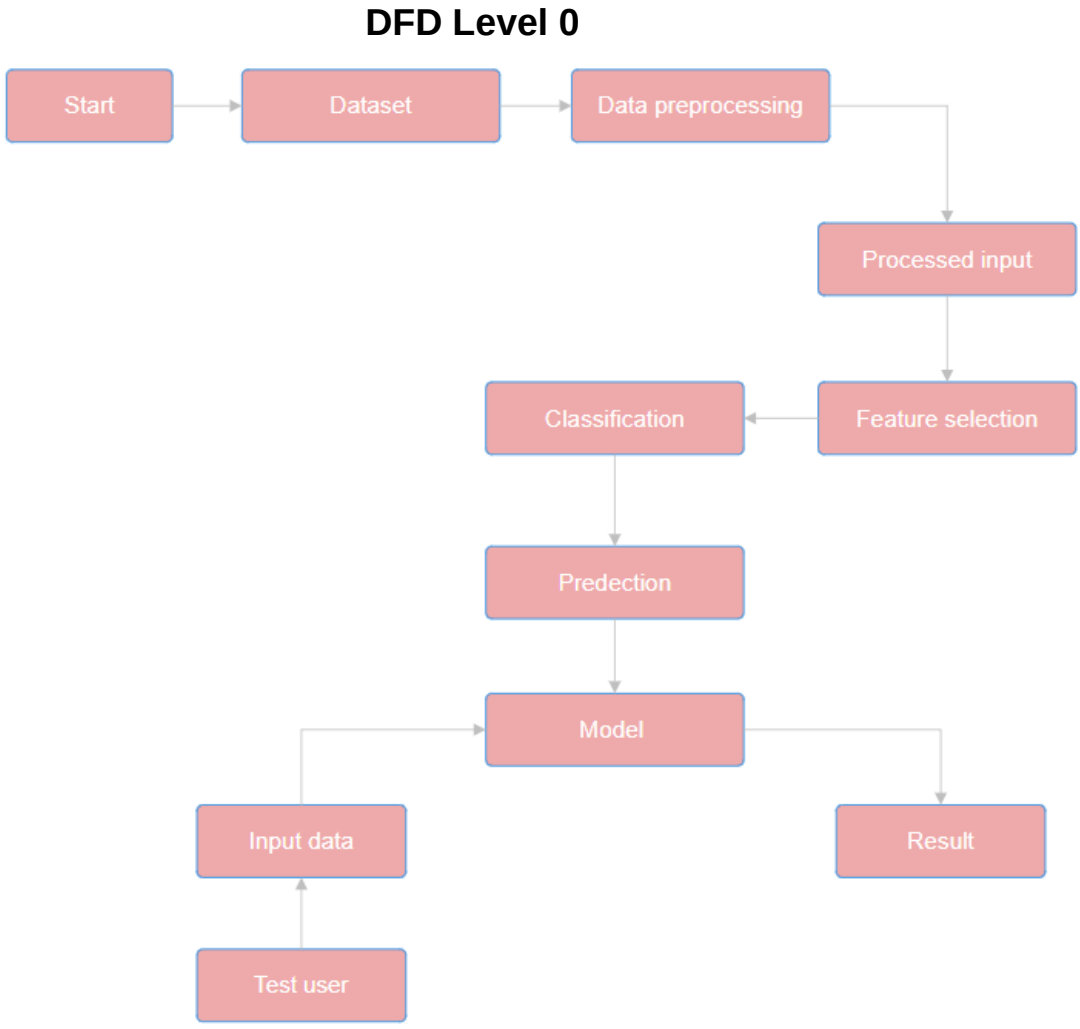
Project Design Phase-II
Data Flow Diagram & User Stories

Date	13 November 2023
Team ID	Team-591594
Project Name	Online Payments Fraud Detection using ML
Maximum Marks	4 Marks

Data Flow Diagrams:

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.



User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Data Scientist	Data Collection and Preprocessing	USN-1	As a data scientist, I want to preprocess the collected data to make it suitable for training.	Raw data is loaded, processed, and prepared, addressing missing values, outliers, normalization, scaling, categorical encoding, and splitting into training and testing sets.	High	Sprint-1
Data Scientist	Basic ML Model Development	USN-2	As a data scientist, I want to develop a basic ML model for fraud detection.	A basic machine learning model is implemented. Model is trained on the preprocessed data. Model performance metrics are calculated.	High	Sprint-1
Data Scientist	Model Enhancement and Validation	USN-3	As a data scientist, I want to enhance and validate the ML model for better accuracy.	The model has performed iterative refinement, including performance evaluation, analysis, and identification of necessary improvements, enhancements, and cross-validation to ensure robustness for better accuracy.	Medium	Sprint-2
Data Scientist	Model Enhancement	USN-4	As a data scientist, I want to fine-tune	Hyper parameter tuning is conducted.	High	Sprint-2

	and Validation		the model parameters for optimal performanc e.	Optimal parameters are identified for improved model performance.		
Develop er	Saving Model and Web application development	USN-5	As a developer, I want to save the trained ML model for later use.	The trained machine learning model is successfully saved in a format compatible with deployment.	Low	Sprint-3
Develop er	Saving Model and Web application development	USN-6	As a developer, I want to develop a Flask web application for fraud detection.	A Flask web application is created. The application integrates the trained fraud detection model. User inputs are accepted through the application.	High	Sprint-3
Tester	Testing Web Application with Test User	USN-7	As a tester, I want to test the web application with simulated user interactions.	Simulated user interactions are tested. The application handles both valid and invalid inputs appropriately. No critical errors or crashes occur during testing.	Mediu m	Sprint-4
Tester	Testing Web Application with Test User	USN-8	As a tester, I want to identify and fix any bugs or issues in the web application.	Any bugs or issues identified during testing are documented. Bugs are categorized by severity. Developers receive clear information to replicate and fix the issues.	Mediu m	Sprint-4