American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

PROJECT TITLE

A Software Engineering Project Submitted
By

Semester: Summer_21_22		**Section:**	**Group Number:**	
SN	Student Name	Student ID	Contribution (CO3+CO4)	Individual Marks
01	Tanvir Ahmed Tuhin	22-46475-1	25%	
02	MD. Muktadir Alam Khiljee	22-46749-1	25%	
03	Rimon Pramanik	22-46957-1	25%	
04	Abdul Kader Mohim	22-47833-2	25%	

The project will be Evaluated for the following Course Outcomes

CO3: *Select* appropriate software engineering models, project management roles and their associated skills for the complex software engineering project and evaluate the sustainability of developed software, taking into consideration the societal and environmental aspects	Total Marks	
Appropriate Process Model Selection and Argumentation with Evidence	[5Marks]	
Evidence of Argumentation regarding process model selection	[5Marks]	
Evaluate the sustainability of the developed software in terms of both society and the environment (Impact identification)	[5Marks]	
Submission, Defense, Completeness, Spelling, grammar and Organization of the Project report	[5Marks]	
CO4: *Develop* project management plan to manage software engineering projects following the principles of engineering management and economic decision process	Total Marks	
Develop the project plan, its components of the proposed software products	[5Marks]	
Identify all the activities/tasks related to project management and categorize them within the WBS structure. Perform detailed effort estimation correspond with the WBS and schedule the activities with resources	[5Marks]	
Identify all the potential risks in the specific project and prioritizing/categorizing those to overcome the risk factors.	[5Marks]	

Description of Student's Contribution in the Project work

Student Name: Tanvir Ahmed Tuhin
Student ID: 22-46475-1
Contribution in Percentage (%): 25%
Contribution in the Project:

- Contribution Description 1: Project Risks.
- Contribution Description 2: Work Breakdown Structure, Gantt Chart.
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Signature of the Student

Student Name: MD. Muktadir Alam Khiljee
Student ID: 22-46749-1
Contribution in Percentage (%): 25%
Contribution in the Project:

- Contribution Description 1: Project Description, Problem Statement, Proposed Solution.
- Contribution Description 2: Gantt Chart.

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Signature of the Student

Student Name: Rimon Pramanik
Student ID: 22-46957-1
Contribution in Percentage (%): 25%
Contribution in the Project:

- Contribution Description 1: Use Case Diagram.
- Contribution Description 2: Work Breakdown Structure, Gantt Chart.

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Signature of the Student

Student Name: Abdul Kader Mohim
Student ID: 22-47833-2
Contribution in Percentage (%): 25%
Contribution in the Project:

- Contribution Description 1: Process Model.
- Contribution Description 2: Work Breakdown Structure, Gantt Chart.

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Signature of the Student

1.Project Description:

The Lost and Found Management System is a software application that simplifies the process of reporting, tracking, and recovering lost things. This system will be available through a web-based interface, with a centralized database for both lost and found objects. Users can report missing items by logging in and providing specific descriptions, such as the date, time, and location where the item was lost. Users who find objects can report them by providing comparable information. The algorithm will then match lost and found objects based on the descriptions provided, allowing for faster and more efficient recoveries.

2.Problem Statement:

Many public spaces, such as schools, companies, and transit hubs, have inefficient and unorganized processes for managing lost and found items. Traditional approaches rely mainly on physical logbooks and human record-keeping, which results in lost information, delays in matching lost things with their owners, and a lack of accountability. Furthermore, the process can be time-consuming and irritating for people who have misplaced stuff because they must search several locations and departments. This inefficiency leads to a low recovery rate for lost objects and places additional pressure on administrative staff.

3.Proposed solution:

The proposed Lost and Found Management System seeks to address these challenges by offering a digital platform for automating and centralizing the entire process. Key characteristics of the solution include:

- User-Friendly Interface: A web-based interface that allows users to quickly report lost or discovered objects, including descriptions, images, and contact information.
- Database Management: A powerful database that securely saves all reports of lost and found objects, allowing for easy search and retrieval.
- Automated Matching: An intelligent system that compares reported missing things to found goods based on keywords, descriptions, and other distinguishing characteristics.
- Notification System: Automated notifications alert users when a potential match is detected, saving time and effort on manual checks.
- Admin Dashboard: An administrative dashboard used to manage reports, analyze data, and ensure the system runs smoothly.
- Security and privacy: Security measures include safeguards to protect user data and ensure that sensitive information is only accessed by authorized staff.

By deploying this system, we hope to dramatically increase the efficiency and efficacy of the lost and found process, improving the possibility of item recovery and decreasing the administrative workload.

4.Process Model:

The Scrum model is ideally suited for the development of the Lost and Found Management System. This project's requirements are likely to evolve based on user feedback and changing organizational needs, making Scrum's iterative and incremental approach an excellent fit. The model emphasizes collaboration, flexibility, and continuous delivery, ensuring that the project adapts effectively to new challenges and stakeholder inputs.

Why We Selected This Model:

We chose the Scrum model due to its adaptive and iterative nature, perfectly aligning with the dynamic requirements of our project.

Adaptability:

- Scrum allows frequent reassessment and refinement based on regular feedback.
- Each sprint can address new requirements or improvements identified during previous iterations.

User Feedback and Involvement:

- Scrum's sprint reviews and retrospectives ensure continuous user involvement, facilitating a user-centered development process.
- Stakeholders, including users reporting lost and found items, can provide ongoing input to shape the system.

Incremental Delivery:

- Scrum's short sprints enable the team to deliver functional system pieces regularly, showing tangible progress and delivering incremental value.
- Early and frequent delivery allows for real-world testing, reducing the risk of major issues late in development.

Transparency and Communication:

- Daily stand-ups and sprint planning foster open communication and quick resolution of issues.
- Structured communication ensures everyone is aware of progress and emerging challenges.

Why This Model Is Better Than Other Models:

Flexibility and Adaptability:

- Unlike the rigid Waterfall and V-Model, Scrum accommodates changes and feedback throughout the development process.
- XP may lack the structured framework necessary for managing complex projects, while Scrum offers a balanced approach with defined roles and ceremonies.

User-Centric Development:

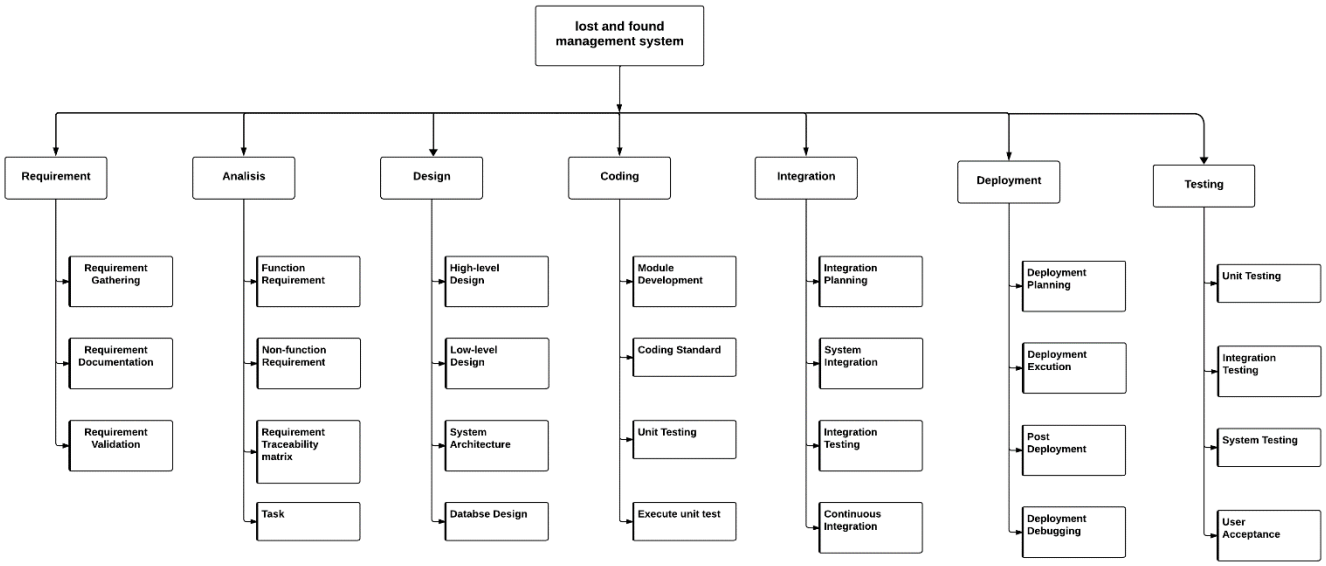
- DSDM, though iterative, may not provide the same level of structured communication as Scrum.
- Scrum's feedback loops ensure the system aligns closely with user expectations and project goals.

Incremental Value Delivery:

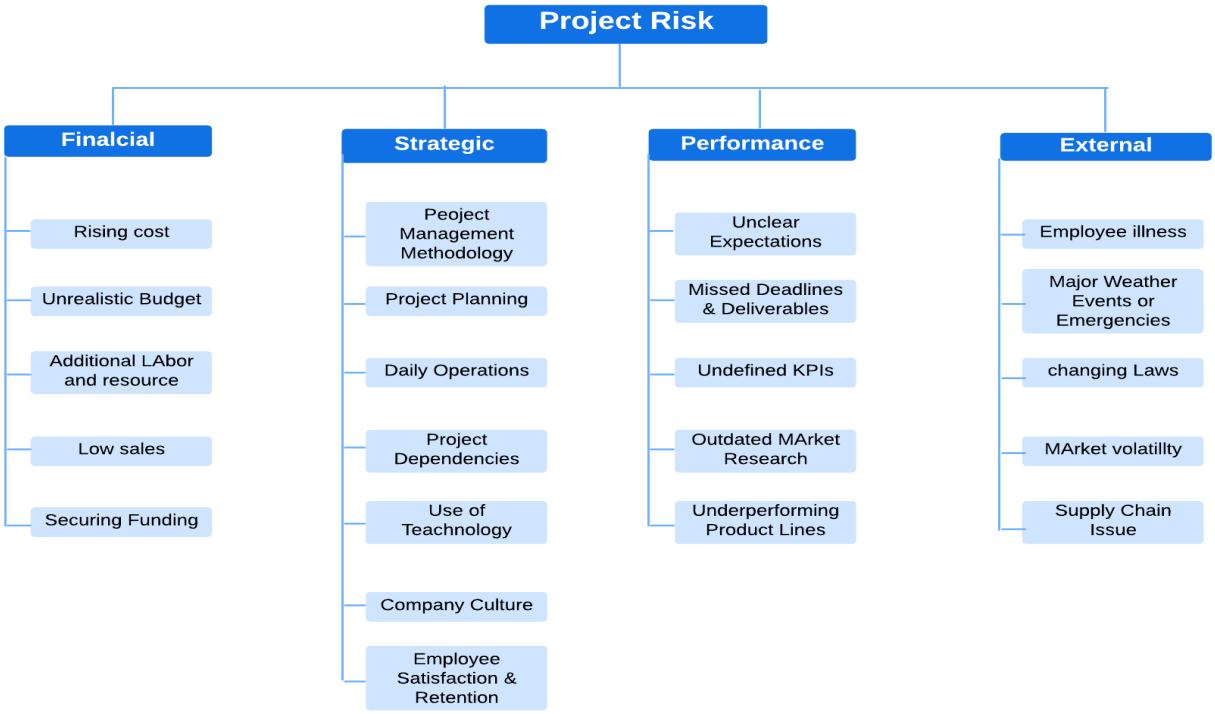
- Scrum's short sprints demonstrate progress and functionality early and often, mitigating risk and enabling early issue detection and correction.
- Continuous improvement through retrospectives fosters ongoing enhancement.

Overall, Scrum's iterative approach, emphasis on user feedback, transparency, and flexibility make it the optimal choice for developing the Lost and Found Management System, ensuring adaptability, continuous value delivery, and alignment with user needs and organizational goals.

5.Work Breakdown Structure (WBS):

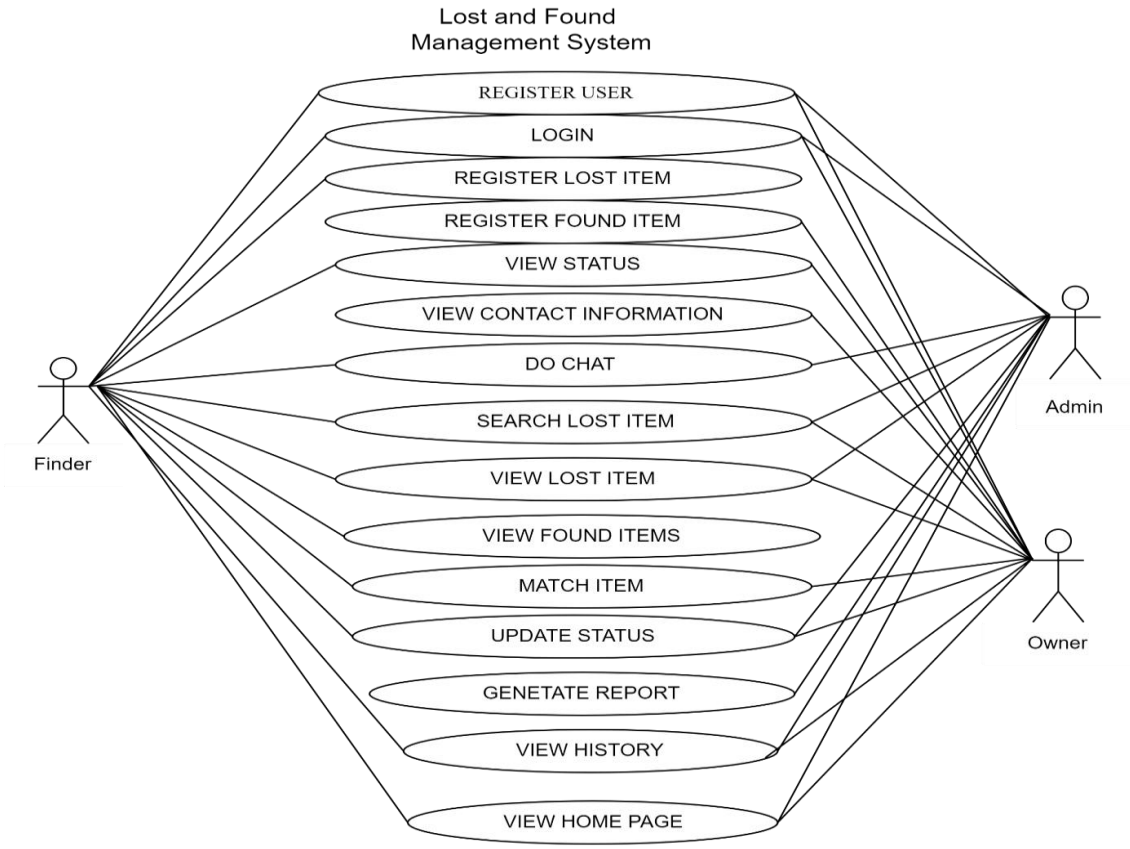


6.Project Risks:

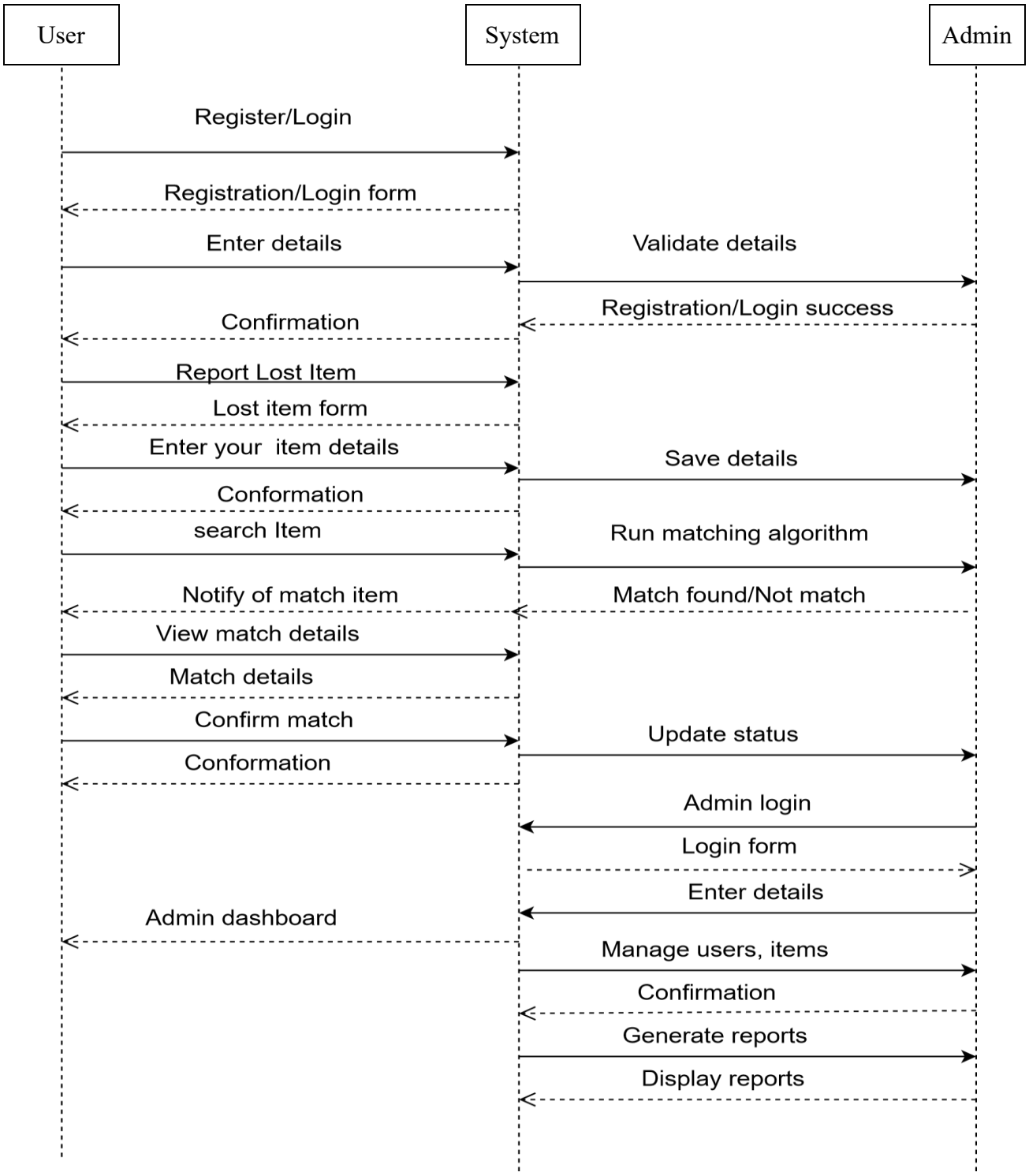


6. Project Requirements:

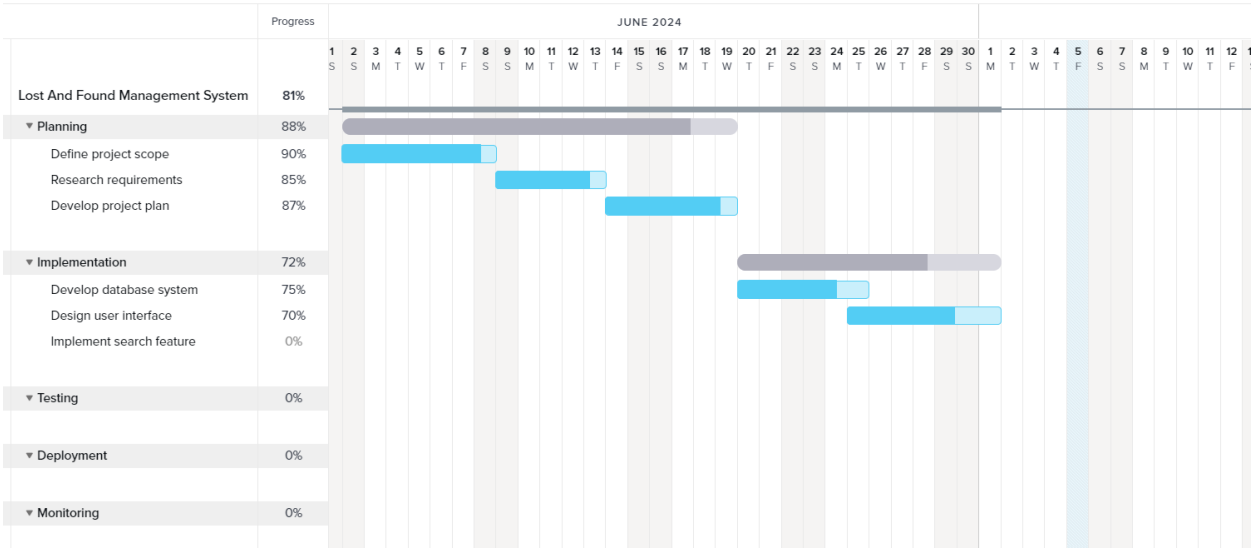
This is usecase diagram of our project



8.Sequence Diagram:



9.Gantt Chart:



10. Testing

Project Name: Lost and Found Management System			Test Designed by: Rimon Pramanik	
Test Case ID: FR_1			Test Designed date:1-7-2024	
Test Priority (Low, Medium, High): Medium			Test Executed by: Rimon Pramanik	
Module Name: Profile settings			Test Execution date:1-7-2024	
Test Title: Sign: Insert and update your account with valid Name, Email id and New Password.				
Description: Test website profile Setting page.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Edit photo 3. Update Your Name 4. 5. Update Your Email 6. Change Password 7. Inser Account 8. Update Your Profile	 Rimon pramanik remon21@gmail.com Password: 123467 Click Click	User should insert or Update profile into the application	As expected,	Pass
Post Condition: User Details is update into database and successfully signed up.				