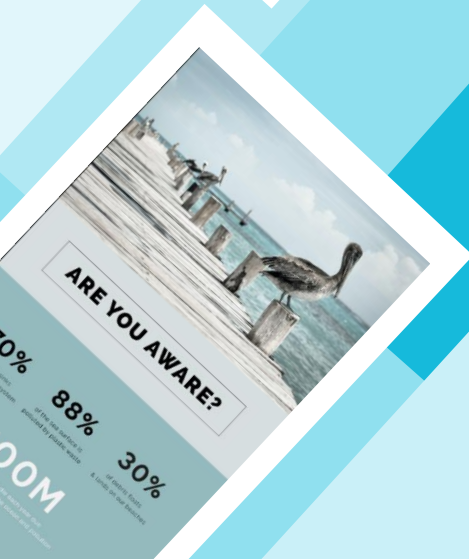


PROJECT PLAN

IT PROJECT MANAGEMENT- CS301.3

GROUP 14



STUDENT NAME	INDEX NUMBER
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Description of project

Type of the project- Web development project

The main objective of this project is to achieve 14th Sustainable Development Goal which is known as 'Life Below Water'. We thought it will be an investment to the future generations. We thought of making such a website because, people can upload information about polluted coastal areas as posts to our website. By noticing those posts, volunteers may give their contribution to clean polluted coastal areas mentioned in those posts. And they may upload pictures to our website after cleaning those polluted coastal areas. In addition, anyone who wishes to save marine biodiversity can take a step in right direction with our website Sedna by,

- posting to 'Feed' and 'Contribution'
- making people aware
- volunteering
- donating
- sharing information

Methodology we are using to develop this project: Agile methodology.

Defining the scope of the project

Objectives and goals.

We make sure that our project goals are **SMART**.

Specific- Create a user-friendly website that allows users to post information about polluted coastal areas and engage in activities related to save marine biodiversity.

Measurable- Have a minimum of 500 users actively participating on the platform within the first six months.

Agreed to- Ensure that all project stakeholders, including users, volunteers, and contributors, agree on the platform's purpose and functionalities.

Realistic- Develop the website within the allocated budget and timeline.

Time-bound- Launch the website three months from the project initiation date.

MOSCOW analysis

Must Have-

- User registration and profile management with authorization.
- Posting functionality for sharing information about polluted coastal areas.

- Posting functionality for the ones who have cleaned and contributed to clean the polluted coastal areas.
- Volunteer registration and login.
- Platform to donate.
- Awareness-raising features.

Should Have-

- User notifications for updates.
- Image upload capability for users to showcase cleaned areas.
- User engagement and interaction features (likes, comments).
- Reporting and analytics for tracking impact.

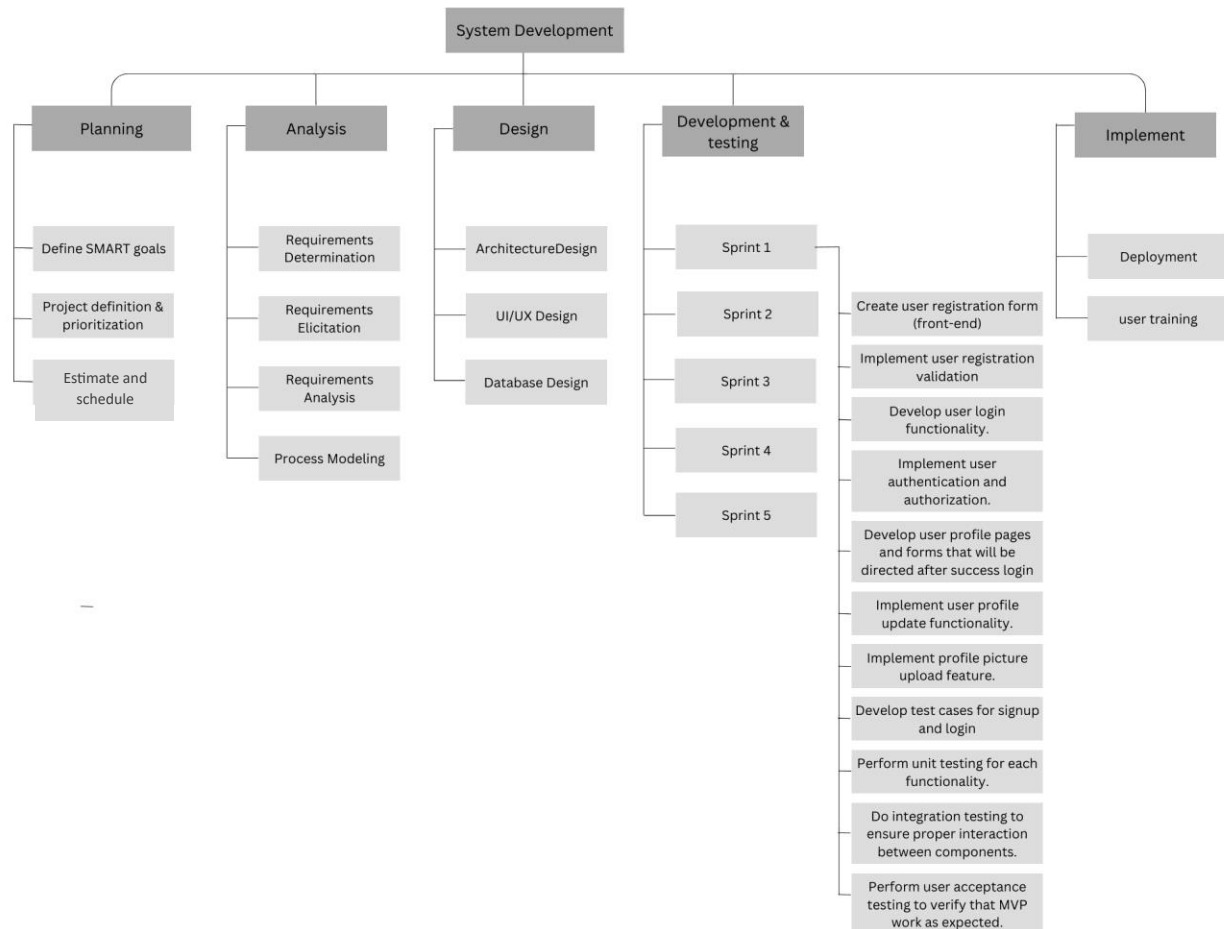
Could Have-

- Mobile application compatibility.
- Social media integration for sharing information.
- Rate us features
- Options to select the preferred language.

Won't Have-

- Advanced features not directly related to the core purpose.
- Integration with unrelated external platforms.

Work Breakdown Structure



Application of Agile project management concepts

Product backlog items

1. User registration, login, functionality.
2. User profile management.
3. Home page with awareness raising features
4. Posting functionality for users to share information about polluted coastal areas.

5. Posting functionality for contributors to share their cleanup efforts.
6. Image upload capability for users to showcase cleaned areas and polluted areas.
7. Volunteering features
8. Donation platform for supporting marine biodiversity conservation.
9. User notification system for updates.
10. User engagement and interaction features (likes, comments).
11. Reporting and analytics dashboard for tracking the impact of conservation efforts.
12. Mobile application compatibility (if applicable).
13. Social media integration for sharing information.
14. "Rate Us" feature for user feedback.
15. Language selection options for user preferences.

Sprint breakdown

Sprint 1 (2 weeks):

- Sprint Goal- Establish the foundational user system.

Sprint Backlog

- Create user registration form (front-end)
- Implement user registration validation.
- Develop user login functionality.
- Implement user authentication and authorization.
- Develop user profile pages and forms that will be directed after success login.
- Implement user profile update functionality.
- Implement profile picture upload feature.
- Develop test cases for signup and login.
- Perform unit testing for each functionality.
- Do integration testing to ensure proper interaction between components.
- Perform user acceptance testing to verify that MVP work as expected.

Sprint 2 (2 weeks):

- Sprint Goal- Enable users to contribute and engage.
 1. Home page with awareness-raising features.
 2. Posting functionality for users to share information about polluted coastal areas.
 3. Posting functionality for contributors to share their cleanup efforts.

Sprint 3 (3 weeks):

- Goal- Enhance user engagement and contributions.
 1. Image upload capability for users to showcase cleaned areas and polluted areas.
 2. Volunteering features.
 3. Donation platform for supporting marine biodiversity conservation.

Sprint 4 (2 weeks):

- Goal- Enhance user interaction and reporting.
 1. User notification system for updates.
 2. User engagement and interaction features (likes, comments).
 3. Reporting and analytics dashboard for tracking the impact of conservation efforts.

Sprint 5 (3 weeks):

- Goal- Expand usability and reach.
 1. Mobile application compatibility (if applicable).
 2. Social media integration for sharing information.
 3. "Rate Us" feature for user feedback.
 4. Language selection options for user preferences.

[illegible]

Sprint Backlog

Sprint 1- Establish the Foundational User System (2 weeks)

The primary objective of Sprint 1 is to complete the user registration and successfully login, and then direct to user profile management after login.

Sprint Planning-

Start date- 11/13/2023

End date- 11/27/2023

Duration- 2 weeks

Team Members- full-stack developers, QA engineer, testers

Backlog items,

- Create user registration form (front-end)
- Implement user registration validation.
- Develop user login functionality.
- Implement user authentication and authorization.
- Develop user profile pages and forms that will be directed after success login.
- Implement user profile update functionality.
- Implement profile picture upload feature.
- Develop test cases for signup and login.
- Perform unit testing for each functionality.
- Do integration testing to ensure proper interaction between components.
- Perform user acceptance testing to verify that MVP work as expected.

Accepted when

User registration and login functionality is fully operational.

Users can create accounts, log in, and log out successfully.

User profile pages allow users to update their information.

Proper authorization controls are in place.

Testing is passed.

Definition of Done

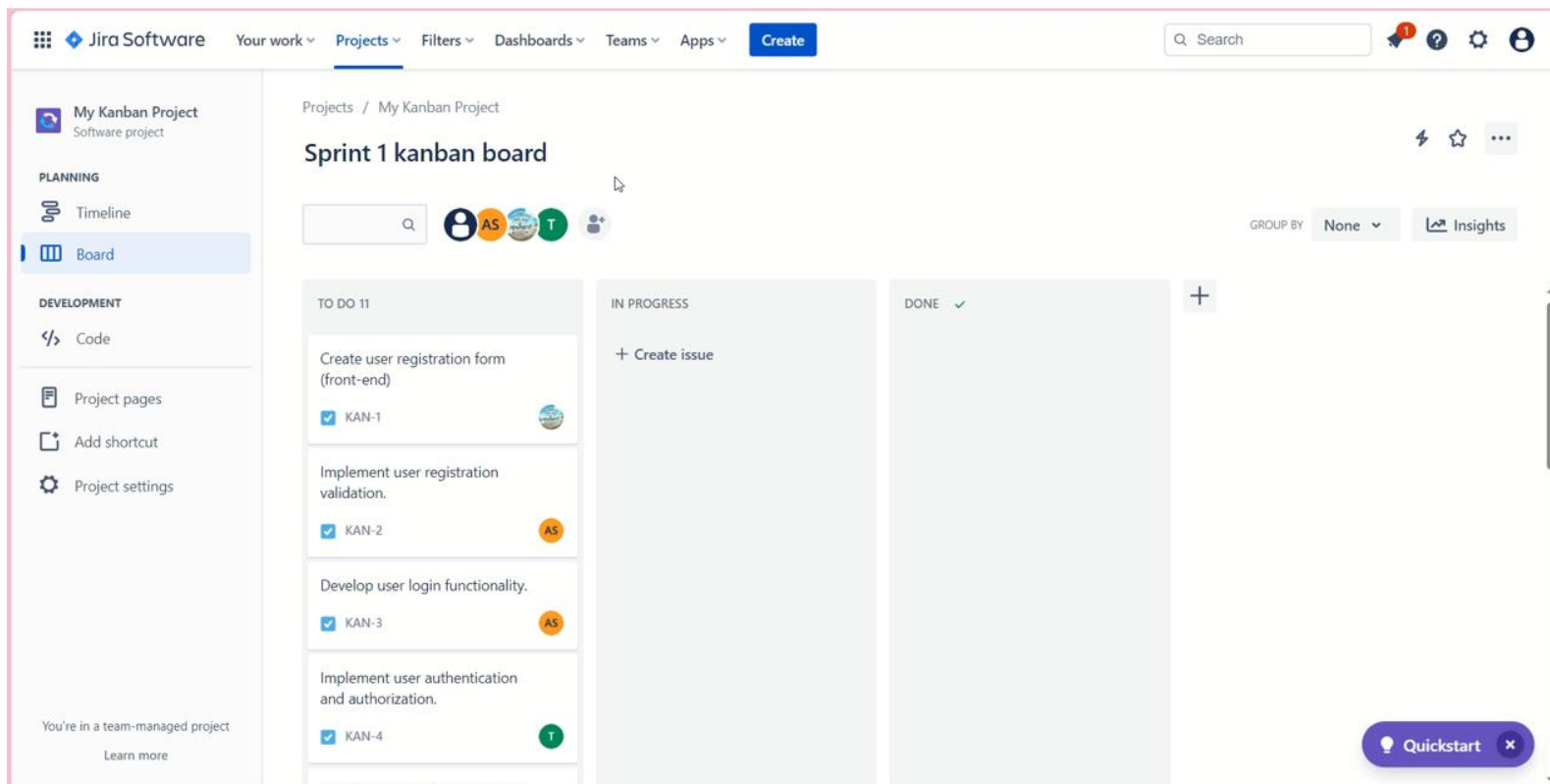
All tasks are completed as per the sprint backlog.

Code is reviewed and approved.

Testing is success

MVP is accepted.

Kanban Board



[Click here to view Kanban board in jira](#)

Or
[click here](#)

Effort Estimation- 3 Point Estimation

Tasks	Optimistic estimate (Days)	Pessimistic estimate (Days)	Most likely estimation (Days)	E (Days)
Define SMART goals.	02	04	$(02 + 04) / 2 = 3$	$(02 + 03 + 04) / 3=3$
Project definition & prioritization	03	05	$(03 + 05) / 2 = 4$	$(03 + 04 + 05) / 3=4$
Estimate and schedule	02	04	$(02 + 04) / 2 = 3$	$(02 + 03 + 04) / 3=3$
Requirements determination	02	04	$(02 + 04) / 2 = 3$	$(02 + 03 + 04) / 3=3$
Requirements elicitation	02	04	$(02+ 04) / 2 = 3$	$(02 + 03 + 04) / 3=3$
Requirements analysis	03	05	$(03 + 05) / 2 = 4$	$(03 + 04 + 05) / 3=4$
Process modeling	02	04	$(02 + 04) / 2 = 3$	$(02 + 03 + 04) / 3=3$
Architecture design	03	05	$(03 + 05) / 2 = 4$	$(03 + 04 + 05) / 3=4$
UI/UX design	06	08	$(06 + 08) / 2 = 7$	$(06 + 07 + 08) / 3=7$
Database design	04	06	$(04 + 06) / 2 = 5$	$(04 + 05 + 06) / 3=5$
Sprint 1				
Create user registration form (front-end)	01	03	$(01 + 03) / 2 = 2$	$(01 + 02 + 03) / 3=2$
Implement user registration validation.	01	03	$(01 + 03) / 2 = 2$	$(01 + 02 + 03) / 3=2$
Develop user login functionality.	01	03	$(01 +03) / 2 = 2$	$(01 + 02 + 03) / 3=2$
Implement user authentication and authorization.	02	04	$(02 + 04) / 2 = 3$	$(02 + 03 + 04) / 3=3$
Develop user profile pages and forms that will be	01	03	$(01 + 03) / 2 = 2$	$(01 + 02 + 03) / 3=2$

directed after success login.				
Implement user profile update functionality.	01	03	$(01 + 03) / 2 = 2$	$(01 + 02 + 03) / 3=2$
Implement profile picture upload feature.	01	03	$(01 + 03) / 2 = 2$	$(01 + 02 + 03) / 3=2$
Develop test cases for signup and login.	02	04	$(02 + 04) / 2 = 3$	$(02 + 03 + 04) / 3=3$
Perform unit testing for each functionality	01	03	$(01+ 03) / 2 = 2$	$(01 + 02 + 03) / 3=2$
Do integration testing to ensure proper interaction between components.	01	03	$(01 + 03) / 2 = 2$	$(01 + 02 + 03) / 3=2$
Perform user acceptance testing to verify that MVP work as expected.	02	04	$(02 + 04) / 2 = 3$	$(02 + 03 + 04) / 3=3$
Sprint 2	10	12	$(10 + 12) / 2 = 11$	$(10 + 11 + 12) / 3=11$
Sprint 3	15	17	$(15 + 17) / 2 = 16$	$(15 + 16 + 17) / 3=16$
Sprint 4	10	12	$(10 + 12) / 2 = 11$	$(10 + 11 + 12) / 3=11$
Sprint 5	15	17	$(15 + 17) / 2 = 16$	$(15 + 16 + 17) / 3=16$
Deployment	03	05	$(03+ 05) / 2 = 4$	$(03+ 04 + 05) / 3=4$
User training	02	04	$(02 + 04) / 2 = 3$	$(02 + 03 + 04) / 3=3$

Sprint Deadlines

sprint	Start date	End date
01	11/13/2023	11/27/2023
02	11/28/2023	12/12/2023
03	12/13/2023	1/3/2024
04	01/4/2024	1/18/2024
05	1/19/2024	2/9/2024

Resource Allocation

Task	E (Days)	Resource Allocation
Planning		
Define smart goals.	3	R1
Project Identification and Prioritize	4	R1
Estimate and schedule	3	
Analysis		
Requirements Determination	3	R2
Requirements elicitation	3	R2
Requirements analysis	4	R2
Process modeling	3	R2
Design		
Architecture design	4	R3
UI/UX design	7	R3
Database design	5	R3
Development, Testing, and Sprints		
Sprint 1		
Create user registration form (front-end)	2	R4
Implement user registration validation.	2	R4
Develop user login functionality.	2	R4
Implement user authentication and authorization	3	R4

Develop user profile pages and forms that will be directed after success login	2	R4
Implement user profile update functionality	2	R4
Implement profile picture upload feature.	2	R4
Develop test cases for signup and login.	3	R5
Perform unit testing for each functionality	2	R4
Do integration testing to ensure proper interaction between components.	2	R5
Perform user acceptance testing to verify that MVP work as expected	3	R5
Sprint 2	11	R4(6days), R5(5 days)
Sprint 3	16	R4(10 days), R5 (6 days)
Sprint 4	11	R4(6days), R5(5 days)
Sprint 5	16	R4(10 days), R5 (6 days)
Implementation		
Deployment	4	R6
User training	3	R7

R1-Project Manager-1 (Rs. 7,696)

R2- Business Analyst- 1 (Rs. 3000)

R3-Designer- 2 (Rs. 4,615)

R4 -Developer(front-end/back-end)- 3 (Rs. 9,000)

R5- QA Engineer- 2 (Rs. 2,820)

R6-DevOps Engineer- 1 (Rs. 3,692)

R7-Trainers/Instructional Designers- 1 (Rs. 2600)

Equipment

- Computers/laptops for developers, designers, and QA engineers.
- Sufficient RAM and processing power for efficient development and testing.
- Smartphones, tablets, or other devices if the software needs to be tested on multiple platforms.

Software

1. Development Tools

- IDE - Visual Studio Code
- Version control system- Git
- Project management tool- Jira, MS projects

2. QA Tools

- Test management tools
- Automation testing tools
- Bug tracking tools

3. Communication Tools

- Microsoft Teams
- Google meets

4. Infrastructure

- Servers or cloud services for hosting application.

Cost Estimation (Three-point estimation)

1) Planning

1.1 Define smart goals = 3 * R1

$$= 3 * 7696$$

$$= \text{Rs. } 23088$$

1.2 Project identification and prioritize = 4 * R1

$$= 4 * 7696$$

$$= \text{Rs. } 30784$$

1.2 Estimate and schedule = 3 * R1

$$= 3 * 7696$$

$$= \text{Rs. } 23088$$

$$\text{Planning} = 30784 + 23088 + 23088 = \text{Rs. } 76,960 /=$$

2) Analysis

2.1 Requirement determination = 3* R2

$$= 3*3000$$

$$= 9000$$

$$\mathbf{2.2} \text{ Requirement elicitation} = 3 * R2$$

$$= 9000$$

$$\mathbf{2.3} \text{ Requirement analysis} = 4 * R2$$

$$= 12\ 000$$

$$\mathbf{2.4} \text{ Process modeling} = 3 * R2$$

$$= 9000$$

$$\mathbf{Analysis} = 9000 + 9000 + 9000 + 12000 = \mathbf{39000} \text{ /=}$$

3) Design

$$\mathbf{3.1} \text{ Architecture design} = 4 * R3$$

$$= 4 * 4615$$

$$= 18460$$

$$\mathbf{3.2} \text{ UI/UX Design} = 7 * R3$$

$$= 32305$$

$$\mathbf{3.3} \text{ Database design} = 5 * R3$$

$$= 5 * 4615$$

$$= 23075$$

$$\mathbf{Design} = 18460 + 32305 + 23075 = \mathbf{Rs. 73840} \text{ /=}$$

4) Development, testing and sprints

4.1 Sprint 1

- Create user registration form (front end)

$$= 2 * R4$$

$$= 2 * 9000$$

$$= 18\ 000$$

- Implement user registration validation.

$$= 2 * R4$$

= 18 000

- Develop user login functionality.

= 2 * R4

= 18 000

- Implement user authentication and authorization.

= 3* R4

= 27 000

- Develop user profile pages and forms that will be directed after successful login

= 2 * R4

= 18 000

- Implement user profile update functionality.

= 2 * R4

= 18000

- Implement profile picture upload Feature.

= 2 * R4

= 18 000

- Develop test cases for signup and login.

= 3 * R5

= 3 * 2820

= 8460

- Perform unit testing for each functionality.

= 2 * R4

= 18000

- Do integration testing to ensure proper Interaction.

= 2 * R5

= 5640

- Perform user acceptance testing to Verify that MVP work as expected.

= 3 * R5

$$= 8460$$

$$\text{sprint 1} = 8460 + 5640 + 18000 + 18000 + 18000 + 8460 + 18000 + 27000 + 18000 + 18000 + 18000$$

$$= \text{RS. } 175,560$$

$$\text{sprint 2} = 6 * R4 * 3 + 5 * R5 * 2$$

$$= 162000 + 28,200$$

$$= 190,200$$

$$\text{sprint 3} = 10 * R4 * 3 + 6 * R5 * 2$$

$$= 270,000 + 33,840$$

$$= 303,840$$

$$\text{sprint 4} = 6 * R4 * 3 + 5 * R5 * 2$$

$$= 162000 + 28,200$$

$$= 190,200$$

$$\text{sprint 5} = 10 * R4 * 3 + 6 * R5 * 2$$

$$= 270,000 + 33,840$$

$$= 303,840$$

5) Implementation

deployment

$$= 4 * R6$$

$$= 3692 * 3$$

$$= 14768$$

user training = 3 * R7

$$= 7800$$

Implementation = 7800 + 14768

$$= 22568 \text{ /=}$$

Total cost = 1,376,008/=

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