Fake News Faux Real :
Lab 4

Tools And Technologies :

Python : is a popular high-level programming language known for its simplicity and ease of use. It is used for a wide range of applications, including web development, scientific computing, data analysis, artificial intelligence, and more. Python has a large community of developers and a vast library of packages and modules that make it easy to develop complex applications.

Flask and Django : are both web frameworks written in Python. Flask is a lightweight and flexible framework that is ideal for small to medium-sized web applications. Flask is customizable and allows developers to use only the features they need.

Jupyter Notebook : is an open-source web application that allows you to create and share documents containing live code, equations, visualizations, and narrative text. It is widely used in data science and scientific computing for data exploration, prototyping, and collaboration. Jupyter Notebook supports many programming languages, including Python, R, and Julia.

HTML (Hypertext Markup Language) : is the standard markup language used to create web pages. HTML uses a series of tags to define the structure and content of a web page, such as headings, paragraphs, links, images, and more. HTML is a static language, meaning that it doesn't provide interactivity on its own.

CSS (Cascading Style Sheets) : is a language used to describe the presentation of a document written in HTML. CSS is used to add styles to web pages, such as colors, fonts, layout, and more. CSS allows you to separate the presentation from the content of a web page, which makes it easier to maintain and modify the appearance of a website.

Bootstrap : is a popular front-end framework used to design and develop responsive, mobile-first web pages. It provides a set of pre-designed CSS styles and JavaScript plugins that make it easy to create professional-looking web pages quickly. Bootstrap is widely used in web development and is compatible with most modern web browsers.

MongoDB : is a NoSQL document-oriented database that stores data in JSON-like documents with dynamic schemas. It is designed to handle large amounts of data and is known for its scalability, flexibility, and performance. MongoDB is widely used in web development, data analytics, and other applications that require fast and efficient data storage and retrieval.

Use-Case Size Point Estimation :

Here, we are going to be using Use-Case Size Point estimation as we have used "use-cases".

We have the following transactions:

Use-Case	Number of Transactions	Complexity
Sign up	1	Simple
Feeding article text for fake news classification	1	Simple
Feeding article text for fake news classification by providing a link to the article.	1	Simple
Notifying the user of the classification result for a given article	1	Simple
Feature Extraction for Fake News Classification	1	Simple
Classification using SVM for FakeRanks Faux Real with Preprocessed Text Input by the System	1	Simple

1. **Calculating unadjusted use-case points :**

The weights to each use case will be assigned as follows:

Use-Case Complexity	Number of Transactions	Use-Case Weight
Simple	≤3	5
Average	4 to 7	10
Complex	>7	15

Unadjusted Use-Case Weight (UUCW):
1 * 5 + 1 * 5 + 1 * 5 + 1 * 5 + 1 * 5 + 1 * 5 = 30

The Unadjusted Actor Weight (UAW) is determined as follows:

Actors	Complexity	Reason	Weight
Simple	System	Interaction through API	1
Average	Developer	Protocol based interaction	2
Complex	User	Interaction through GUI	3

Actors	Number of Actors	Weight
Simple	3	1
Average	0	2
Complex	2	3

Unadjusted Actor Weight (UAW) = 3 * 1 + 0 * 2 + 2 * 3 = 3 + 0 + 6 = 9

Now, we will calculate Unadjusted Use-Case Points (UUCP):
UUCP = UUCW + UAW = 30 + 9 = 39

2. Adjusting For Technical Complexity:

Factor	Description	Weight	Rated Value	Impact
T1	Distributed System	2.0	1	2.0
T2	Response time or throughput performance objectives	1.0	2	2.0
T3	End user efficiency	1.0	3	3.0
T4	Complex internal processing	1.0	2	2.0
T5	Code must be reusable	1.0	2	2.0
T6	Easy to install	0.5	1	0.5
T7	Easy to use	0.5	5	2.5
T8	Portable	2.0	1	2.0
T9	Easy to change	1.0	1	1.0
T10	Concurrent	1.0	1	1.0
T11	Includes special security objectives	1.0	1	1.0
T12	Provides direct access for third parties	1.0	1	1.0
T13	Special user training facilities are required	1.0	1	1.0

Total Technical Factor (TFactor) : 21.0

$$TCF = 0.6 + (0.01 \times TFactor)$$
$$TCF = 0.6 + (0.01 \text{ x } 21.0)$$
$$TCF = 0.81$$

3. Calculating environmental impact:

Factor	Description	Weight (W)	Rated Value (0-5) (RV)	Impact (I=W×RV)
F1	Familiar with the project model that is used	1.5	3	4.5
F2	Application experience	.5	3	1.5
F3	Object-oriented experience	1.0	4	4.0
F4	Lead analyst capability	.5	4	2.0
F5	Motivation	1.0	0	0.0
F6	Stable requirements	2.0	3	6.0
F7	Part-time staff	-1.0	0	0.0
F8	Difficult programming language	-1.0	4	-4.0
Total Environment Factor (EFactor)				14.0

Environmental Factor (EF) = 1.4 + (-0.03 × EFactor)

EF = 1.4 + (-0.03 * 14)

EF = 0.98

Adjusted Use-Case Points (UCP)
= UUCP × TCF × EF
= 39 * 0.81 * 0.98 = 30.96

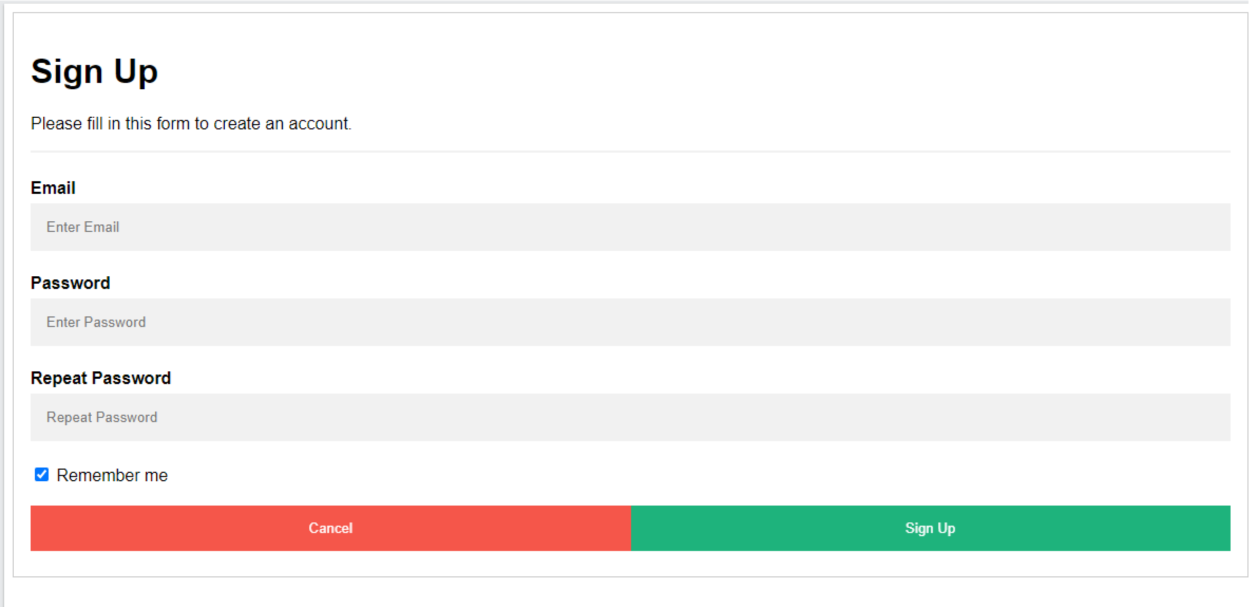
Assuming that man hours per UCP are 6;
Estimated efforts = 6 x 30.96 = 185.76 hours.

Let us consider 40 hours per week.

This means that we would spend about 5 weeks completing this project.

Initial Functionalities:

a. Sign Up Page:



Sign Up

Please fill in this form to create an account.

Email

Enter Email

Password

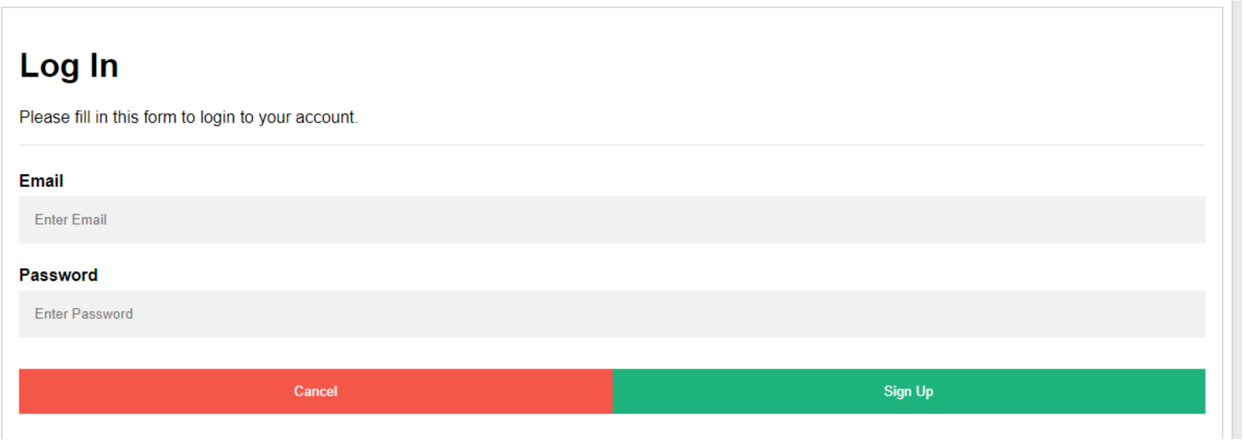
Enter Password

Repeat Password

Repeat Password

☑ Remember me

b. Login Page:



Log In

Please fill in this form to login to your account.

Email

Enter Email

Password

Enter Password