Project Design Phase-I Data Flow Diagram & User Stories

| Date	10/11/2023
Team ID	Team-592815
Project Name	Project
Maximum Marks	4 Marks

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Data Flow Diagram:

Level 0:

Level 1:

Flow Chart
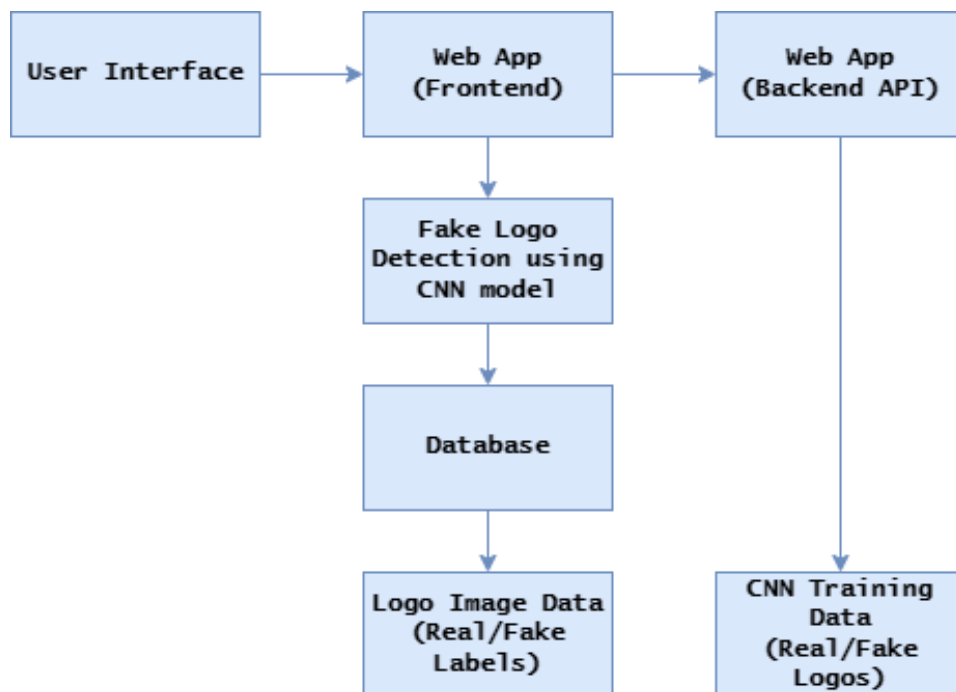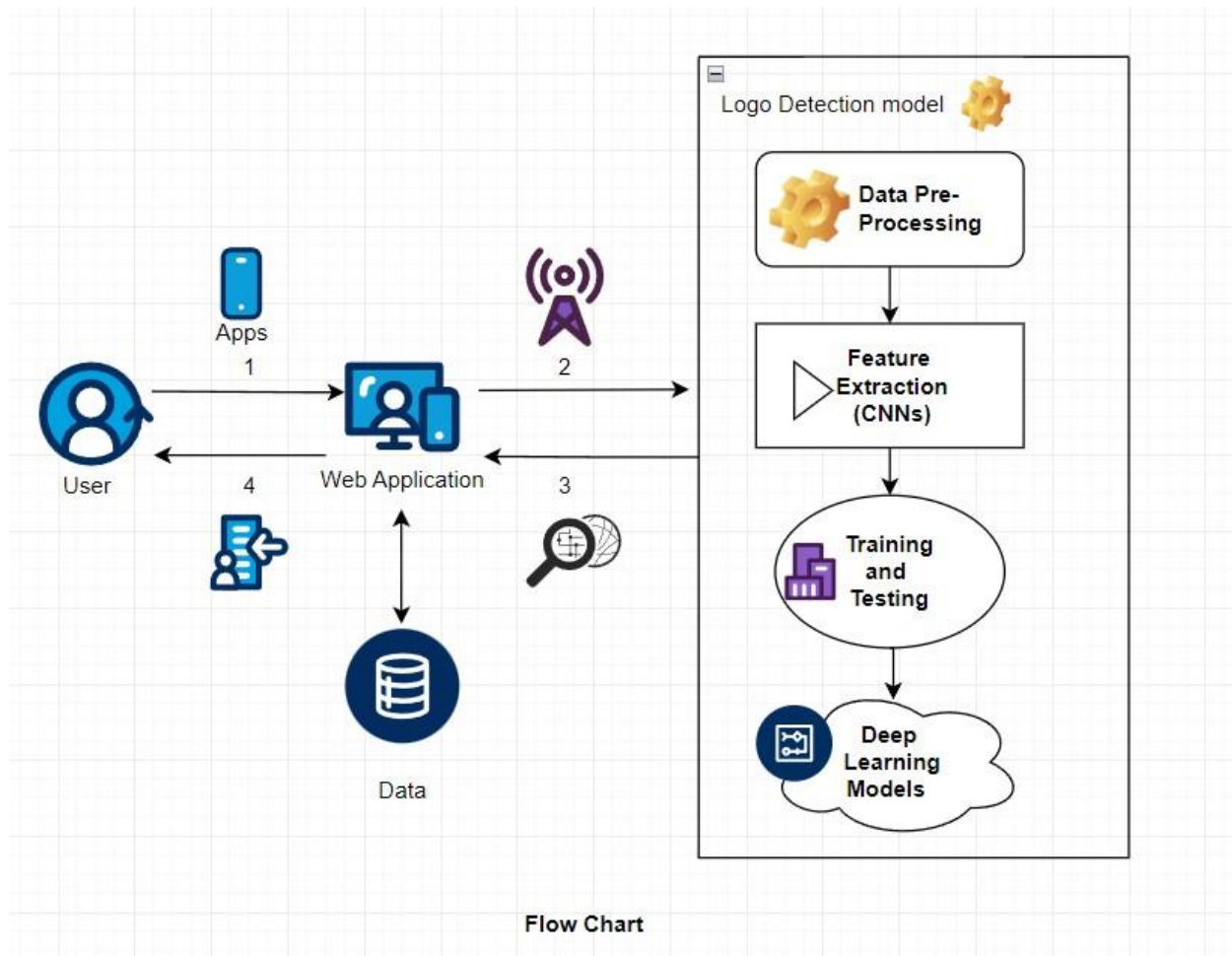
The process of Data Flow Diagram:

1. The process begins with the user accessing the application and entering their login credentials. This provides safe access to the service. After logging in, the user uploads the image to be verified.

2. After the image is uploaded, the system performs data preprocessing to improve its quality and prepare it for analysis. This might include tasks like scaling, noise reduction, and normalization. Convolutional Neural Networks (CNNs) are used to extract detailed information from images after preprocessing. CNNs are ideal for image analysis because they can recognize patterns and structures in visual data.

3. The preprocessed picture is now enhanced with extracted features and is sent into the deep learning models. These models have been trained to distinguish between real and counterfeit trademarks. They evaluate numerous factors such as color schemes, forms, proportions, and other unique features. This is an important step in assessing the validity of the submitted logo or product.

4. The output of the deep learning models is compared with the data included in the dataset file after that. This dataset provides a large number of genuine logos and their associated attributes. The comparison ensures that the evaluation is thorough and that the system can correctly identify any inconsistencies between the uploaded image and the reference data.

5. The system produces a definite result based on its analysis when the comparison procedure is finished. This result is then displayed to the user via the application interface. The final result typically provides a clear indication of whether the logo is genuine or whether there are indicators of potential counterfeit features. The method may also produce a confidence score to assess the degree of certainty in the determination.

User Stories:

User Type	Functional Requirement	User Story num.	User story	Acceptance criteria	priority	release
General Consumer	Consumer Trust	1	As a general consumer, I want to verify the authenticity of a product's logo before making a purchase.	The system offers an easy-to-use app. I can scan a product's logo using my camera. The app returns a classification result indicating whether the logo is real or fake.	High	Sprint-1
E-commerce Platform Administrator	Verify the authenticity of product listings by detecting and validating logos	2	As a E-commerce Platform Administrator, I want to ensure that all product listings on our platform accurately represent products, including the logos and branding.	I can review the verification results and take appropriate action, such as removing or flagging listings.	High	Sprint-1
Marketing Manager	Ensure that logos in Marketing materials are used in compliance with branding guidelines.	3	As a Marketing Manager, I want to verify that logos used in our marketing materials, including print and digital campaigns, adhere to our branding guidelines.	I can access to the system via our marketing department's online portal. I can receive a notification with details if there is anything wrong and can make necessary adjustments to marketing materials.	Medium	Sprint-2

Shop-keepers	To Verify the authenticity of product which they are buying from a retailer or directly from a consumer to validating logos	4	As a shopkeeper customer trust us to sell them authentic products as they are paying quite a huge amount for these brand's and if the get know that the products are fake it can harm the reputation of my	I can access the system through browers their I have to take picture of the product and upload it and it will tell me if the product is fake or real a with a good reason	Medium	Sprint-2
			shop and the trust of customer			
Salesman	To convince the customer that the product he is selling are authentic and they should buy it	5	Salesmen often face the perception that they are attempting to peddle inexpensive and counterfeit products. However, in reality, many salesmen strive to offer genuine products and understand that earning the trust of their customers is of paramount importance for their business.	So I can access this system through app or I can ask my customer to check the authentic product by using the same app in their phone this way it will help to gain their trust	Medium	Sprint-2

| Digital Artists | To protect work ethic and to ensure that artworks are genuine and not imitating it. | 6 | As a digital artist, I'd want to use the Fake Logo Detection service to confirm that the logos I include into my work are genuine and do not violate any copyrights. | It must allow easy logo upload in common formats, give quick and accurate analysis, manage logo variations, have a user-friendly interface, and link with current systems. It should instantly warn users of fraudulent logos, allow for comment on false positives, and create thorough reports. It should provide speedy analysis, unambiguous authenticity signal, handle false positives, and maybe interact with digital art tools while assuring privacy, security, and affordability for digital artists. | Low | Sprint-3 |
| Experienced consumer | To gain knowledge of identifying | 7 | As an experienced buyer, I'd want to use the Fake Logo | The service must offer a user-friendly interface, | Medium | Sprint-1 |

	counterfeit goods easily.		Detection service to make educated purchase selections, regardless of whether the product is real or counterfeit.	performing quick logo analysis with obvious authenticity signals, and educate customers about counterfeit goods. It should be able to recognize small logo alterations while being anonymous, and manage false positives with user feedback. Furthermore, the solution should be affordable, promote security and privacy, stay neutral toward certain businesses, and preferably link with major marketplaces for easy verification.		