SW23, 17Sw23@students.muett.edu.pk

Work Flow Diagram

Training Section



Detection Section



SUPERVISED BY:

❖ Engr. Mariam Memon

Towards Emotional Intelligence(EI)/ emotional quotient(EQ) in Machines for Identifying student's emotional fitness and need for counselling

Abstract:

Emotional intelligence(EI) is having potential to recognize , restrain, evaluate our emotions and so the emotions of others as well. In practical terms it is necessary to control emotions as it navigates our behavior in certain situations. Emotionally Intelligent people can easily handle their emotional states like they have more power to reject negativity, annoyance, depression, and something more disappointing. They avail more pleasing victorious career. Visualize a picture in which you are not able to evaluate your fellow's state of mind , what things can help you built strong understanding and relationships. Emotional Intelligence helps you to proceed in a better way if you want to learn or teach something. It enhances our social and emotional learning abilities that is why the idea behind this initiative is not only to improve student's progress but also make them able to take right decisions in their academic life. EI improves their interpersonal communication skills. Research says that EI is more important to make out success life as compare to IQ. The focus of this project is to give a machine skill of emotional intelligence, which checks the EI level of students and provide them a best decision about upcoming challenges in career. The machine will suggest them whether they need any counselling to be more powerful before they are entering in any new environment. A questionnaire will help us to judge their behavior and EI level. After the collection of data, we will train a model based on the results to suggest contenders for psychological assistance. The outcomes will help educational institutions to achieve a kind of balance that enforces all students to seek knowledge, work hard, and give efforts with their highest potential.

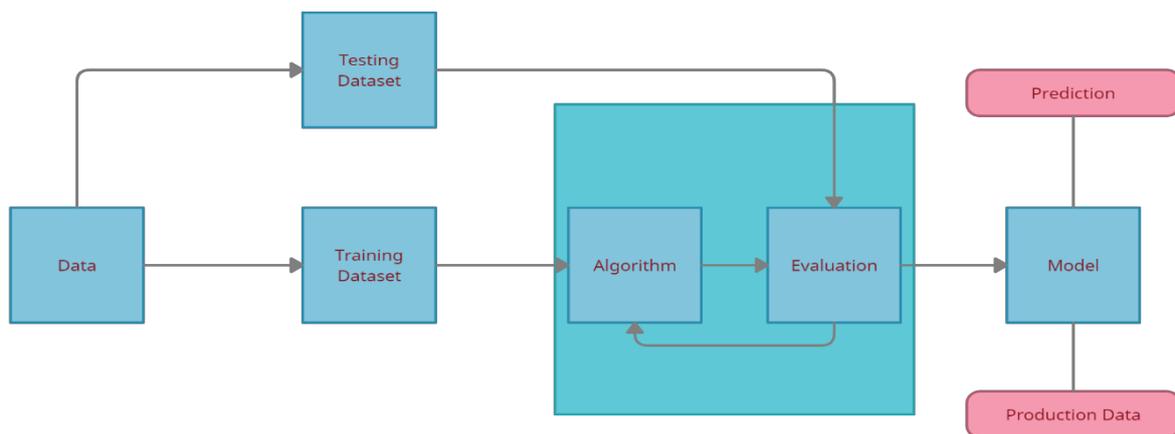
Technologies:

- ❖ HTML
- ❖ CSS
- ❖ JavaScript
- ❖ Bootstrap
- ❖ Python
- ❖ MySQL
- ❖ Machine learning
- ❖ Data mining tool

Group Members:

- ❖ Dur e Hassan(GL) 17sw26 17sw26@students.muett.edu.pk
- ❖ Mir Shahnawaz 17sw44 17sw44@students.muett.edu.pk
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System Flow Diagram:



Supervised By:

- ❖ Engr Rabia Iftikhar

Web Portal for submission of Research papers to Mehran University Research Journal

Abstract:

The main objective of this project is to provide the web portal for submission of research papers to Mehran UET. As the world is revolving to become smart day by day and along with the emerging technologies it is working for preservation of the earth resources as well. Every year we waste a lot of paper in making research paper in hardcore and a lot of time and human energy. Generally, in University, things are done manually submission of research paper, so to avoid this we are designing a web portal for our university. This portal provides useful facilities for students who wish to access the portal through web service.

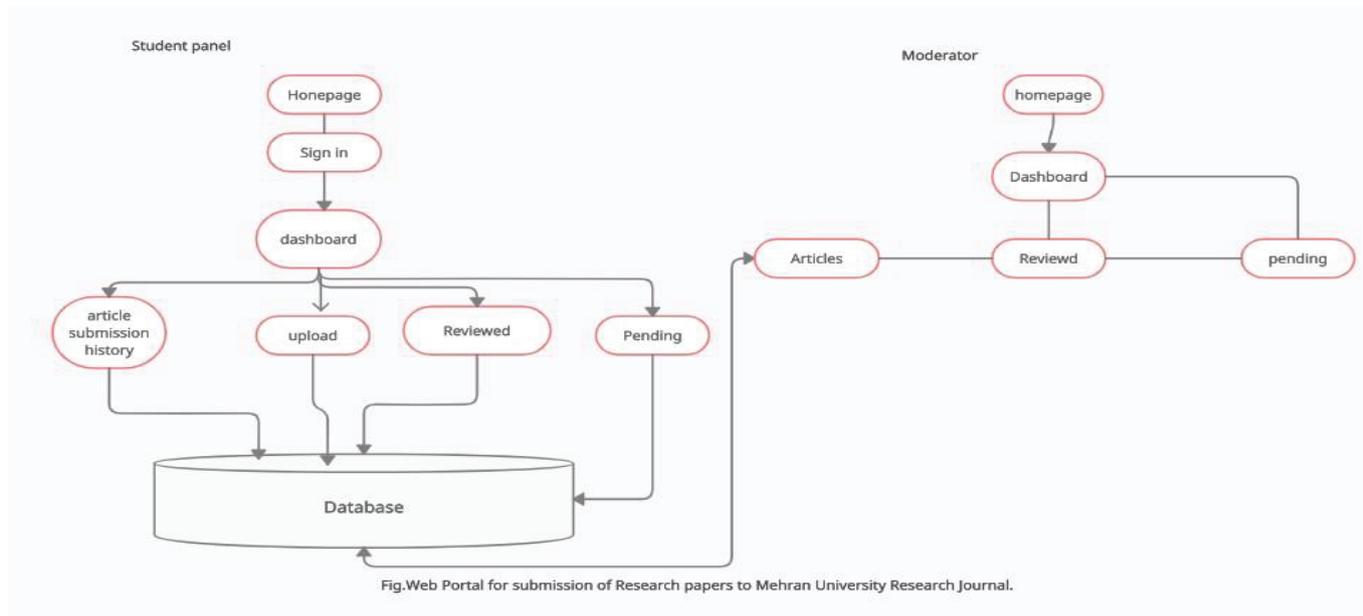
Technologies:

- ❖ HTML,
- ❖ CSS,
- ❖ Bootstrap,
- ❖ JavaScript,
- ❖ PHP, and MySQL.

Group Members:

- ❖ Mr Pawan Kumar (GL) 17SW47 17sw47@students.muuet.edu.pk
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Workflow Diagram:



Supervised by:

❖ Dr. Qasim Arain

Mangrove classification of Indus delta using satellite images

Abstract:

This study aims to provide the comprehensive mangrove species classification across the Indus river delta in Pakistan. The Indus delta extends over an area of some 6000 hectares, on the border between Pakistan and India. The mangroves in this region are the sixth largest in the world. The Google Earth Engine (GEE) a geospatial processing service powered by Google Cloud Platform, will be used, Different classification algorithms will be applied on acquired Satellite images to classify major covers: ‘mangroves’, ‘water’ and ‘other’. After that, ‘mangroves’ will be further classified into species. According to Flora of Pakistan, eight species of mangroves have been reported along the coast of Pakistan, out of which four species have completely disappeared, three species, red mangrove (*Rhizophora mucronata*), black mangrove (*Aegiceras corniculatum*) and Indian mangrove (*Ceriops tagal*) are at the verge of extinction and only one species, grey mangrove (*Alvicennia marina*) is surviving in Indus delta. This study-project will classify the remaining four species that are thriving in this area and map their explicit locations.

Keywords: Mangrove in Pakistan; Google Earth Engine (GEE); Random Forest (RF); mangrove classification; mangrove conservation; mangrove mapping.

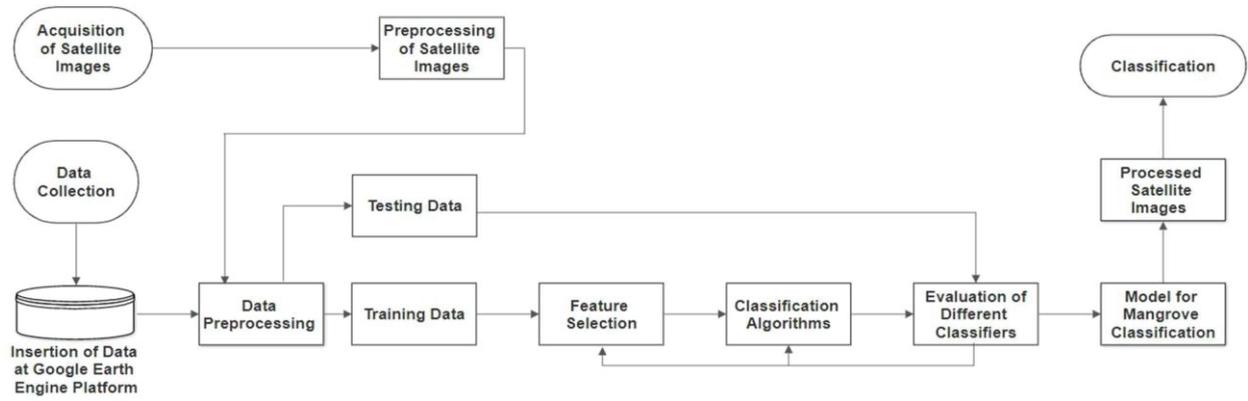
Technologies:

- ❖ Google Earth Engine
- ❖ Machine Learning
- ❖ JavaScript
- ❖ QGIS

Group Members:

- ❖ Mr. Abdul Rafiu (GL) 17SW08 ark.1kh@gmail.com
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System Workflow Diagram:



Supervised By:

❖ Dr. Naeem Mahoto.

Rent a Room Service

Abstract:

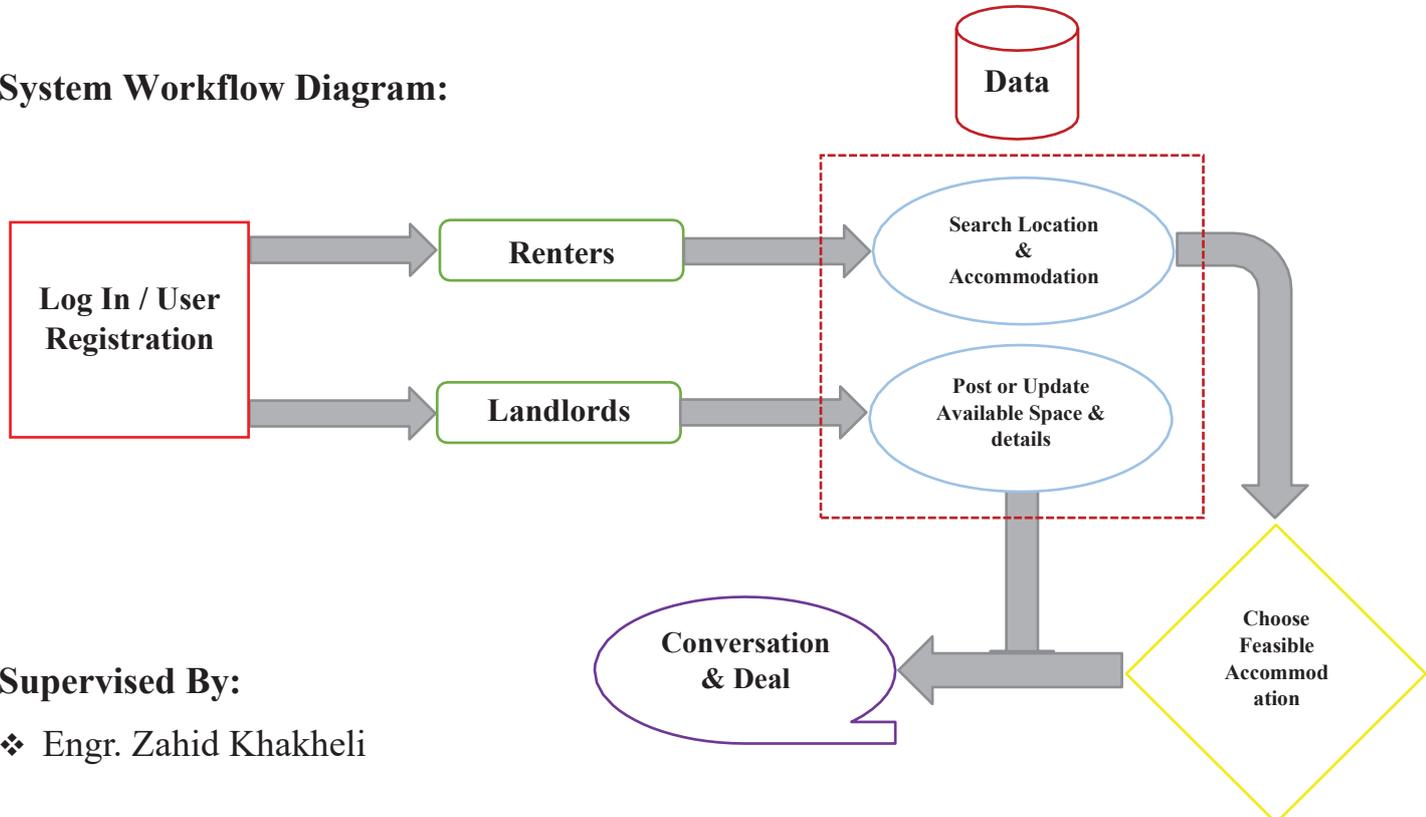
Rent a Room Service will administer the information regarding Rooms/Flats/Houses that are available for Rent, making it easier to find accommodation for the renter in a specific area on time. Moreover, a good facility towards landlords and property managers to furnish their available spaces, specifically for middle house families looking for multiple income sources by providing available spaces of their property. So, the working principle for a renter is: firstly, find the location you're moving to then select Room/Flat/House whatever feasible to you and booked via online payment or visit the spot. From a landlord perspective, master will make renting easy by uploading the location, contact number, expected rent, no. of rooms, facilities and other information required. This Application will save time, physical hard work and resources of a renter in finding accommodation, this results in quick deals and direct communication between the renter and landlord. It will be an Open-Source Application which can be freely access via desktop, tablet or mobile.

Technologies: HTML, CSS, Bootstrap, JS ES6, React Native, PHP, Mongo DB

Group Members:

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System Workflow Diagram:



Supervised By:

- ❖ Engr. Zahid Khakheli



The rise of technology and digital tools in today's modern world is evident. Everywhere you turn, you can see a student working on their laptop in a coffee shop or a kid playing games on their parent's smartphone. In fact, all are experiencing the digital transformation process behind which is a software smart application, software is an integral part of almost every device that makes your daily life easier. Mobile phones, computers, home appliances, public transportation, and the emergency services all rely on intelligent software to make the most of their technology we

As a software engineer, you'll be the one designing it. Applying your technical skills to the invention and innovation of software, along with the development, maintenance, and management of it, you'll be able to use your love for technology to make a difference in the world. And you'll make good money while doing it.

The demand for skilled and qualified software engineers seems to have no end. This demand is strengthened by a changing economic landscape and fueled by the need for technology solutions.

Completing a formal education is the first step toward becoming a software engineer, so the bachelor of software engineering program educates students about the systematic design, development, production, and maintenance of complex computer programs. This process requires collaboration and teamwork as software projects move from one life cycle stage to the next: analysis, design, coding and implementation, validation, installation, and maintenance.

Software engineering is a field that is vitally important to computer technology as a whole. Without the software to run the computer hardware, that hardware is simply a clump of plastic, silicon and metal – perhaps useful as an overpriced paperweight.