

Sri Lanka Institute of Information Technology



SE3080 - Software Project Management Year 3, Semester 1 -2025

Group ID: Y3S1-WE-20

Details of the Group Members:

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1. Project Selection and Justification

This project is aimed at creating a web-based **Travel and Accommodation Rental platform** where owners of accommodation can promote lodges (flats, villas, special spots) for short-term rentals, and tourists discover, book, and rate them without inconvenience. The website also aims to include add-on services such as transport and domestic tour packages to increase travel experience.

- Problem Identification

Travelers and property owners face several challenges with existing travel and rental solutions. Many travelers struggle to find reliable, authentic, and affordable short-term accommodation, particularly in domestic markets. Local and unique properties are overshadowed by large hotel chains, limiting travelers' choices and experiences. Booking is also typically scattered among different platforms, which can be inconvenient and lacking in consistency.

Not only that, but Small-scale property owners also struggle with visibility and high commission fees on global platforms. No simple-to-use tools for managing bookings, payment, and communication with visitors.

- Real World Relevance

This project fills a real and growing need. With budget travel and independent travel on the rise, there is a need for an easy-to-use, centralized platform that offers trustworthy lodging, especially in destinations like Sri Lanka.

Ex- A reservation guest coming to “Galle” would be keen on an authentic villa experience, while a property owner wants more exposure and easier booking method.

- Agile Suitability

The solution can be incrementally developed according to user stories (property listing, authentication, search and filter, booking, payment, reviews). Each sprint can focus on one user journey, ensuring a functional increment at the end of every cycle.

- Scope Manageability

The project's core features (user authentication, property listings, search and filtering, booking management, payment integration, and a basic review system.) can be developed within be developed using the Scrum framework over 4 development sprints (~8 weeks).

- Sprint 1: User Registration & Property Listing
- Sprint 2: Booking flow
- Sprint 3: Payment and review system
- Sprint 4: Transport add-ons and final refinements

- Technology Stack

Frontend:- React.js

Backend:- Node.js + Express

Database:- MongoDB

2. Project Charter

Section	Details
Product Vision	“To provide travelers with a user-friendly and secure platform to discover and book accommodations and travel services, while empowering local hosts to simply manage and grow their rental business.”
Scope	<ul style="list-style-type: none"> • User registration, login, management • Property listings and management with images, descriptions, availability. • Booking request, confirmation, and cancellation system • Vehicle rental and reservation system • Search and filtering options for accommodations • Secure payment process • User reviews and ratings
Objectives	<ul style="list-style-type: none"> • Provide an easy-to-use platform for travelers to book accommodation efficiently. • Provide a vehicle rental and reservation feature among the platform services. • Enable to list, update, and manage properties with detailed descriptions, images, and availability schedules. • Give quick and easy search and filtering features to help travelers find suitable accommodations and vehicles. • Establish a community of trust through a user review and rating system.
Constraints	<ul style="list-style-type: none"> • Timeline-8 weeks (Sprint 0 + 4 sprints). • Technology stack-MERN (MongoDB, Express.js, React, Node.js). • Scope limited to MVP features.
Stakeholders	<ol style="list-style-type: none"> 1. End Users (Customers / Travelers) <ul style="list-style-type: none"> • Use the platform to search, book, or rent accommodations and vehicles. • Expect a user-friendly interface, secure payments, and reliable services. 2. Property Owners <ul style="list-style-type: none"> • List their accommodations or vehicles for rent. 3. System Administrators <ul style="list-style-type: none"> • Manage user accounts, listings, bookings, and resolve issues. 4. Project Development Team <ul style="list-style-type: none"> • (designers, developers, testers) who build and maintain the system. • Responsible for delivering project objectives.

3. Initial Product Backlog

The product backlog is structured into Epics, which are then broken down into user stories/tasks.

Prioritized epics

1. User Management
2. Listings Management
3. Search & Filtering
4. Booking Management
5. Payment Integration
6. Reviews & Ratings
7. Add-on Travel Services
8. Project Setup & Environment
9. Agile Process & Tools
10. Prototype & Requirement Analysis

This screenshot shows the Jira Backlog view for the TravelMate project. The sidebar on the left includes links for 'For you', 'Recent', 'Starred', 'Apps', 'Plans', 'Projects' (with a 'TravelMate' entry), 'Teams', and 'More'. The main area displays a search bar, filter options ('Backlog', 'Epic'), and a table of work items. The table has columns for title, epic, priority, status, due date, and assignee. Tasks include 'User account creation', 'Edit user profile/preferences', 'Property owner registration', etc., categorized under 'USER MANAGEMENT', 'LISTINGS MANAGEMENT', 'BOOKING MANAGEMENT', and 'PAYMENT INTEGRATION' epics.

Backlog (23 work items)	Epic	Priority	Status	Due Date	Assignee
TM-13 User account creation	USER MANAGEMENT	TO DO	3	SD	...
TM-14 Edit user profile/preferences	USER MANAGEMENT	TO DO	2	= SD	
TM-15 Property owner registration	USER MANAGEMENT	TO DO	5	= NK	
TM-16 List a property	LISTINGS MANAGEMENT	TO DO	8	= TP	
TM-17 Manage listings (Edit /Delete)	LISTINGS MANAGEMENT	TO DO	5	= TP	
TM-18 View property details (property Detail page)	LISTINGS MANAGEMENT	TO DO	3	= NK	
TM-19 User booking request	BOOKING MANAGEMENT	TO DO	8	= SD	
TM-20 User view bookings Summary	BOOKING MANAGEMENT	TO DO	3	= SD	
TM-21 Owner accept/reject booking	BOOKING MANAGEMENT	TO DO	5	= SF	
TM-22 Users (travelers & owners) receive email notifications	BOOKING MANAGEMENT	TO DO	5	= SF	
TM-23 Traveler secure online payment	PAYMENT INTEGRATION	TO DO	8	= O	
TM-24 Payment success email Notification	PAYMENT INTEGRATION	TO DO	3	= O	

This screenshot shows the Jira Timeline view for the TravelMate project. The sidebar is identical to the previous backlog view. The main area displays a search bar, filter options ('Timeline'), and a table of work items. The table has columns for title, epic, priority, status, due date, and assignee. Tasks include 'Traveler leaves a review', 'User View reviews', 'List a Travel Services', etc., categorized under 'REVIEWS & RATINGS', 'ADD-ON TRAVEL SE...', 'SEARCH & FILTERING', 'PROJECT SETUP & E...', 'AGILE PROCESS & T...', and 'PROTOTYPE & REQUI...' epics.

Timeline (23 work items)	Epic	Priority	Status	Due Date	Assignee
TM-25 Traveler leaves a review	REVIEWS & RATINGS	TO DO	3	= O	...
TM-26 User View reviews	REVIEWS & RATINGS	TO DO	3	= O	
TM-27 List a Travel Services	ADD-ON TRAVEL SE...	TO DO	5	= O	
TM-28 Reservation for transport services	ADD-ON TRAVEL SE...	TO DO	4	= O	
TM-29 Search by location	SEARCH & FILTERING	TO DO	5	= O	
TM-30 Filter search results	SEARCH & FILTERING	TO DO	4	= O	
TM-34 Set up a shared Git repository	PROJECT SETUP & E...	TO DO	2	= SF	
TM-35 Development environment	PROJECT SETUP & E...	TO DO	-	= SD	
TM-36 Create project in Jira	AGILE PROCESS & T...	TO DO	2	= SD	
TM-37 set up communication channels	AGILE PROCESS & T...	TO DO	2	= NK	
TM-38 Create initial wireframes	PROTOTYPE & REQUI...	TO DO	3	= TP	

4. Sprint Backlogs and Plans

Jira

For you

Recent

Starred

Apps

Plans

Projects

Starred

(Learn) Jira Premium b...

Recent

TravelMate

More projects

Teams

... More

Give feedback on the n...

Search

+ Create

See plans

Backlog

Summary Board Calendar Timeline Pages Forms Reports

Search backlog

Sprint 0 11 Aug – 24 Aug (5 work items)

Establish project environment, tools, and architecture so the team is ready to implement user-facing features from Sprint 1 onward.

TM-34 Set up a shared Git repository

TM-35 Development environment

TM-36 Create project in Jira

TM-37 Requirements Gathering & Analysis

TM-38 Create initial wireframes

PROJECT SETUP & E... DONE Aug 12 2 = SF

PROJECT SETUP & E... DONE Aug 13 2 = SD

AGILE PROCESS & T... DONE Aug 15 2 = SD

PROTOTYPE & REQUI... DONE Aug 19 2 ~ NK ...

PROTOTYPE & REQUI... DONE Aug 24 3 = SD

Sprint 1 25 Aug – 7 Sep (5 work items)

Deliver a basic working platform where users can register, log in, and start listing accommodations.

TM-13 User account creation

TM-14 Edit user profile/preferences

TM-15 Property owner registration

TM-16 List a property

TM-17 Manage listings (Edit /Delete)

USER MANAGEMENT DONE Aug 27 3 = SD

USER MANAGEMENT DONE Aug 29 2 = SD

USER MANAGEMENT DONE Sep 1 5 = TP

LISTINGS MANAGEM... DONE Sep 4 8 ~ TP

LISTINGS MANAGEM... IN PROGRESS Sep 7 5 ~ TP

+ Create

Jira

For you

Recent

Starred

Apps

Plans

Projects

Starred

(Learn) Jira Premium b...

Recent

TravelMate

More projects

Teams

... More

Give feedback on the n...

Search

+ Create

See plans

Backlog

Summary Board Calendar Timeline Pages Forms Reports

Search backlog

SD +4 Epic Clear filters

Sprint 2 7 Sep – 21 Sep (5 work items)

Enable travelers to book properties, and allow owners to manage booking requests.

TM-18 View property details (property Detail page)

TM-19 User booking request

TM-20 User view bookings Summary

TM-21 Owner accept/reject booking

TM-22 Users (travelers & owners) receive email notifications

LISTINGS MANAGEM... TO DO 3 ~ NK

BOOKING MANAGEM... TO DO 8 ~ SD

BOOKING MANAGEM... TO DO 3 ~ SD

BOOKING MANAGEM... TO DO 5 = SF

BOOKING MANAGEM... TO DO 5 = SF

+ Create

5 of 5 work items visible | Estimate: 24 of 24

Backlog (8 work items)

TM-23 Traveler secure online payment

TM-24 Payment success email Notification

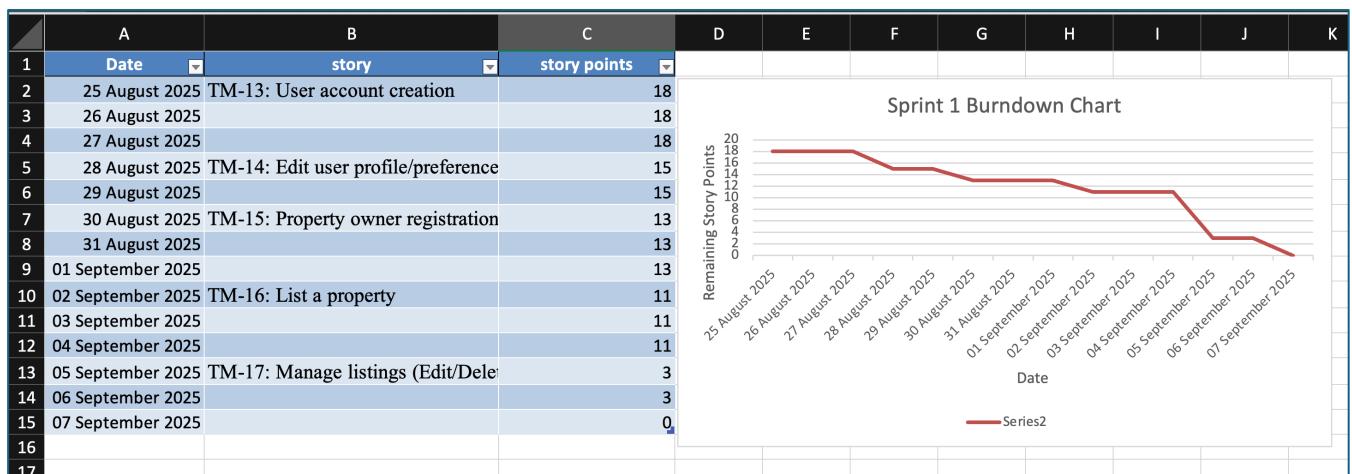
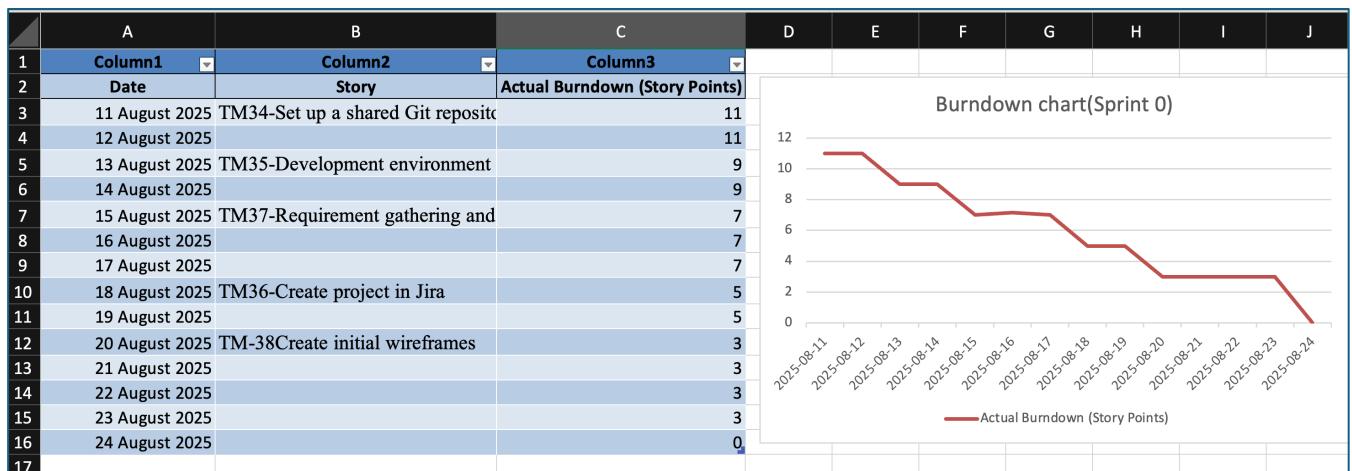
PAYOUT INTEGRATI... TO DO 8 = O

PAYOUT INTEGRATI... TO DO 3 = O

More results

Sprint	Goal	Backlog Items
Sprint 0	The environment setup, requirement gathering, and initial prototypes.	TM-34: Set up a shared Git repository TM-35: Development environment TM-36: Create project in Jira TM-37: Requirement gathering and analysis TM-38: Create initial wireframes
Sprint 1	Deliver a basic working platform where users can register, log in, and start listing accommodations.	TM-13: User account creation TM-14: Edit user profile/preferences TM-15: Property owner registration TM-16: List a property TM-17: Manage listings (Edit/Delete)
Sprint 2	Enable travelers to book properties, and allow owners to manage booking requests.	TM-18: View property details (property detail page) TM-19: User booking request TM-20: User view bookings summary TM-21: Owner accept/reject booking TM-22: Users (travelers & owners) receive email notifications

Burndown Charts



5. Defined Scrum Roles

1. Product Owner(D.D.I.M.S Dissanayake)

maximize the value of the final product that the development team produces.

- defining and outlining the project's goals and product vision.
- creating, managing, and setting priorities for the Product Backlog.
- writing user stories with precise approval criteria that are simple and concise.
- Representing the voice of the customer and key stakeholders.
- using the Definition of Done to determine whether to accept or reject finished work items during the Sprint Review.

2. Scrum Master(D.G.N.K. Karunathilaka)

Promoting and supporting Scrum as outlined in the Scrum Guide and making sure the team adheres to agile values and principles are the main responsibilities.

- facilitating all Scrum activities, including sprint planning, sprint review, daily stand-up, and retrospective.
- guiding the group in cross-functionality and self-management.
- removing obstacles that are preventing the Development Team from moving forward.
- Shielding the team from external interruptions and distractions.
- Ensuring transparency and promoting a culture of continuous improvement

3. Development Team(D.D.I.M.S Dissanayake, S.A. Fernando, B.N.T. Perera, D.G.N.K. Karunathilaka)

Delivering a potentially releaseable "Done" increment of the product at the conclusion of each sprint is the main duty.

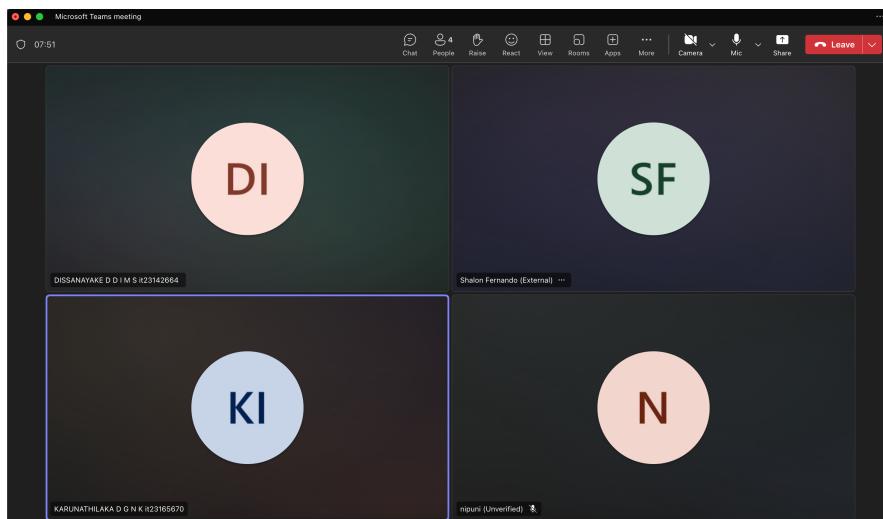
- A cross-functional group that collectively owns all aspects of development (analysis, design, coding, testing, documentation).
- figuring out how to best complete the task and reach the Sprint Goal by self-organizing.
- Collaboratively estimating the effort for Product Backlog items.
- holding one another responsible for the timely and high-quality performance of tasks.
- modifying the strategy daily in light of developments and conversations during the Daily Stand-up.

6. Evidence of Scrum Events

followed the Scrum framework, holding all prescribed events. Below are summaries and logs from our key ceremonies.

Sprint 0 Planning Meeting (August 11, 2025)

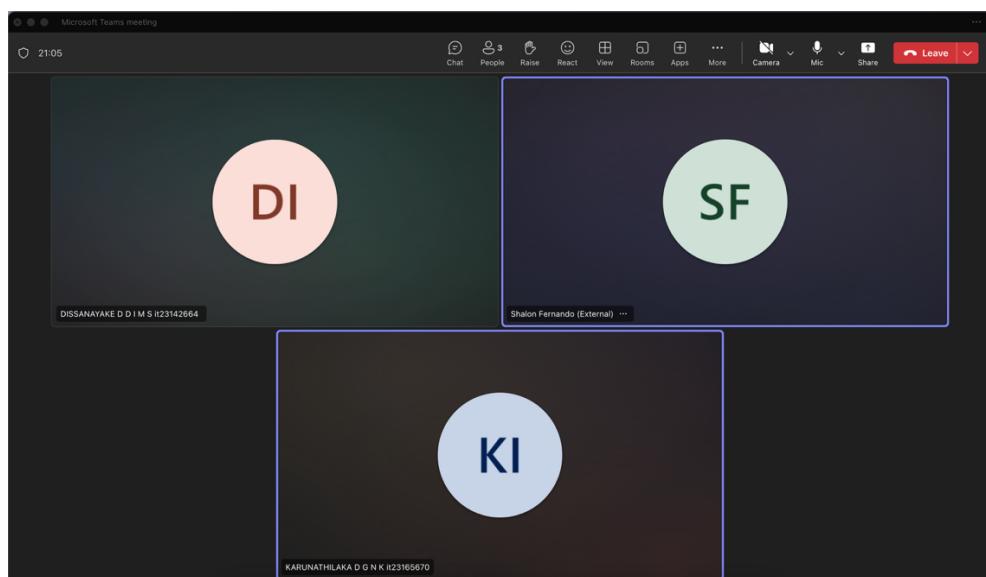
- The Product Owner (DISSANAYAKE D D I M S) introduced the objectives of Sprint 0, focusing on project setup, requirement gathering, and initial prototypes.
- The Sprint Goal was set: " foundation for development through environment setup, requirement analysis, and wireframes."
- The team selected preparatory backlog items including:
 - Setting up version control (Git repository)
 - Configuring the development environment
 - Creating the Jira project for backlog management
 - Conducting requirement gathering and analysis
 - Designing initial wireframes for the platform
- Stories were broken down into setup tasks and analysis activities, with rough estimates assigned collaboratively.
- The team committed to completing the Sprint 0 backlog as a prerequisite for development in Sprint 1.



Team meeting(August 11, 2025)

Sprint 1 Planning Meeting(August 24, 2025)

- The Product Owner (DISSANAYAKE D D I M S) presented the prioritized Product Backlog.
- The Sprint Goal was set: "Establish a foundation with user authentication and property listing functionality."
- The team selected user stories for "User Management" and "Property Listings" epics.
- Stories were broken down into tasks, and initial estimates were assigned collaboratively.
- The team committed to the Sprint 1 backlog.



Teams Meeting(August 24, 2025)

Sprint 1 Review & Retrospective (September 4, 2025)

Sprint 1 Review Summary

The development team successfully demoed the working functionality for the "User Management" and "Property Listings" epics, achieving the Sprint Goal.

- User Registration & Login
- User Profile: A logged-in user can edit their basic profile information and preferences .
- Property Owner Registration
- List a Property: A registered property owner can successfully create and publish a new property listing with details like title, description, and price .