UNIVERSITY ADMIT ELIGIBELITY PREDICTOR

Team Id : PNT2022TMID23959

Github Link : https://github.com/IBM-EPBL/IBM-Project-15578-1659601085

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TITLE

1. INTRODUCTION

1.1 Project Overview

1.2 Purpose

2. LITERATURE SURVEY

2.1 Existing problem

2.2 References

2.3 Problem Statement Definition

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

3.2 Ideation & Brainstorming

3.3 Proposed Solution

3.4 Problem Solution fit

4. REQUIREMENT ANALYSIS

4.1 Functional requirement

4.2 Non-Functional requirements

5. PROJECT DESIGN

5.1 Data Flow Diagrams

5.2 Solution & Technical Architecture

5.3 User Stories

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

6.2 Sprint Delivery Schedule

6.3 Reports from JIRA

7. CODING & SOLUTIONING (Explain the features added in the project along with code)

7.1 Feature 1

7.2 Feature 2

7.3 Database Schema (if Applicable)

8. TESTING

8.1 Test Cases

8.2 User Acceptance Testing

9. RESULTS

9.1 Performance Metrics

10. ADVANTAGES & DISADVANTAGES

11. CONCLUSION

12. FUTURE SCOPE

13. APPENDIX

ABSTRACT

In todays era we see a lot of students pursuing their education. In the past decade the number of students pursuing graduate education from has rapidly increased. Each applicant has to face a tough competition to get admission in their dream university. Generally as the students don't have much idea about the procedures, requirements and details of the universities .They seek help from the education consultancy firms to help them successfully secure admission in the universities which are best suitable for their profile, for this they have to invest huge amount of money as consultancy fees. Apart from these the education consultancy firms there are few websites and blogs that guide the students on the admission procedures. The drawback of the currently available resources is that they are very limited and also they are not truly dependable taking into consideration of their accuracy and reliability. The aim of this research is to develop a system using Applied Data Science and Machine learning algorithms. We will name it as University Admit Eligibility Predictor (UAEP). It will help the students to identify the chances of their application to an university being accepted. Also it will help them in identifying the universities which are best suitable for their profile and also provide them with the details of those universities. A simple user interface will be developed for the users to access the UAEP system.

1. INTRODUCTION:

1.1 Project overview:

This University Admit Eligibility Predictor is used to predict the Percentage of a Student Getting a chance to join the university . By using CGPA , GRE Grade we can calculate the student chances.

1.2 Purpose:

Easy way for a student to Know his/her Chances to getting Seats in Universities. Effective one in this Modern Day Technology World.

2. LITERATURE SURVEY

2.1 Existing Problem:

For a University Admission Predictor there are some problem will araise because of the university Rules or Guidelines they Follow.Like The Grade Score acquired by the students . By using this predictor Student Easily Knows the Chances of Preferred University.

2.2 REFERENCES:

- Kruthika CS1*, Apeksha B2 , Chinmaya GR3 , Madhumathi JB4 , Veena MR5 1Department of CS&E.BIET, Davanagere. Karnataka, India

- Geiser, Saul, and with Roger Studley. "UC and the SAT: Predictive validity and differential impact of the SAT I and SAT II at the University of California." *Educational Assessment* 8.1 (2002): 126.
- Rothstein, Jesse M. "College performance predictions and the SAT." *Journal of Econometrics* 121.1-2 (2004): 297-317.
- Leonard, David K., and Jiming Jiang. "Gender bias and the college predictions of the SATs: Acry of despair."*Research in Highereducation* 40.4 (1999): 375-407.

2.3 Problem Statement:

This is a Requirements Specification Document for a new Data science-based University Admit Eligibility Predictor . It is an AI based application that asks for the users to input their academic transcripts data and calculates their chances of admission into the University Tier that they selected. It also provides an analysis of the data and shows how chances of admissions can depend on various factors. This document describes the scope, objectives and goals of the system. In addition to describing the non-functional requirements.

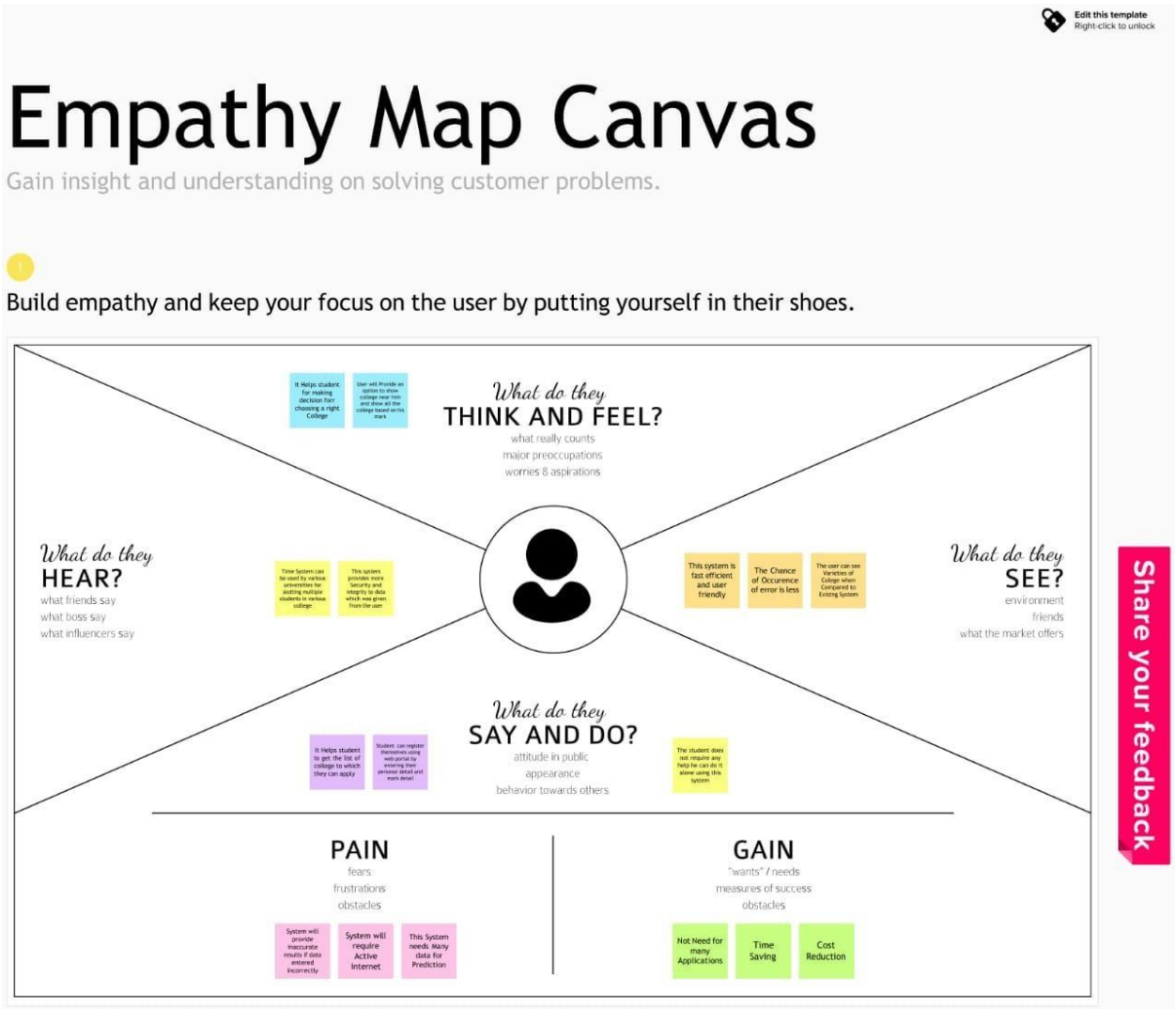
In order to get admitted to these universities, a set of academic requirements are needed. However, because of the sheer number of universities of different levels, students are often stuck in a dilemma till the very last minute as to whether or not their applications will be accepted or not as no concrete documentation is available which lists the requirements.

Our AI Model that was built after considering many leading Machine Learning Algorithms, to provide the most accurate prediction of how much of a chance of admissions does a student’s current grades and other academic transcripts allow them in the tier of universities of their choice.

A Database will also be implemented for the system so that students can save their data and review and edit it as they progress with the most recent predictions being saved with their profile.

3.IDEATION AND PROPOSED SOLUTION:

3.1 Empathy Map Canvas:



3.2 Ideation and Brain Storming:

Template

Idea prioritization

Use this framework to rank ideas based on their feasibility and impact to visually compare the merits of multiple ideas. Deliver a set of ideas that your team wants to try out, and identify which of them need to be prioritized.

Share template feedback

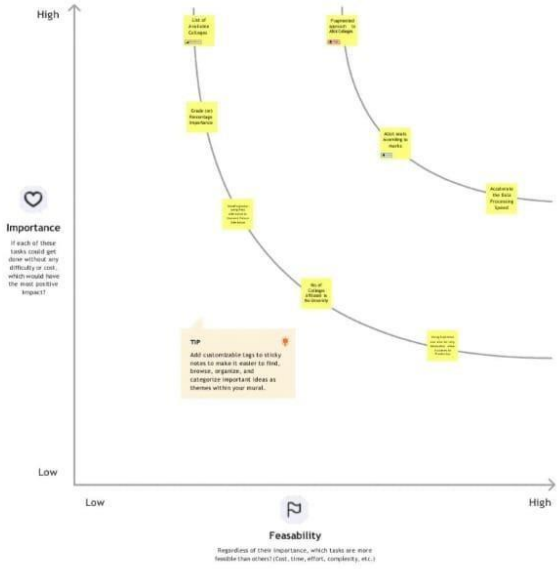
Need some inspiration?

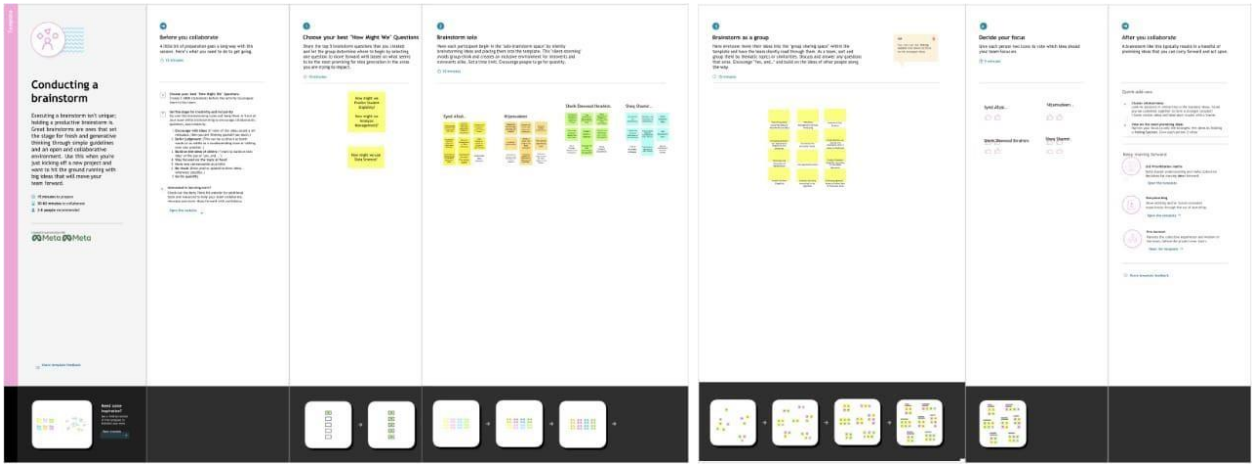
See a finished version of this template to kickstart your work.

Open example

Collect your ideas in one place

Jot down different ideas your team is interested in trying out. These could be different solutions, or different approaches to the same solution. As a team, go through the ideas in the Idea bank one by one and place them on the grid. Take the time to discuss each idea and come to a consensus on where it should go.





3.3 Proposed Solution

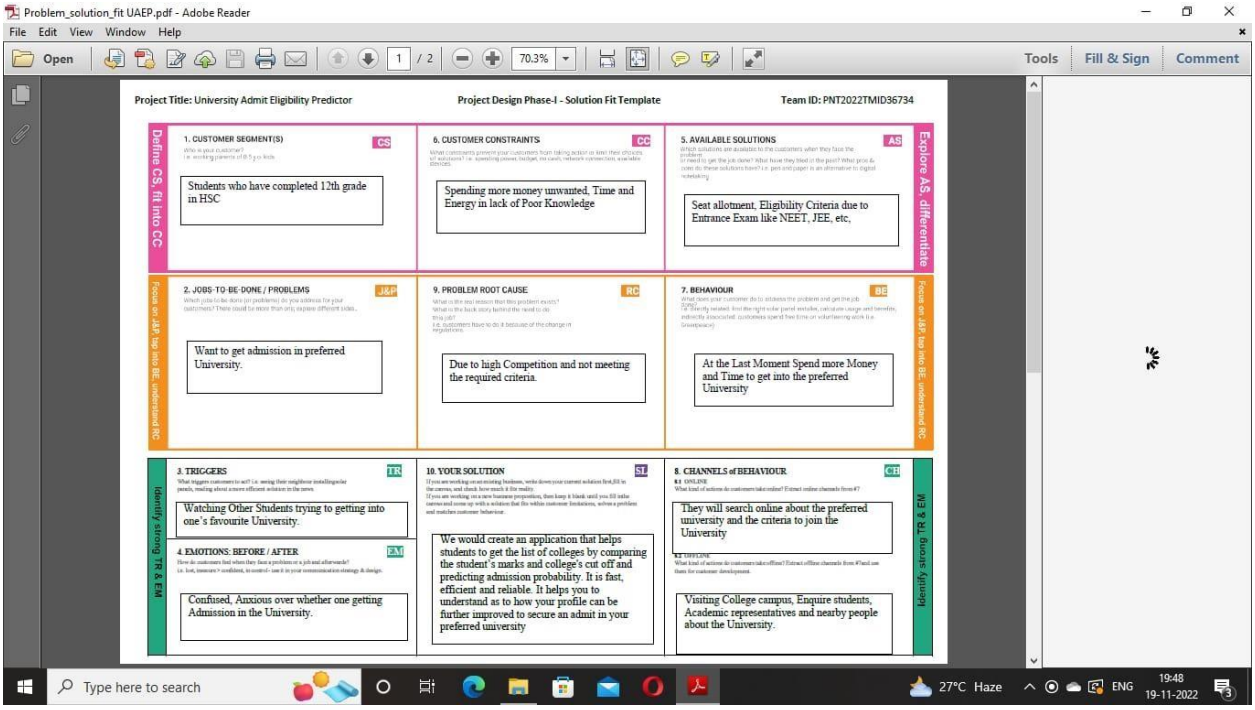
This project aims at developing an application that uses machine learning-based algorithms to determine the feasibility of a particular student's profile being eligible for university admission. The main objective is to save the time and money spent by the students at education consultancy firms. Moreover, if the students apply only to those universities where he/she has a genuine chance of admission would reduce the application process.

Our project will assist UG graduates in getting into shortlisted colleges for master's programmes based on their GRE, CGPA, and TOEFL scores. If the expected production gives them a good picture of their prospects of admission to the university. This study will also assist students who are presently preparing to have a better understanding. It will also provide students with information on the university's research prospects, admissions procedure, courses offered, and noteworthy alumni.

The project website can identify numerous amenities available at universities and provide directions to the university where it is located. You can also apply for scholarships and financial aid. By using Machine learning models like Regression models, the probability of a student getting admission at a desired university is predicted.

The solution proposed will be deployed as web-application. So, it is easily accessible by anyone who has internet services and has no specific software and hardware specifications. The dataset used for model training can be scale according to the available universities admission data.

3.4. Problem Solution Fit



4.REQUIREMENT ANALYSIS:

Requirements analysis, also called requirements engineering, is the process of determining user expectations for a new or modified product. These features, called requirements, must be quantifiable, relevant and detailed. In software engineering, such requirements are often called functional specifications. Requirements analysis is critical to the success or failure of a systems or software project. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design.

4.1 Functional Requirements:

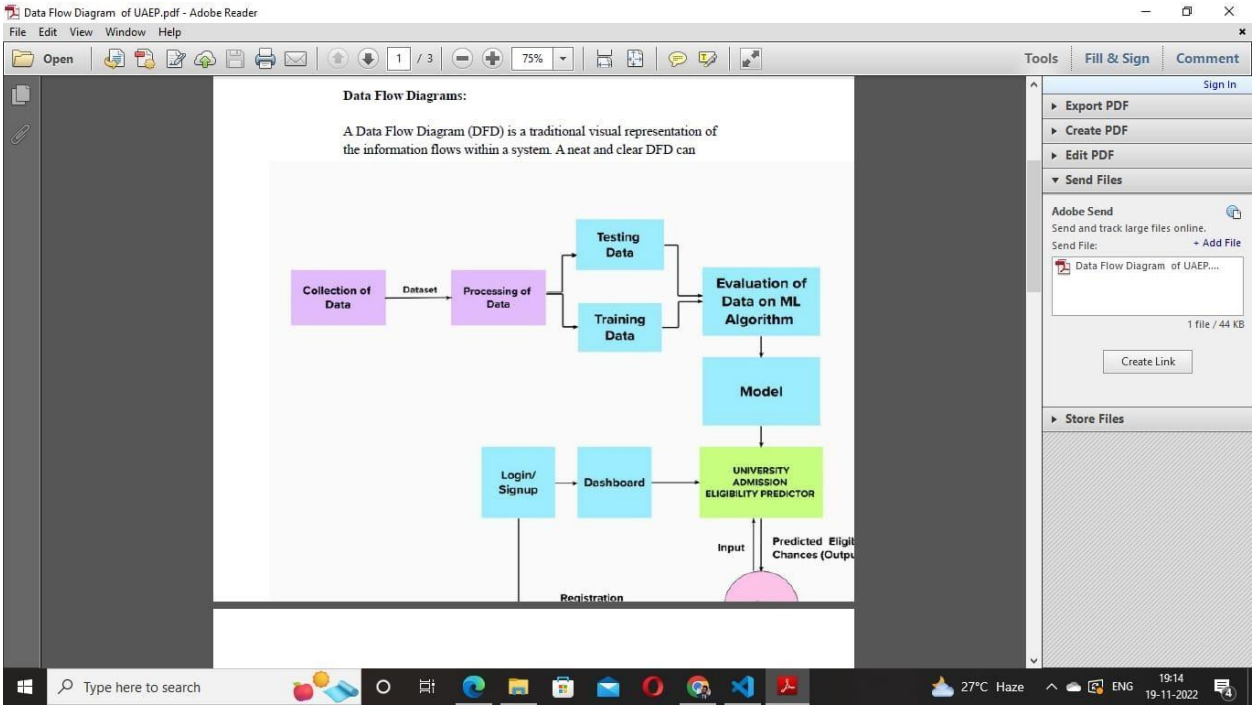
- Prediction
- Input form
- Percentage of chance

4.2 Non-Functional Requirements:

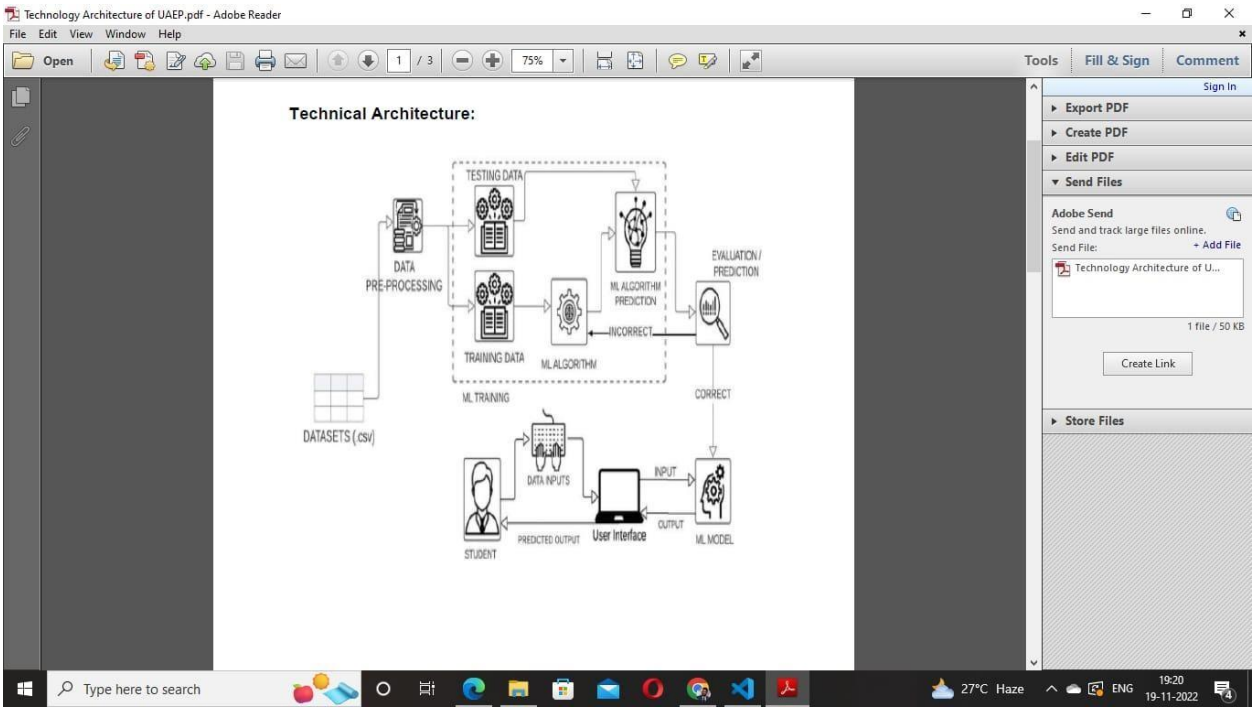
- Speed
- Security
- Portability
- Compatibility
- Capacity
- Reliability
- Environment
- Localization

5 .Project Design:

5.1 Data Flow Diagrams:



5.2 Solution and Technical Architecture:



5.3 User Stories

A user story is an informal, natural language description of features of a software system. They are written from the perspective of an end user or user of a system, and may be recorded on index cards, Post-it notes, or digitally in project management software.[1] Depending on the project, user stories may be written by different stakeholders like client, user, manager, or development team.

6 .PROJECT PLANNING AND SCHEDULING:

6.1 Sprint planning and Estimation:

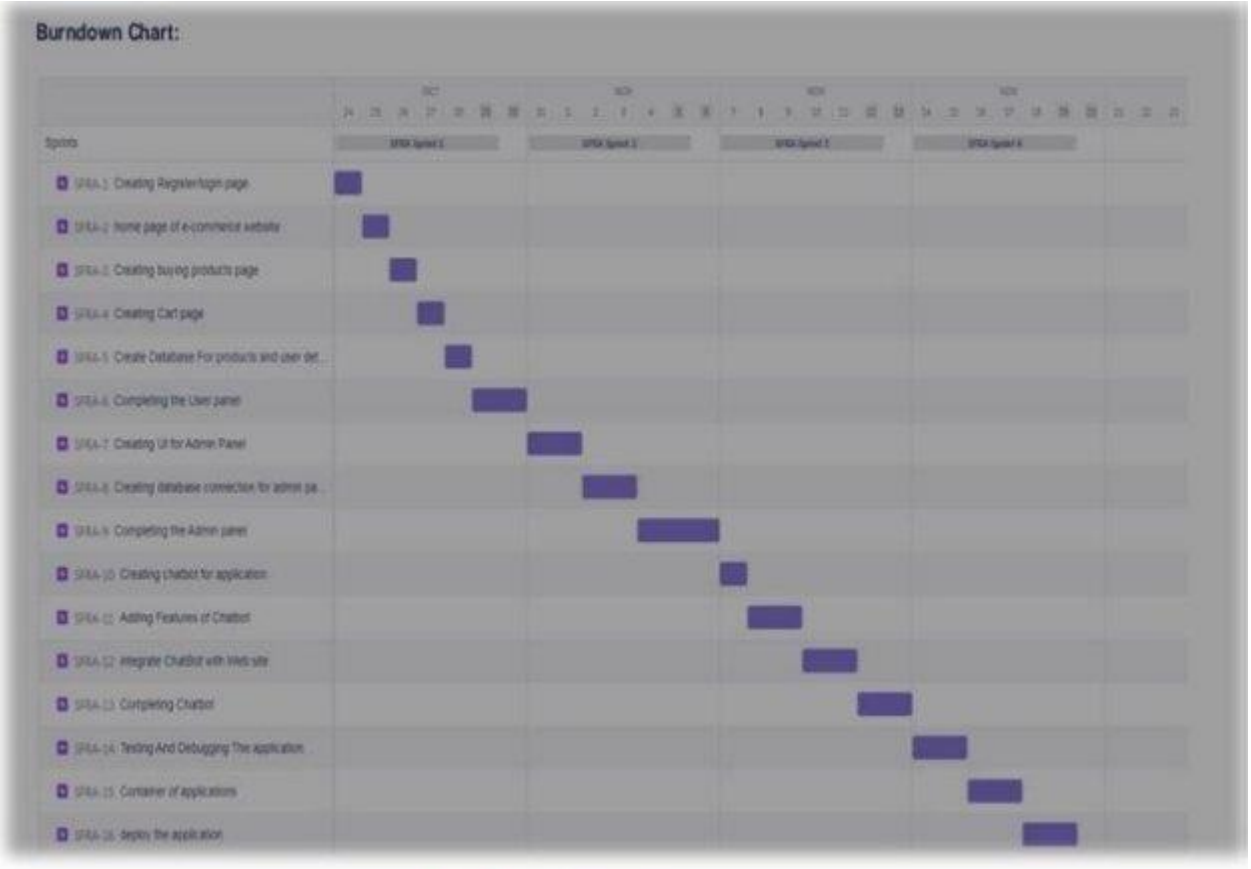
6.2 Sprint delivery Schedule:

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by	2	High	
Sprint	**Functional Requirement (Epic)**	**User Story Number**	**User Story / Task**	**Story Points**	**Priority**	**Team Members**
			entering my email, password, and confirming my password.			
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	
Sprint-2		USN-3	As a user, I can register for the application through Facebook	2	Low	
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	

Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	1	High	
	Dashboard					

Use the below template to create product backlog and sprint schedule

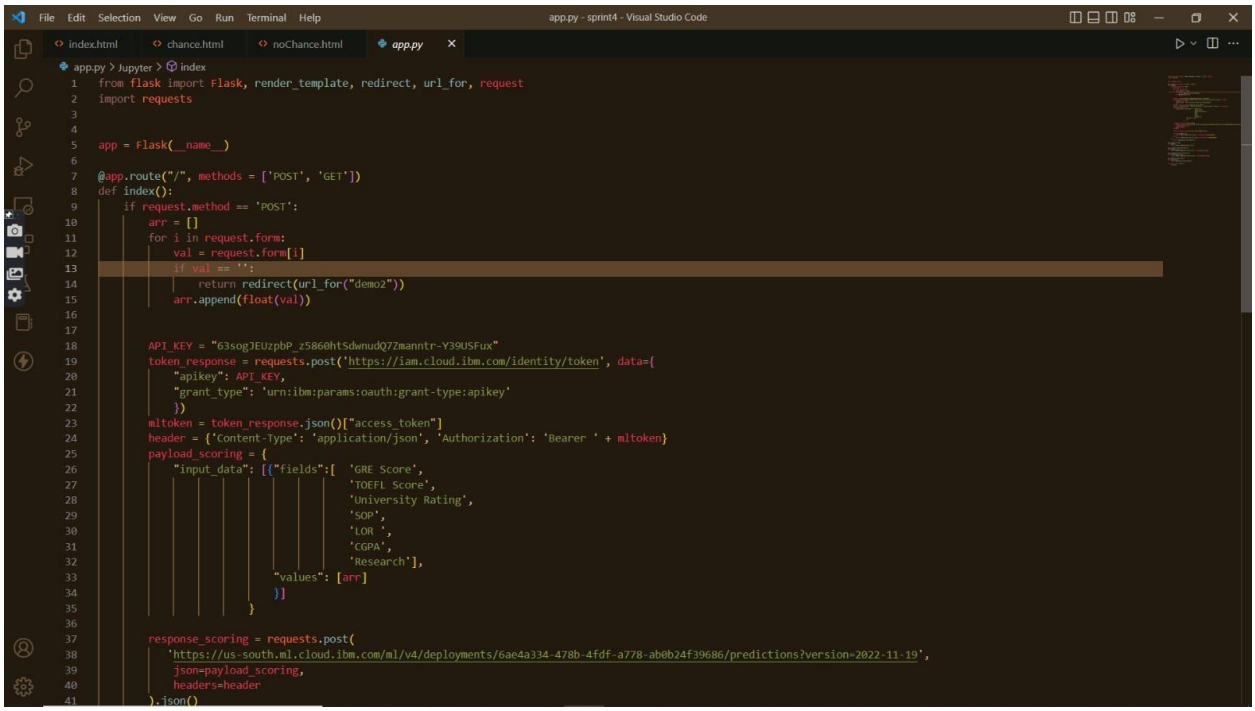
6.3 Reports From JIRA

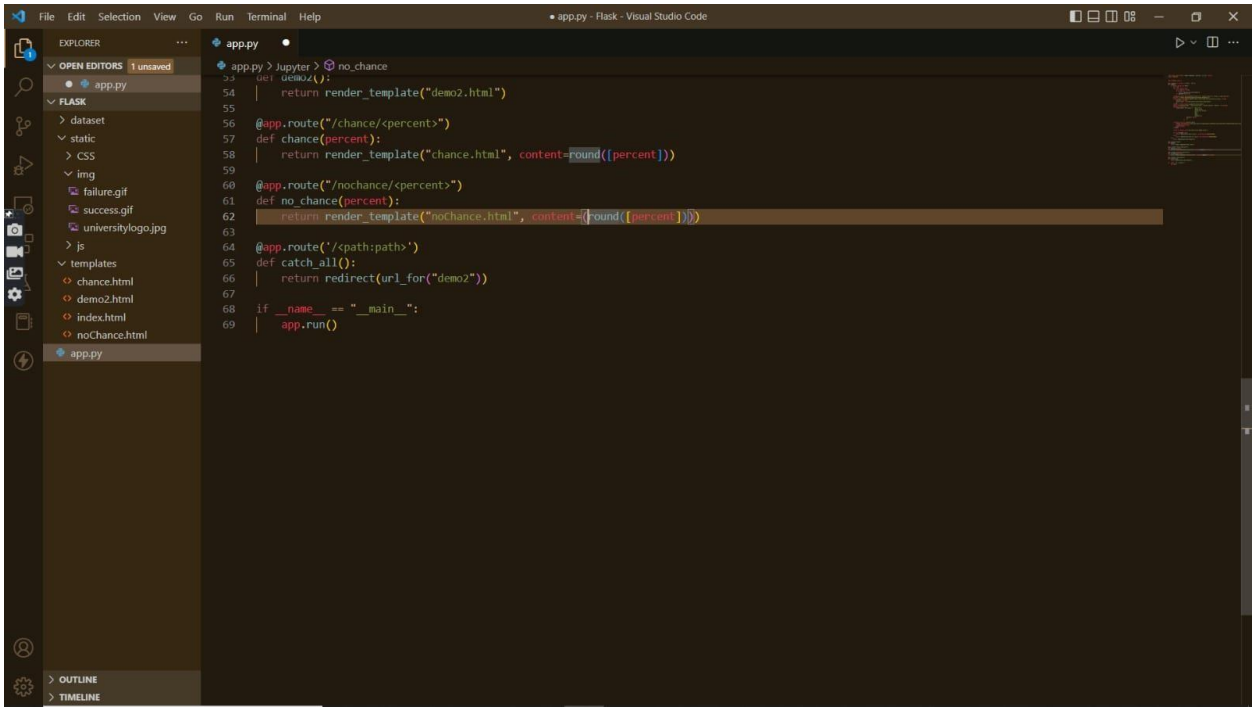


BURNDOWN CHART

7.CODING AND SOLUTIONING:

7.1 Feature 1:




File Edit Selection View Go Run Terminal Help
• app.py - Flask - Visual Studio Code
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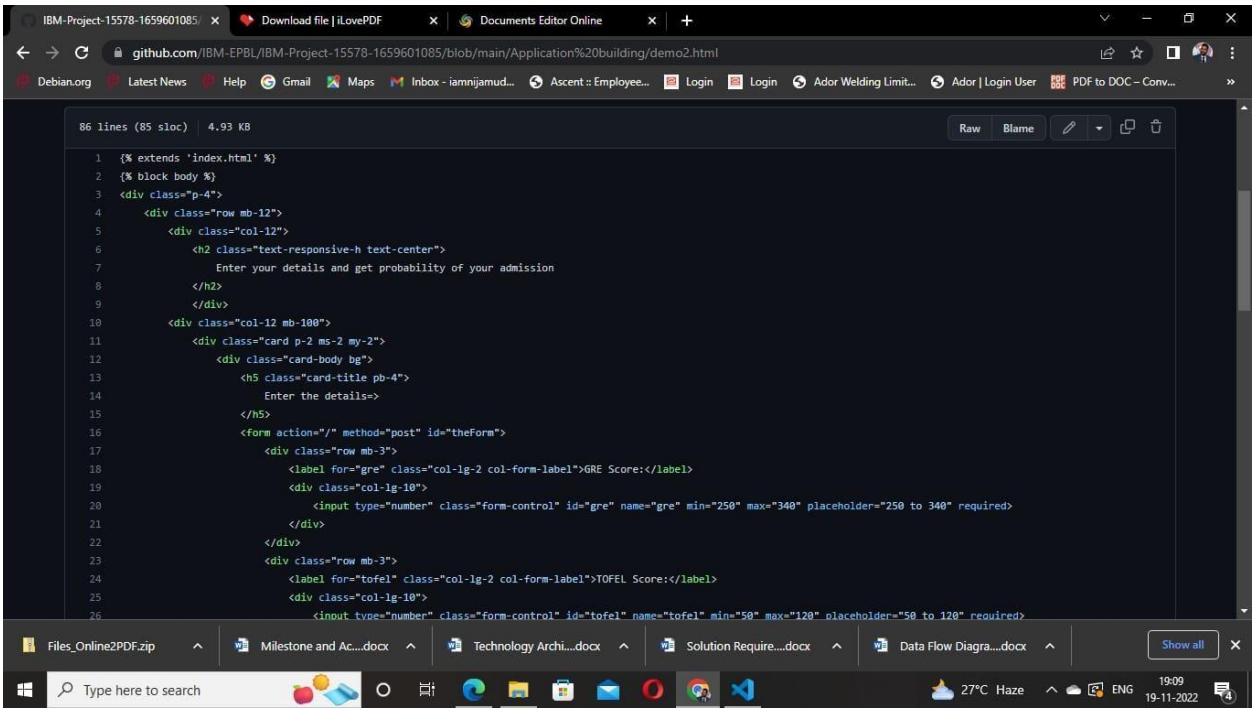
app.py
FLASK
dataset
static
CSS
img
failure.gif
success.gif
universitylogo.jpg
js
templates
chance.html
demo2.html
index.html
noChance.html
app.py
OUTLINE
TIMELINE
app.py
app.py > Jupyter > no_chance
def demo2():
return render_template("demo2.html")
@app.route("/chance/<percent>")
def chance(percent):
return render_template("chance.html", content=round([percent]))
@app.route("/nochance/<percent>")
def no_chance(percent):
return render_template("noChance.html", content=round([percent]))
@app.route('/<path:path>')
def catch_all():
return redirect(url_for("demo2"))
if __name__ == "__main__":
app.run()

7.2 Feature 2: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86 lines (85 sloc) 4.93 KB
Raw Blame
{% extends 'index.html' %}
{% block body %}

<h2 class="text-responsive-h text-center">
Enter your details and get probability of your admission
</h2>

<h5 class="card-title pb-4">
Enter the details=>
</h5>
<form action="/" method="post" id="theForm">

<label for="gre" class="col-lg-2 col-form-label">GRE Score:</label>

<input type="number" class="form-control" id="gre" name="gre" min="250" max="340" placeholder="250 to 340" required>

<label for="tofel" class="col-lg-2 col-form-label">TOFEL Score:</label>

Files_Online2PDF.zip
Milestone and Ac....docx
Technology Archi....docx
Solution Require....docx
Data Flow Diagra....docx
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27°C Haze
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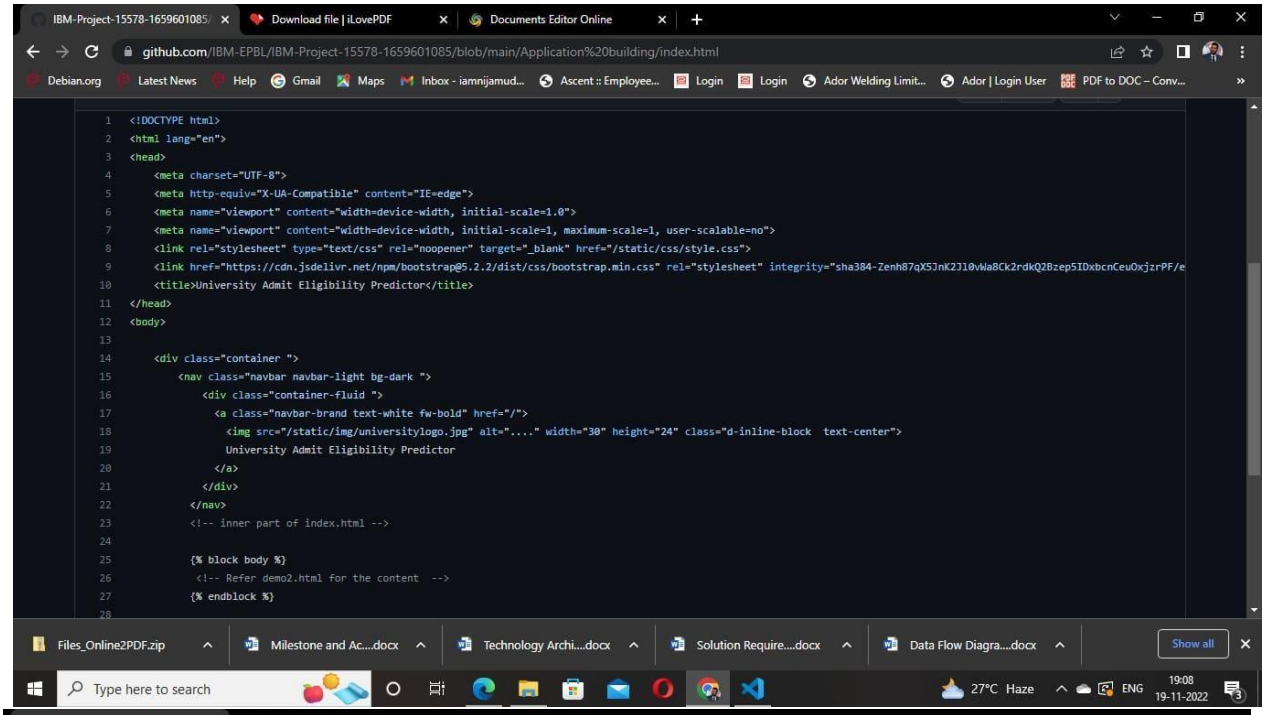
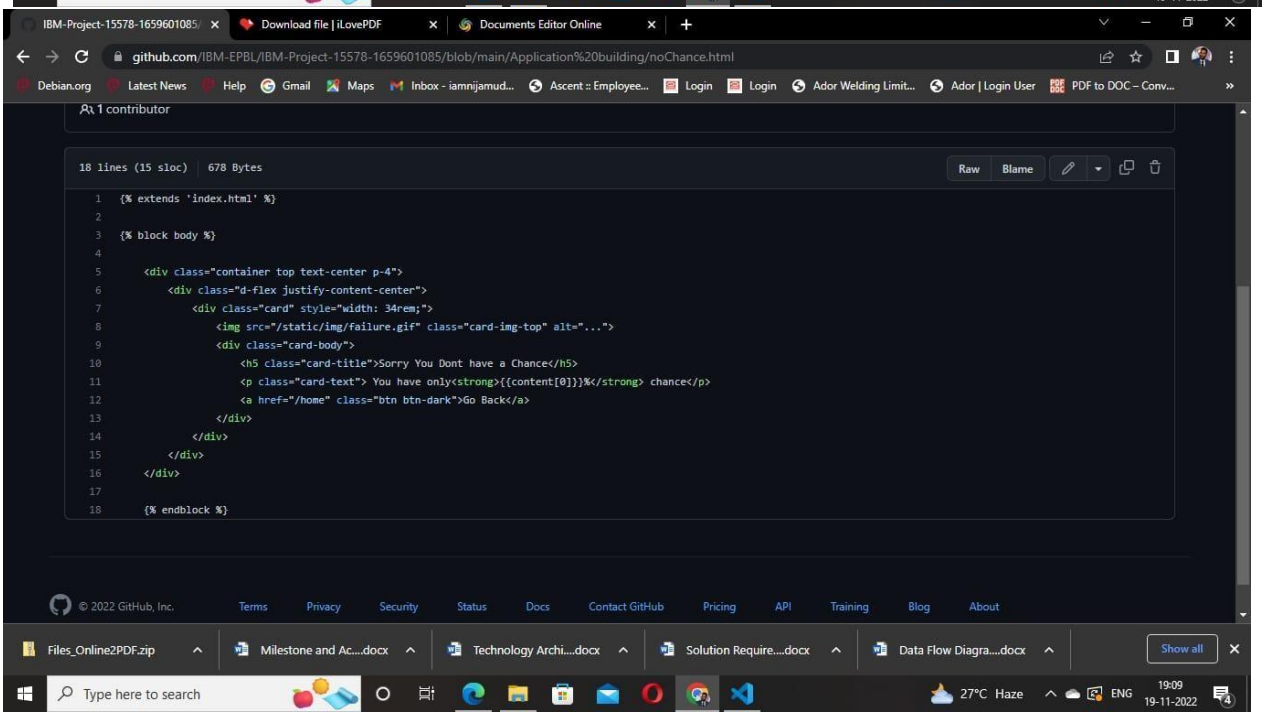
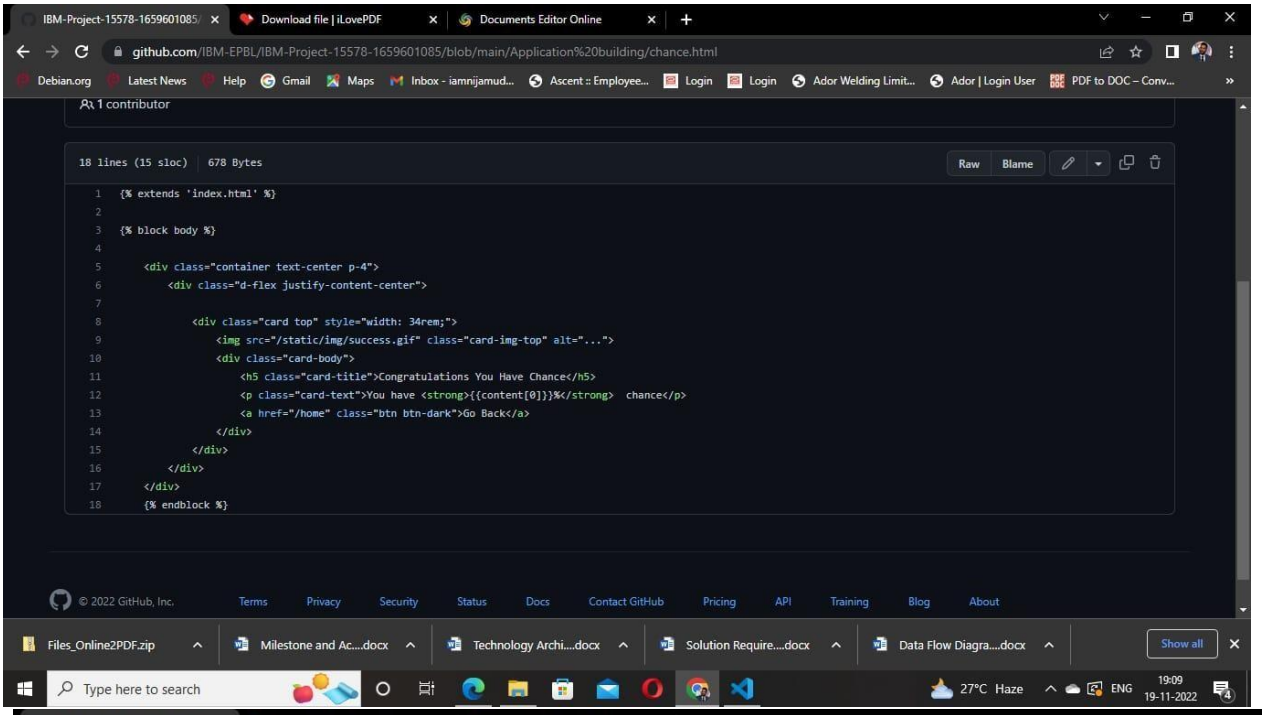
19-11-2022

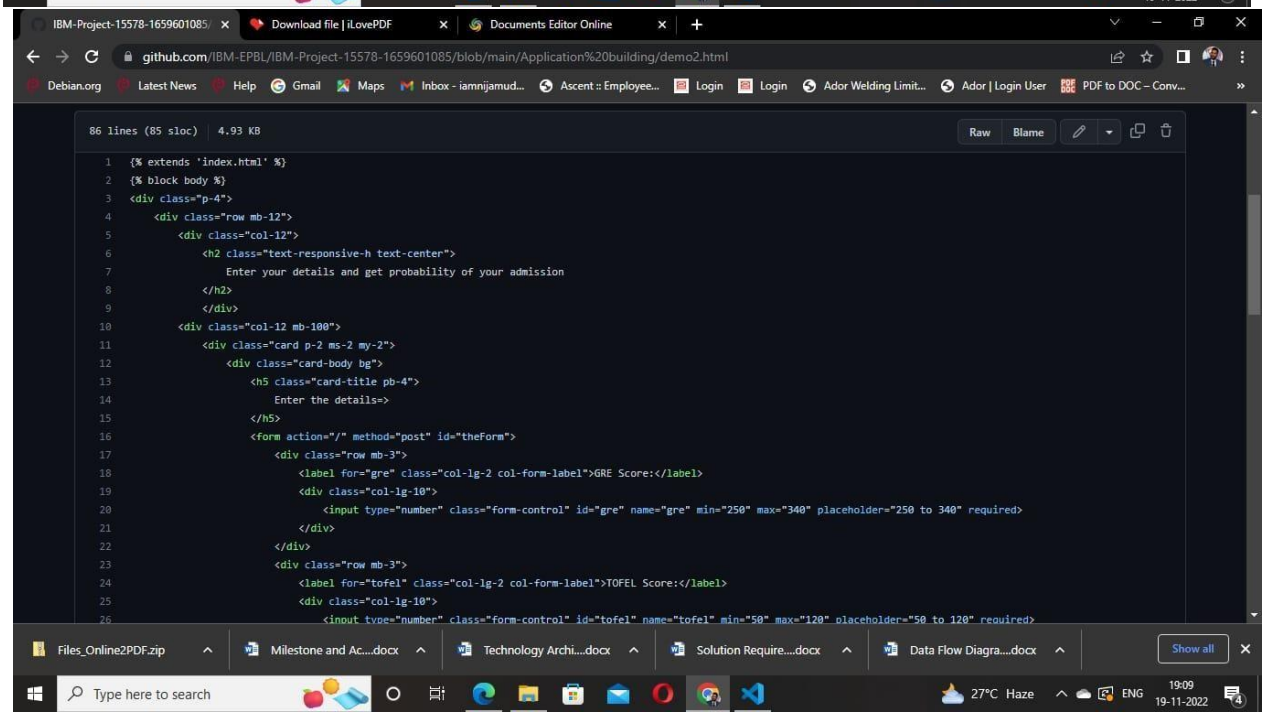


```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1, user-scalable=no">
    <link rel="stylesheet" type="text/css" rel="noopener" target="_blank" href="/static/css/style.css">
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/e
    <title>University Admit Eligibility Predictor</title>
</head>
<body>

    <div class="container ">
        <nav class="navbar navbar-light bg-dark ">
            <div class="container-fluid ">
              <a class="navbar-brand text-white fw-bold" href="/">
                <img src="/static/img/universitylogo.jpg" alt="...." width="30" height="24" class="d-inline-block  text-center">
                University Admit Eligibility Predictor
              </a>
            </div>
          </nav>
          <!-- inner part of index.html -->

          {% block body %}
           <!-- Refer demo2.html for the content  -->
          {% endblock %}
```



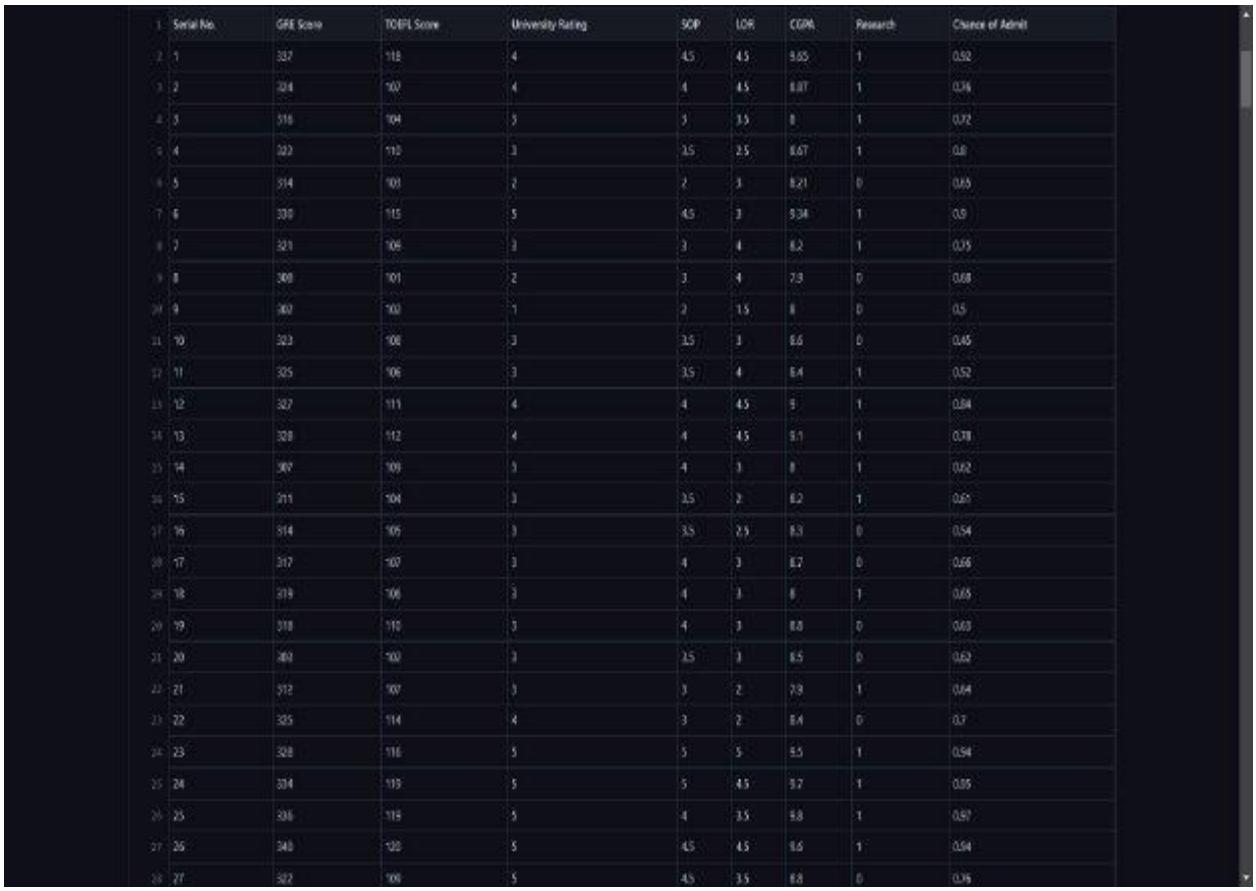
```
{% extends 'index.html' %}

{% block body %}

    <div class="container top text-center p-4">
        <div class="d-flex justify-content-center">
            <div class="card" style="width: 34rem;">
                <img src="/static/img/failure.gif" class="card-img-top" alt="...">
                <div class="card-body">
                    <h5 class="card-title">Sorry You Dont have a Chance</h5>
                    <p class="card-text"> You have only<strong>{{content[0]}}%</strong> chance</p>
                    <a href="/home" class="btn btn-dark">Go Back</a>
                </div>
            </div>
        </div>
    </div>

    {% endblock %}
```





8 . TESTING:

8.1 Test Case:



Serial No.	GRE Score	TOEFL Score	University Rating	SOP	LOR	CGPA	Research	Chance of Admit
1	337	118	4	4.5	4.5	9.65	1	0.92
2	324	107	4	4	4.5	8.87	1	0.76
3	316	104	3	3	3.5	8	1	0.72
4	322	110	3	3.5	2.5	8.67	1	0.8
5	314	103	2	2	3	8.21	0	0.65
6	330	115	5	4.5	3	9.34	1	0.9
7	321	109	3	3	4	8.2	1	0.75
8	308	101	2	3	4	7.9	0	0.68
9	302	102	1	2	1.5	8	0	0.5
10	323	108	3	3.5	3	8.6	0	0.45
11	325	106	3	3.5	4	8.4	1	0.52
12	327	111	4	4	4.5	9	1	0.84
13	328	112	4	4	4.5	9.1	1	0.78
14	307	109	3	4	3	8	1	0.62
15	311	104	3	3.5	2	8.2	1	0.61
16	314	105	3	3.5	2.5	8.3	0	0.54
17	317	107	3	4	3	8.7	0	0.66
18	319	106	3	4	3	8	1	0.65
19	318	110	3	4	3	8.8	0	0.63
20	303	102	3	3.5	3	8.5	0	0.62
21	312	107	3	3	2	7.9	1	0.64
22	325	114	4	3	2	8.4	0	0.7
23	328	116	5	5	5	9.5	1	0.94
24	334	119	5	5	4.5	9.7	1	0.95
25	336	119	5	4	3.5	9.8	1	0.97
26	340	120	5	4.5	4.5	9.6	1	0.94
27	322	109	5	4.5	3.5	8.8	0	0.76

8.2 User Acceptance Testing:

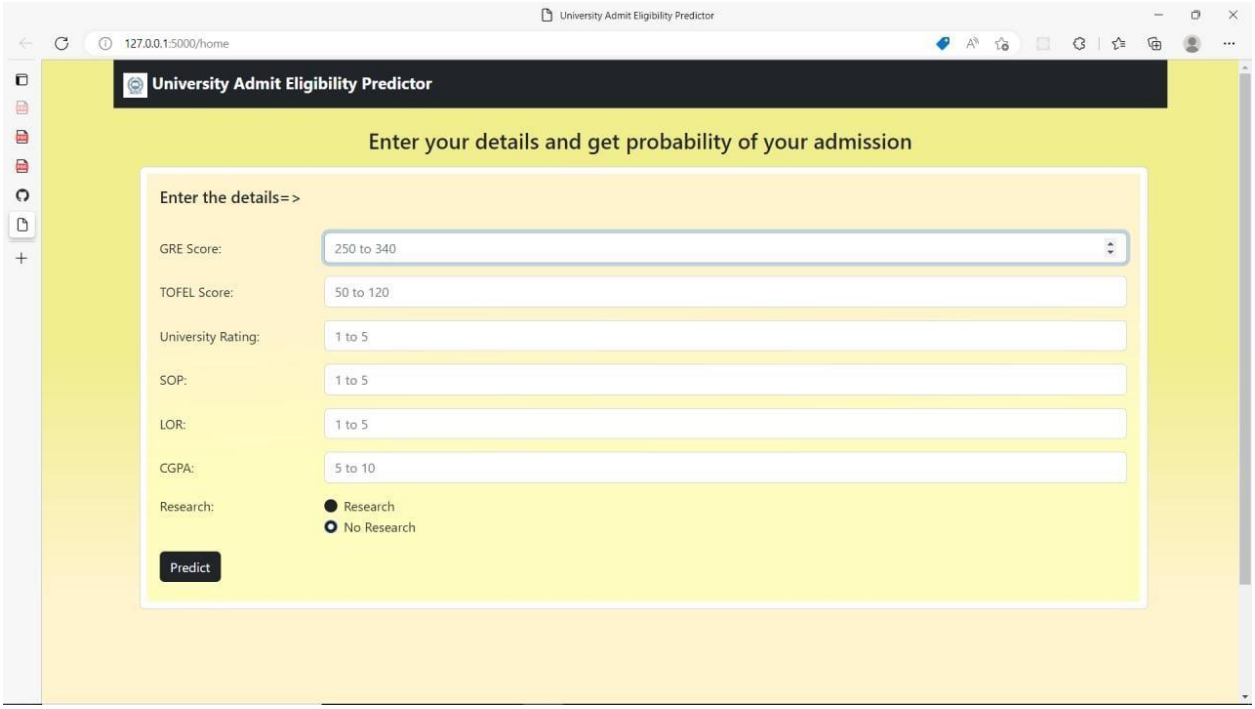
User Acceptance Testing (UAT) is a type of testing performed by the end user or the client to verify/accept the software system before moving the software application to the production environment. UAT is done in the final phase of testing after functional, integration and system testing is done.

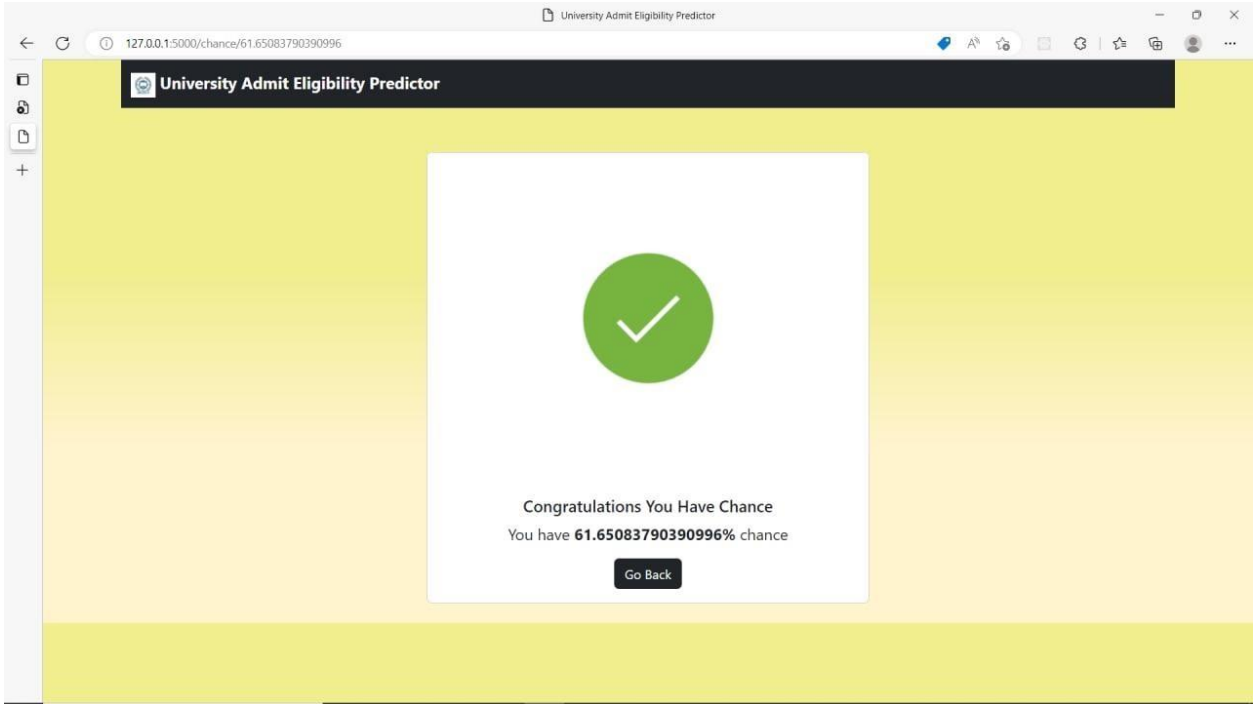
The User Acceptance of this product is not surveyed enough to give a solid conclusion. The theretical and hypothetical acceptance is calculated to be high enough to conclude that this product is usable and valuable.

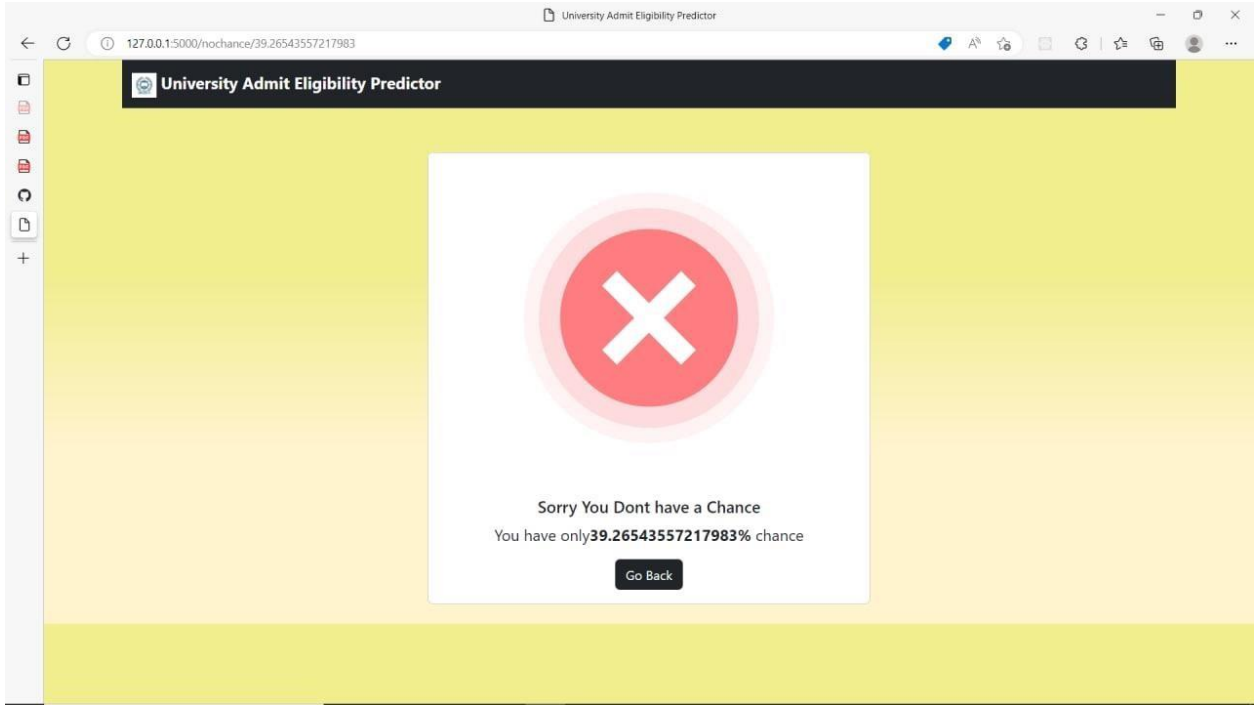
9.RESULTS:

9.1 Performance Metrics

The Performance is the Accuracy of the model trained. The training accuracy of the model is 92%. The testing accuracy of the model is 89%.




University Admit Eligibility Predictor
127.0.0.1:5000/chance/61.65083790390996
University Admit Eligibility Predictor
Congratulations You Have Chance
You have 61.65083790390996% chance
Go Back


University Admit Eligibility Predictor
127.0.0.1:5000/nochance/39.26543557217983
University Admit Eligibility Predictor
Sorry You Dont have a Chance
You have only39.26543557217983% chance
Go Back

10. ADVANTAGES &DISADVANTAGES

- **ADVANTAGE** 1. Know the percentage 2.Lower investigation 3.Provide Relevant Material

  4. Reduce time consumption

  5. Good user experience

- **DISADVANTAGE**

  1. Significiant investments required.
  2. Inable to capture changes
  3. Privacy concerns

11. CONCLUSION

We have successfully developed an application using python flask, HTML,CSS. By using the application we can predict weather we can get admission in the desired University or not.

12. FUTURESCOPE

In future we would like to enhance the existing model in such a way that consumer feels the same way when purchasing in store using Virtual reality and other upcoming technologies. Research to improve the accuracy of the system is under progress.

13. APPENDIX

GitHub Link : https://github.com/IBM-EPBL/IBM-Project-15578-1659601085