Project Design Phase-II
Data Flow Diagram & User Stories

Date	30 October 2023
Team ID	2.11
Project Name	Malware Detection and Classification
Maximum Marks	4 Marks

Data Flow Diagrams:

Malware Detection and Classification

USER INPUT

Malware Sample

PROCESSING PIPELINE

Feature Extraction

Malware Classification

DATA STORAGE

Classification Results

Malware Database
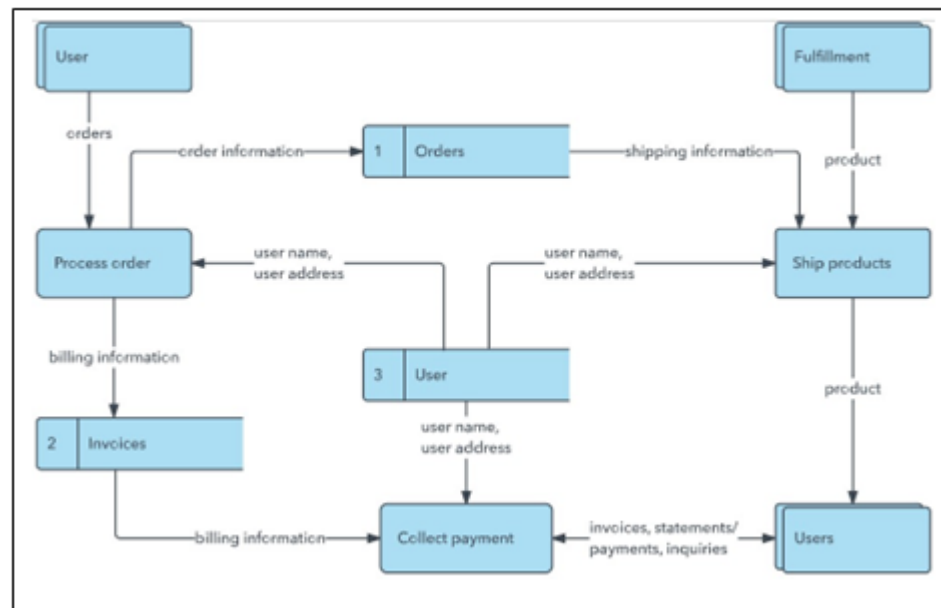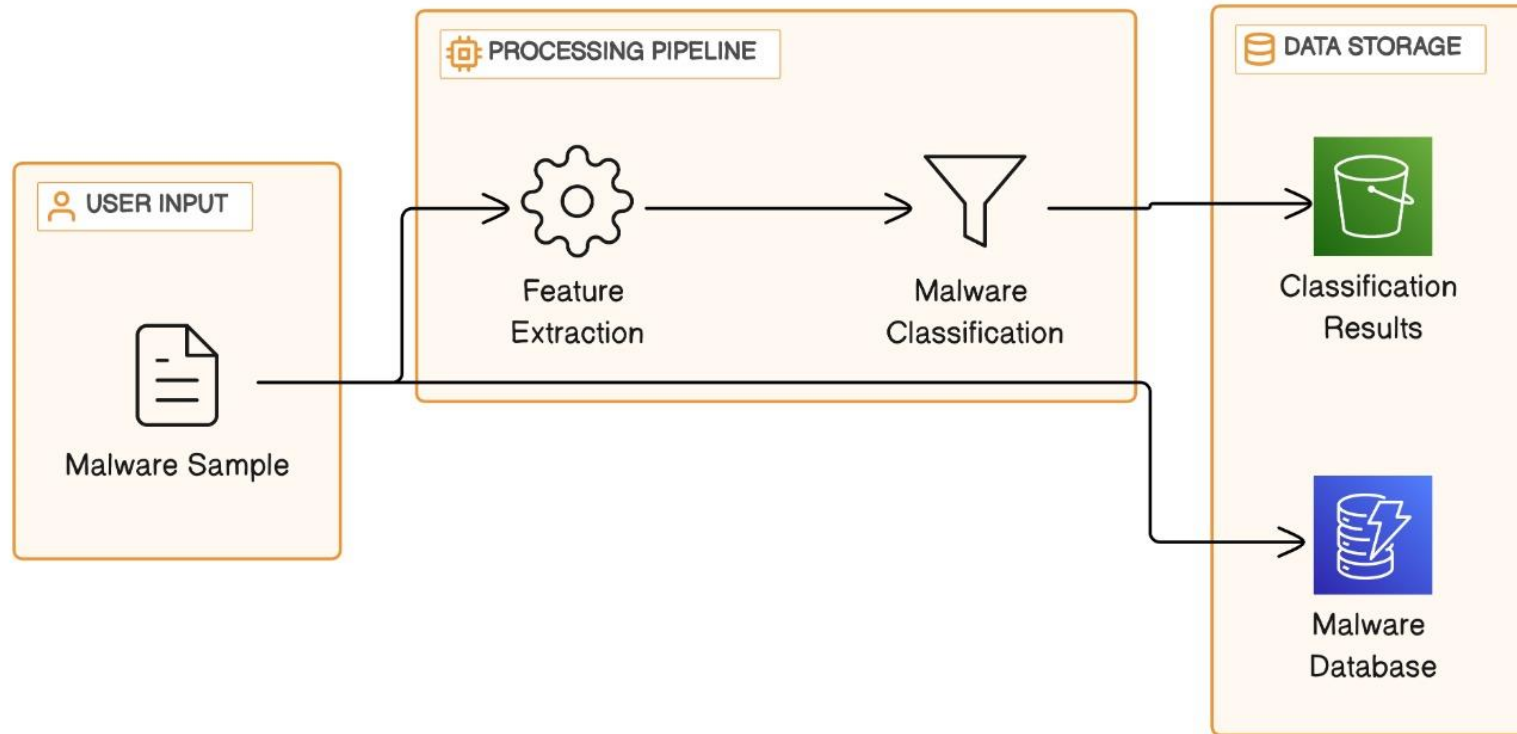
User Stories

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

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Project Scope and Objectives	USN-1	Define the project's goals, such as building a machine learning model to detect malware in memory dumps.	2	High	Mohan Raj G
Sprint-2	Data Collection	USN-1	Collect the necessary resources, including datasets of memory dumps, Python libraries. Acquire a dataset of memory dumps that contains samples of both benign and malicious software.	1	High	Hiya Sharma
Sprint-3	Data Preprocessing	USN-1	Clean the dataset by handling missing values and outliers. Split the dataset into features (X) and the target variable (y).	2	Medium	Shashibhushan Das
Sprint-3	Feature Selection	USN-2	Select relevant features for model training	1	Low	Shashibhushan Das
Sprint-4	Model Selection	USN-1	Research and select appropriate machine learning algorithms for malware detection. Experiment with different models and choose the one that provides the best results.	2	Medium	Athibhan Pruthve
Sprint-4	Model Training	USN-2	Train the selected machine learning model on the training dataset.	1	High	Athibhan Pruthve
Sprint-4	Model Testing	USN-3	Test the model on the testing dataset to ensure it generalizes well to unseen data.	2	High	Athibhan Pruthve
Sprint-5	Visualize Results	USN-1	Create visualizations to present the results effectively, such as confusion matrices or ROC curves.	1	Medium	Hiya Sharma

Sprint-5	Documentation	USN-2	Create documentation that explains the project, including the dataset, methodology, and model details.	2	Medium	Hiya Sharma
Sprint-5	Project Completion	USN-3	Conclude the project, archive the code, documentation, and datasets, and ensure that it is well-organized for future reference.	2	Low	Athibhan Pruthve