Project Planning Phase
Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	22 October 2022
Team ID	PNT2022TMID41957
Project Name	Real-Time River Water Quality Monitoring and Control System
Maximum Marks	8 Marks

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

the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my username, password.	2	High	Sineka R
Sprint-1	Login	USN-2	As a user, I can log into the application by entering my username & password	2	Low	Vinothini G
Sprint-1	IBM Cloud service Access	USN-3	As a user, I can get access to IBM cloud services.	2	Medium	Bhuvana A
Sprint-2	Create the IBM Watson IoT and device Settings	USN-4	As a user, I can create the IBM Watson IoT Platform and integrate the microcontroller with it, to send the sensed data on Cloud	2	High	Suganthi K

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Create a node red service	USN-5	As a user, I can create a node red service to integrate the IBM Watson along with the Web UI	2	Medium	Vinothini G
Sprint-2	To develop a Python code	USN-6	As a user, I can create a python code to sense the physical quantity and store data.	2	Medium	Sineka R
Sprint-2	Publish Data to cloud.	USN-7	As a user, I can publish Data that is sensed by the microcontroller to the Cloud	3	High	Bhuvana A
Sprint-3	MIT app inventor (Front end Design)	USN-8	As a user, I can create the front end design for the application using MIT app Inventor	2	Medium	Suganthi K
Sprint-3	MIT app inventor (Back-end Design)	USN-9	As a user, I can create the back end design for the application using MIT app Inventor	3	High	Sineka R
Sprint-3	Create a Web UI using Node-red	USN-10	As a user, I can create a Web UI, to access the data from the cloud and display all parameters.	2	Medium	Bhuvana A
Sprint-3	Connecting Nodered to Mobile Application	USN-11	As a user, I can connect the node-red to the mobile application to display all the parameters in the mobile app	2	Medium	Vinothini G

Sprint-4	Fast-SMS Service	USN-12	As a user, I can use Fast SMS to send alert messages once the parameters like pH, Turbidity and temperature goes beyond the threshold	3	High	Suganthi K
Sprint-4	Testing	USN-13	As a user, I can test the project and final deliverables	3	Medium	Sineka R

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	30 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	06 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	13 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

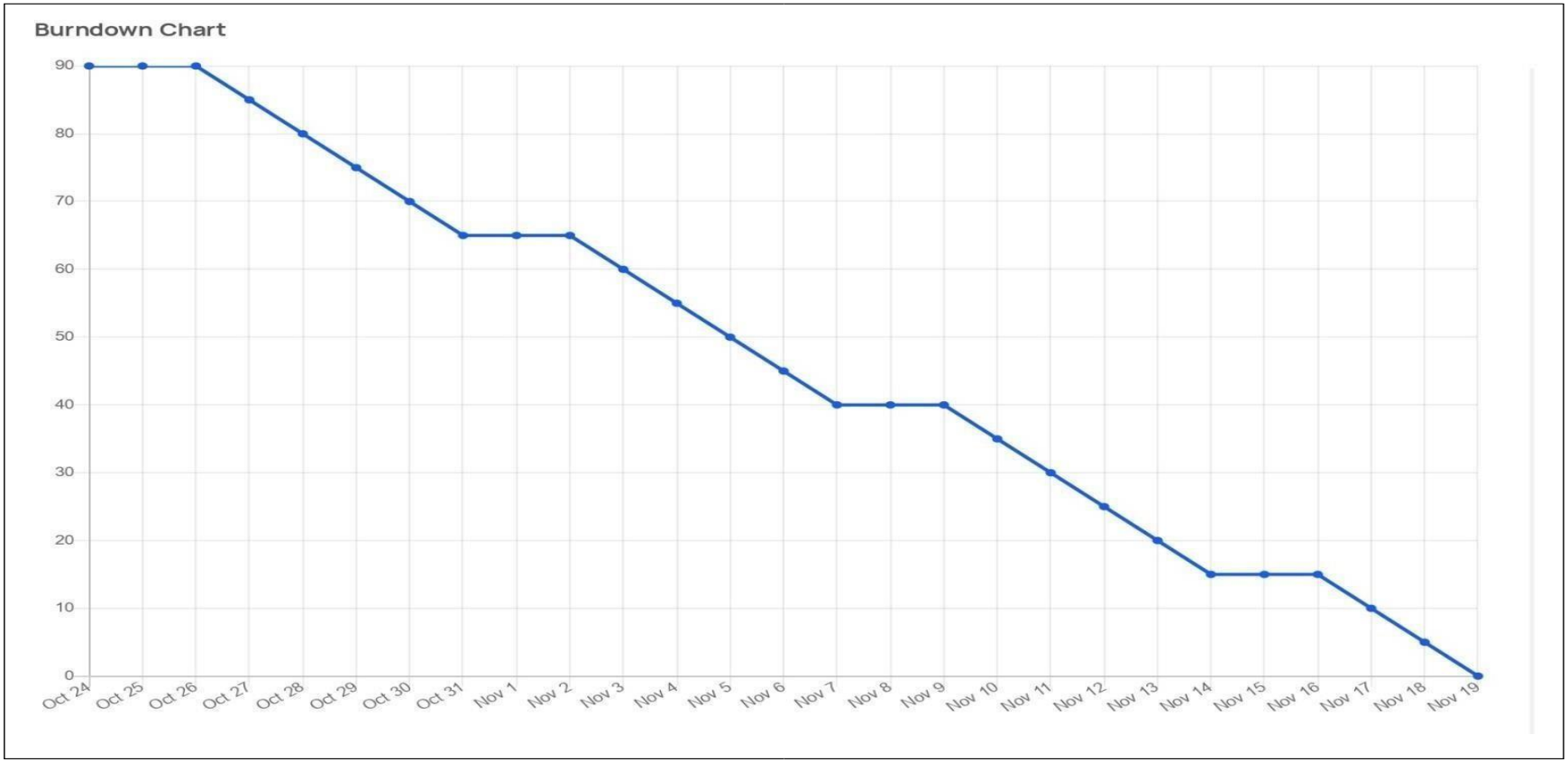
Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Burndown Chart:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.


Burndown Chart
90
80
70
60
50
40
30
20
10
0
Oct 24
Oct 25
Oct 26
Oct 27
Oct 28
Oct 29
Oct 30
Oct 31
Nov 1
Nov 2
Nov 3
Nov 4
Nov 5
Nov 6
Nov 7
Nov 8
Nov 9
Nov 10
Nov 11
Nov 12
Nov 13
Nov 14
Nov 15
Nov 16
Nov 17
Nov 18
Nov 19