A **Sprint** is a fixed period or duration in which the development team works to complete a defined set of tasks.
An **Epic** is a large functional requirement that cannot be completed in a single sprint and is divided into smaller **Stories**.
A **Story** is a small, manageable task that contributes to completing an epic.
A **Story Point** represents the level of effort required to complete a story and is usually estimated using the Fibonacci scale.

Story Point Estimation Scale

- **1** – Very Easy task
- **2** – Easy task
- **3** – Moderate task
- **5** – Difficult task

Sprint 1: Data Collection & Preprocessing (2 Days)

Epic: Data Collection & Preprocessing

This sprint focuses on gathering retinal fundus images and preparing the dataset for model training. Proper preprocessing ensures data quality and reliability of predictions.

Stories and Story Points

- **Collection of retinal fundus images** – 2 story points
- **Loading image dataset into the environment** – 1 story point
- **Handling missing or corrupted images** – 3 story points
- **Image preprocessing (resizing, normalization)** – 3 story points

Total Story Points (Sprint 1): 9

Sprint 2: Exploratory Data Analysis & Feature Engineering (2 Days)

Epic: Feature Engineering

This sprint focuses on understanding the dataset and preparing image features that improve deep learning model performance.

Stories and Story Points

- **Exploratory data analysis of fundus images** – 4 story points
- **Image encoding and normalization** – 1 story point
- **Feature creation and data augmentation** – 2 story points

Total Story Points (Sprint 2): 7

Sprint 3: Model Development (3 Days)

Epic: Model Building

This sprint involves designing and training the deep learning model for diabetic retinopathy detection.

Stories and Story Points

- **CNN model architecture design** – 5 story points
- **Hyperparameter tuning** – 2 story points
- **Model evaluation (accuracy, precision, recall, F1-score)** – 2 story points
- **Model validation** – 1 story point
- **Testing model performance** – 3 story points

Total Story Points (Sprint 3): 13

Sprint 4: Deployment (2 Days)

Epic: Deployment

This sprint focuses on integrating the trained model with a web-based interface and backend services.

Stories and Story Points

- **Development of working HTML frontend pages** – 3 story points
- **Flask backend API deployment** – 5 story points

Total Story Points (Sprint 4): 8

Sprint 5: Cloud Deployment, Testing & Documentation (3 Days)

Epic: Testing & Final Deployment

This sprint ensures the system is production-ready and well-documented.

Stories and Story Points

- **Cloud deployment (Render / Netlify)** – 5 story points
- **Full system testing** – 5 story points
- **Project documentation and report preparation** – 3 story points

Total Story Points (Sprint 5): 13

Summary of Story Points

Sprint	Total Story Points
Sprint 1	9
Sprint 2	7
Sprint 3	13
Sprint 4	8
Sprint 5	13

Total Story Points = 50

Velocity Calculation

Velocity is calculated as:

Velocity=Total Story Points CompletedNumber of Sprints\text{Velocity} = \frac{\text{Total Story Points Completed}}{\text{Number of Sprints}}Velocity=Number of SprintsTotal Story Points Completed Velocity=505=10\text{Velocity} = \frac{50}{5} = 10Velocity=550=10

Team Velocity

My team velocity is 10 Story Points per Sprint.

This indicates consistent progress and balanced workload distribution across all sprints.

Conclusion of Project Planning

The project planning follows Agile Scrum methodology with clearly defined sprints, epics, stories, and story points. Each sprint is time-bound and outcome-oriented, ensuring systematic development of the diabetic retinopathy detection system. The achieved velocity reflects efficient sprint execution and effective team collaboration.