<div align="center">**Project Design Phase-II**
Data Flow Diagram & User Stories</div>

| Date	27 October 2023
Team ID	592655
Project Name	Disease Prediction Using Machine Learning
Maximum Marks	4 Marks

Data Flow Diagrams:

 1. **Data Collection**: External entities, such as "Patients" and "Healthcare Providers," provide data to the system. This data may include patient records, medical history, lab results, and other relevant information. The "Data Sources" retrieve and supply this data.

2. **Data Repository**: The collected data is stored in the "Data Repository." This repository houses patient data, medical records, lab results, training data for the machine learning model, and the model's output.

3. **Disease Prediction Model**: This core component consists of several processes:
- **Data Preprocessing (DP)**: The data is cleaned and prepared for analysis.
- **Feature Extraction (FE)**: Relevant features are extracted from the preprocessed data.
- **Machine Learning Model (ML)**: The machine learning algorithm processes the features and makes predictions.
- **Model Training (MT)**: The model is trained on historical data to improve its predictive capabilities.
- **Prediction (PD)**: When a patient requests a prediction, the model utilizes its training to make a prediction about the likelihood of a disease.

4. **Results and Reporting**: The prediction results are sent back to the requesting "Patient" or "Healthcare Provider" for further action. The model's output is also stored in the "Data Repository" for future reference or analysis.

Flow in the model:

The Disease Prediction Model follows a structured data flow process. Initially, external entities like "Patients" and "Healthcare Providers" provide data, which is collected and stored in the "Data Repository." Within the model, data undergoes preprocessing, feature extraction, and is then analyzed by the Machine Learning Model. This model is further trained on historical data to improve its predictive accuracy. When a prediction is requested, the model provides an output, which is shared with the requesting parties. This flow ensures that data is effectively processed and used to make informed disease predictions for better patient care and decision-making.

Data flow diagram:

Disease Prediction Model Data Flow Diagram
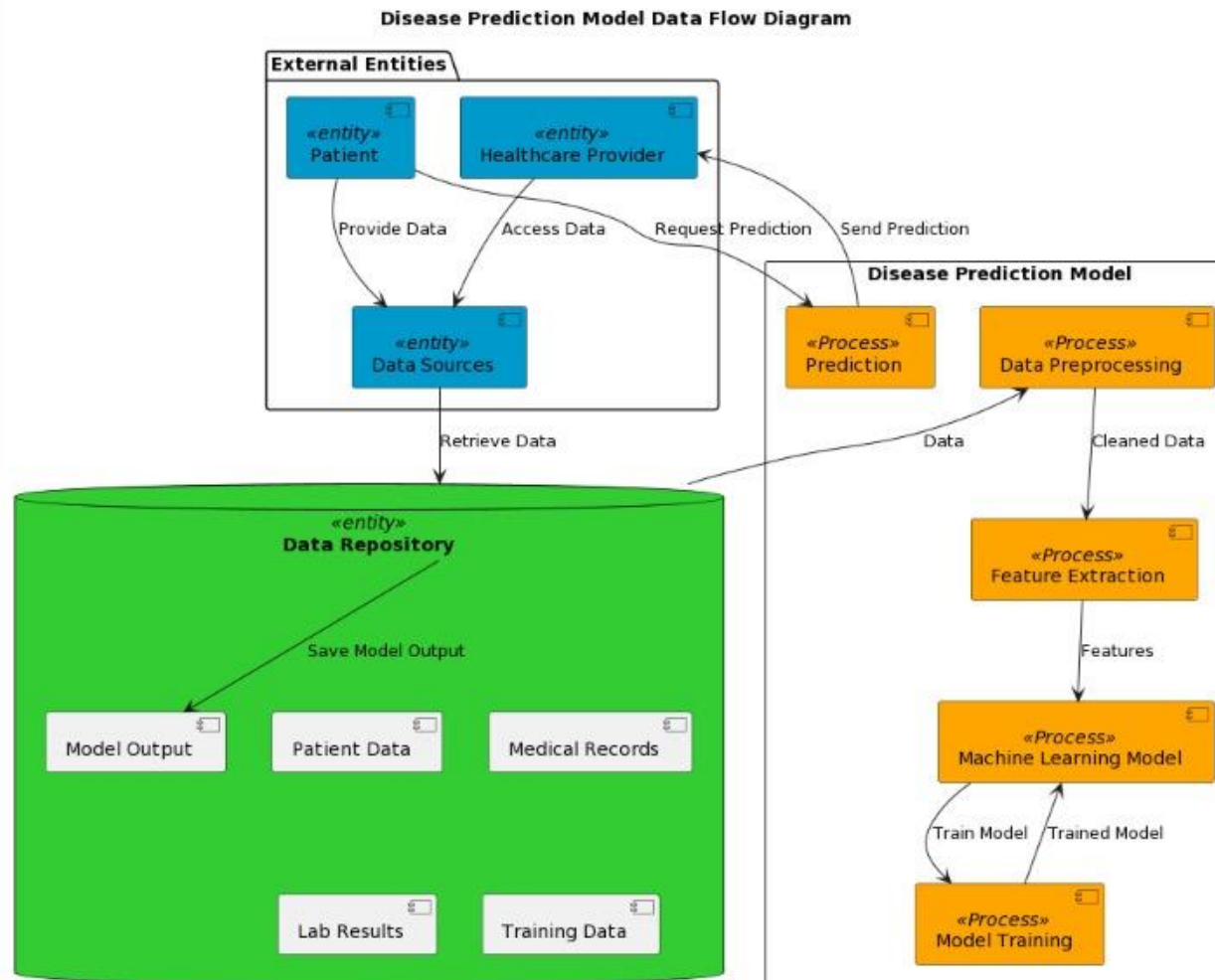
User Stories

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
Patient	Registration	US001	As a patient, I want to register for an account, so I can access my health information.	The registration form should include fields for name, email, and password. Upon successful registration, the system should send a confirmation email.	High	Release 1
Physician	View Patient Records	US002	As a physician, I want to view the medical records of my patients.	I should be able to search for patients by name or patient ID. Access to records should be secure and require authentication.	High	Release 1
Admin	User Management	US003	As an admin, I want to manage user accounts to ensure data security.	I should be able to add, delete, or modify user accounts. Admin actions should be logged for auditing.	High	Release 1
Patient	Request Appointment	US004	As a patient, I want to request an appointment with my physician.	I should be able to select a preferred date and time. \The system should notify me of appointment confirmation or rejection.	Medium	Release 2
Physician	Record Patient Notes	US005	As a physician, I want to record notes about a patient's visit.	I should be able to attach notes to a patient's profile. Notes should include date, time, and details of	Medium	Release 2

				the visit.		
Admin	Generate Reports	US006	As an admin, I want to generate usage reports for system performance analysis.	Reports should include the number of registered users, usage statistics, and peak usage times. Reports should be exportable in CSV format.	Low	Release 3