Project Planning Phase

Project Planning (Product Backlog, Sprint Planning, Stories, Storypoints)

Date	17 October 2022
Team ID	PNT2022TMID41539
Project Name	Project – Signs with Smart Connectivity for Better Road Safety
Maximum Marks	8 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Preparation	USN-1	**Install the Python IDE.** Install the required python libraries: • Install Watson IoT Python SDK to connect to IBM Watson IoT Platform using python code: give the following command in command prompt: pip install wiotp-sdk Download the required files from the link Create a fast SMS service for sending the messages and getting the API	10	Medium	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Preparation	USN-2	**Create An Account In OpenweatherMap Website** Using Openweathermap we can get current weather details of a location and integrate this with our project **Create An Account In MIT App inventor Website** Create an account in MIT app inventor website and download MIT AI2 companion app in mobile.	5	Low	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S
Sprint-1	Preparation	USN-3	**IBM Cloud Services** Need to have basic knowledge of the following cloud services: • IBM Watson IoT Platform • Node-RED Service	5	Medium	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S
Sprint-2	Create And Configure IBM Cloud Services	USN-4	**Create IBM Watson IoT Platform And Device** • IBM Watson IoT platform acts as the mediator to connect the web application to IoT device, so create the IBM Watson IoT platform. • In order to connect the IoT device to the IBM cloud, create a device in the IBM Watson IoT platform and	10	High	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
			get the device credentials. • Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM IoT Platform.			
Sprint-2	Create And Configure IBM Cloud Services	USN-5	**Create Node-RED Service** To create a web application create a Node-RED service.	10	High	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S
Sprint-3	Develop The Python Script	USN-6	**Develop A Python Script** Create a code snippet using python to • Extract weather data from OpenWeatherMap using APIs • Send the extracted data to the cloud • Receive data from the cloud and view it in the python compiler	10	Medium	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S
Sprint-3	Develop The Python Script	USN-7	**Publish Data To The IBM Cloud** Python code is used to send random sensor data to the cloud and also to receive commands from the cloud. When the commands are received just print the statements which represent the control of the devices.	10	High	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Develop A Web Application Using Node-RED Service.	USN-8	**Develop The Web Application Using Node-RED** Configure the Node-RED flow to send data to the IBM IoT platform.	5	High	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S
Sprint-4	Develop A Web Application Using Node-RED Service.	USN-9	**Use Dashboard Nodes For Creating UI(Web App)** Create use dashboard nodes to visualize the data in graphical format.	5	High	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S
Sprint-4	Develop A Mobile Application Using MIT App inventer.	USN-10	**Use MIT App For Creating Mobile application** Build the app. Using MIT AI2 companion(in mobile) by connecting it with the app builded(click connect in app inventor then click AI companion and scan the QR code in mobile companion- it will be connected) we can see the Road Safety informations in mobile.	10	High	1.Mugila R 2.Ishwariya P 3.Kalpana T 4.Shreein Fathima S

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	4 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	11 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

Velocity:

We have a 6-day sprint duration, and the velocity of the team is 25 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = 20/6 = 3.33$$

Burndown Chart: