Sri Lanka Institute of Information Technology

Information Technology Project (IT2080)

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EasyRent - Vehicle Rental and Hiring Management System

Agile Activity Report

Submitted by:

	Name with Initials (Surname first)	Registration Number	Contact Phone Number	Email
1.	Jayasekara M.P.S.S	IT22580344	0772629286	it22580344@my.sliit.lk
2.	Chandrasekara C.M.P.V	IT22286246	0762404667	it22286246@my.sliit.lk
3.	Wijewantha H.D.C	IT22137128	0776183693	it22137128@my.sliit.lk
4.	Nathasha K.D.S	IT22230638	0703886818	it22230638@my.sliit.lk
5.	Jayasundara J.M.T.P	IT22281128	0786414979	it22281128@my.sliit.lk
6.	Tharuka M.S	IT22101242	0701215676	it22101242@my.sliit.lk
7.	Silva M.W.P.R.K	IT22124876	0777372445	it22124876@my.sliit.lk
8.	Abeysekara W.R.G.M	IT22271150	0776501141	it22271150@my.sliit.lk

Introduction

EasyRent is your one-stop shop for renting or sharing a car! Do you have a car that just sits around unused? EasyRent helps you turn it into extra cash by listing it for rent on our user-friendly platform. This is like having a virtual garage sale for your car, but instead of selling it, you rent it out to people who need it for a while.

Renting a car through EasyRent is just as easy! Finding the perfect car is a breeze with our search filters that allow you to pick exactly what you need, whether it's a fuel-efficient car for a weekend getaway or a spacious van for a family trip. Once you've found the car you want, booking it online takes just a few minutes. No more calling around or meeting with strangers!

EasyRent makes the whole rental process smooth and secure. You can pay for your rental safely and easily through our system, and car owners can use it to pay drivers if they choose to hire one. EasyRent also takes care of car maintenance by having a team that checks the vehicles regularly to make sure they're in top shape.

Whether you're looking to make some extra money on your car or you need a car to rent for a while, EasyRent is the perfect solution! Our system is designed to be user-friendly for everyone, so give it a try today and see how easy it is to rent or share a car!

IT22580344 – Jayasekara M.P.S.S.

Epic – Booking and Payment Management

Feature	User Story ID	User Story	Tasks
Filter vehicles	101	As a renter, I want to filter and select a vehicle based on my preferences so that I can find the best vehicle for my needs.	1. Implement a feature for renters to filter and select a vehicle based on their preferences.
Check vehicle availability	102	As a renter, I want to check the availability of a vehicle before placing a booking request so that I can ensure the vehicle is available for my desired time period.	2. Implement a feature for renters to check the availability of a vehicle before placing a booking request.
Place a booking request	103	As a renter, I want to place a booking request if the vehicle is available so that I can reserve it for future use.	3. Implement a feature for renters to place a booking request if the vehicle is available.
Accept or reject booking request	104	As a vehicle owner, I want to check the booking details when I receive a request so that I can decide whether to accept or reject the booking.	4. Implement a feature for vehicle owners to check the booking details when they receive a request. 5. Implement a feature for vehicle owners to accept or reject booking request
Check driver availability	105	As a vehicle owner, I want to check the driver's availability when a booking is for hire so that I can ensure the driver is available for the requested time period.	6. Implement a feature for vehicle owners to check the driver's availability when a booking is for hire.
Pay nonrefundable booking fee	106	As a renter, I want to pay a non-refundable booking fee once my booking request is accepted so that I can reserve the vehicle.	7. Implement a feature for renters to pay a non-refundable booking fee once their booking request is accepted.
Update vehicle availability	107	As a vehicle owner, I want to update the vehicle's availability status to 'reserved' once it is booked so that other renters cannot place booking requests for the same time period.	8. Implement a feature for vehicle owners to update the vehicle's availability status to 'reserved' once it is booked.

Generate estimated bill	108	As a renter, I want to review a full bill before booking so that I can understand the cost breakdown.	9. Implement a feature for renters to review a full bill before booking.
Provide packages	109	As a vehicle owner, I want to decide on the packages I provide so that I can offer different options to renters.	10. Implement a feature for vehicle owners to provide the packages.
Select packages	110	As a renter, I want to select a package if the owner provides them so that I can choose the best option for me.	11. Implement a feature for renters to select a package if the owner provides them.
Collect necessary information and proofs	111	As a renter, I want to provide necessary information and proofs such as a copy of my National Identity Card (NIC), a utility bill, and if I am a foreigner, a copy of my passport when renting a vehicle so that I can comply with the owner's requirements.	12. Implement a feature for renters to provide necessary information and proofs such as a copy of their National Identity Card (NIC), a utility bill, and if they are a foreigner, a copy of their passport when renting a vehicle.
Collect refundable security deposit	112	As a vehicle owner, I want to collect a refundable security deposit before renting out my vehicles so that I can cover any potential damages or additional charges.	13. Implement a feature for vehicle owners to collect a refundable security deposit before renting out their vehicles.
Generate bill	113	As a vehicle owner, I want to input the meter number before giving the vehicle to the renter and repeat the process when the vehicle is returned so that I can generate a bill based on the time duration and distance.	14. Implement a feature for vehicle owners to input the meter number before giving the vehicle to the renter and repeat the process when the vehicle is returned for generate bill automatically.
Additional charges generate	114	As a renter, I want to know if I exceed the agreed-upon limits or incur any damage during the rental period so that I can expect additional charges on my bill.	15. Implement a feature for renters to know if they exceed the agreed-upon limits or incur any damage during the rental period and generate bill according to additional charges.

Payment for drivers	115	As a vehicle owner, I want to pay the drivers for hires so that I can compensate them for their service.	16. Implement a feature for vehicle owners to pay the drivers for hires.
Payment History management	116	As a vehicle owner, I want to manage payment history for both drivers and owners so that I can keep track of all transactions.	17. Implement a feature for vehicle owners to manage payment history for both drivers and owners.
Earning History management	117	As a vehicle owner, I want to check the earning history from each vehicle so that I can understand the profitability of each vehicle.	18. Implement a feature for vehicle owners to check the earning history from each vehicle.
Booking and Transaction history management	118	As a renter, I want to keep a record of my booking history and payment history so that I can track my past transactions.	19. Implement a feature for renters to keep a record of their booking history and payment history.

IT22101242 Tharuka M.S

Epic – Vehicle Owner Management System

Feature	User Story ID	User Story	Tasks
Owner profile management	201	As an unregistered vehicle owner, I want to create a profile and register in the system	1. Implement user registration and profile creation functionality.
		As a vehicle owner, I want to be able to update and delete profile information	2. Design user interface for profile management.
Vehicles adding and management	202	As a vehicle owner, I want to add my vehicles details	3. Develop vehicle registration form.
		As a vehicle owner, I want to update and delete my vehicle details as needed	4. Create interface and implement logic for vehicle update and deletion
Approval process	203	As a vehicle owner, I want my added vehicles to be approved by the maintenance manager	5. Implement notification system for vehicle approval status

Feature	User Story ID	User Story	Tasks
Booking notifications	204	As a vehicle owner, I want to receive notifications about bookings and other updates	6. Set up notification system for sending alerts and updates to vehicle owners
Access financial reports and histories	205	As a vehicle owner, I want to access financial reports to track expenses and incomes related to the booking	7. Develop financial reporting module
		As a vehicle owner, I want to view financial histories related to my vehicles	8. Integrate transaction history for vehicle owners

IT22230638 Nathasha K.D.S

Epic – Vehicle Management System

Feature	User Story ID	User Story	Tasks
Vehicle Manager Login	301	As the vehicle manager, I want to access the system securely using my credentials	1. Implement a secure login mechanism. 2. Design and develop the dedicated interface for the vehicle manager.
Vehicle Details Update	302	As the vehicle manager, I want to update various details of vehicles, including specifications, registration information, and maintenance records.	3. Design the user interface for updating vehicle details. 4. implement a user interface allowing vehicle managers to update specifications, registration information, and maintenance records for vehicles in the system.
Add New Vehicles	303	As the vehicle manager, I want to add new vehicles to the system, incorporating detailed information submitted by vehicle owners.	5. Implement the functionality to add new vehicles.
Manage Vehicle Availability	304	As the vehicle manager, I want to manage the availability status of vehicles for rentals.	6. Design the user interface for managing vehicle availability.

Feature	User Story ID	User Story	Tasks
			7. Implement the functionality to update the availability status of vehicles.
View Rental Reports and History	305	As the vehicle manager, I want to view comprehensive rental reports and historical data.	8. Design the user interface for viewing rental reports and history. 9. Implement the functionality to retrieve and display rental reports and historical rental data.
Renter Access	306	As a renter, I want to easily access, and view details of all vehicles added by the vehicle manager.	10. Design a user-friendly interface for renters to view vehicle details. 11. Implement the functionality to allow renters to access and view vehicle information.

IT22124876 Silva M.W.P.R.K.

Epic – Driver Management System

Feature	User Story ID	User Story	Tasks
Driver Registration	401	• As a new driver, I want to register with the system to start using the service. • As a driver I can log into the system after the registration.	1. Create a registration form. 2. Implement backend logic for user registration. 3. Integrate email verification for account activation.
Driver Profile Management	402	• As a driver, I want to create and update my profile information. • As user I want the profile delete option if needed.	1. Design and implement a profile page. 2. Enable profile update functionality. 3. Delete account.
Vehicle Browsing	403	• As a driver, I want a user-friendly interface to browse available vehicles.	1. Design a vehicle listing page. 2. Implement filtering and sorting options.

License Authentication	404	• As a driver, I want the system to verify the authenticity of my license.	1. Integrate a license verification service. 2. Implement the verification process in the registration flow.
Notification System	405	• As a driver, I want to receive notifications for reservation confirmations and upcoming bookings.	1. Integrate a notification service. 2. Implement triggers for reservation and booking events.
Behavior Monitoring	406	• As a system administrator, I want to monitor driver behavior, including speed, adherence to traffic rules, and working hours.	1. Research and integrate GPS-based speed tracking. 2. Implement a system to monitor traffic rule adherence. 3. Implement working hours tracking.
Payment Integration	407	• As a driver, I want a secure and efficient payment system for the services I provide.	1. Integrate a payment gateway for transactions. 2. Implement a billing system for tracking and managing payments.
Rating System	408	• As a passenger, I want to provide ratings and feedback on the driver's service.	1. Create a rating and feedback form. 2. Implement a system to display average ratings for each driver.
Customer Support Chat	409	• As a user, I want a real-time chat option to connect with customer support for immediate assistance.	1. Integrate a chat support system. 2. Implement notifications for incoming support messages.
Driver Feedback	410	• As a driver, I want to receive constructive feedback from passengers to improve my service.	1. Implement a feedback notification system. 2. Design a feedback dashboard for drivers.

IT22137128 Wijewantha H.D.C
Epic – Customer Management System

Feature	User Story ID	User Story	Tasks
User Registration	501	As a new user, I want to register easily on the platform	1. Develop user registration form with necessary fields 2. Implement validation for email and password
	502	As a user, I want the option to delete my account if needed	3. Create a delete account functionality with confirmation prompt
Vehicle Ads Viewing	503	As a renter, I want to view vehicle ads within the system	4. Design and implement vehicle ad display page
Vehicle Search	504	As a renter, I want to search for vehicles	5. Develop search functionality with filters for vehicle type, location, etc. 6. Implement saving of search results for easy access
Requesting Vehicles	505	As a renter, I want to request vehicles from the system	7. Develop booking request form
Booking Management	506	As a renter, I want to manage my booking requests	8. Implement functionality to delete or update booking requests
Booking Modifications	507	As a renter, I want to edit confirmed bookings within 24 hours	9. Develop functionality to edit booking details within the specified time
Finding a Driver	508	As a renter, I want the option to find a driver if needed	10. Integrate driver finding functionality with booking process
Vehicle Reporting	509	As a renter, I want to report vehicles if necessary	11. Implement vehicle reporting form
Favourite List Management	510	As a renter, I want to add vehicles to my favourite list and manage it	12. Develop functionality to add/remove vehicles from favourites
Providing Feedback	511	As a user, I want to provide feedback after service	13. As a user, I want to provide feedback after service
Submitting Complaints	512	As a user, I want to submit complaints at any time	14. Implement complaint submission form

IT22286246 – Chandrasekara C.M.P.V

Epic – Humana Recourses Management

Feature	User Story ID	User Story	Tasks
Employee Registration & Authentication	601	As an HR manager, I want to be able to register new employees into the system and make sure they have their own set of authentication credentials.	1. Create the employee registration user interface. 2. Execute validations for input. 3. Implement backend logic for storing employee information securely.
Employee summary	602	As an HR, I want to be able to access and manage employee profiles, including contact details, work roles, and personal information.	1. Create a schema for employee profiles. 2. Develop CRUD (Create, Read, Update, Delete) functionality for employee profiles. 3. Implement access control to ensure only authorized personnel can modify employee profiles.
Employee Removal	603	As an HR manager, I would want to have the ability to note the cause for termination when an employee leaves, and this data need to be kept in a distinct database for my reference whenever needed.	1. Implement functions to delete employee entries from the database 2. 2.Store reasons for employee removal in a separate table
Salary Allocation	604	As an HR manager, I want to allocate salaries to employees based on their job roles and performance.	1. Design salary structure and calculation rules. 2. Create interface for inputting and updating employee salaries. 3. 3.Collect data and store in the database 4. Implement functions to update details.

Feature	User Story ID	User Story	Tasks
Leave Request Management	605	As an HR manager, in order to avoid conflicts with the programs that my employees are assigned to, I need to be able to approve or disapprove their requests for leaves of absence.	1. Create leave request form with necessary fields. 2. Develop workflow for leave request approval process and store their status in the database.
Reporting	606	As an HR manager, I want to generate monthly income reports for employee salaries allocated for all the employees.	1. Identify key metrics and data sources for income report. 2. 2.Create functions to generate monthly report for total employee salary.

IT22271150 Abeysekara .W.R.G.M

Epic: Reviews and Rating Management System

Feature	User Story ID	User Story	Tasks
Rating through the stars	701	As a renter, I want to review my experience with the system with other users	1. Put in place a star rating system so that tenants can evaluate their experiences. 2. Include user-profiles and vehicle listings in the rating system. 3. On car classifieds, show both average and individual ratings.
	702	As a vehicle manager, I want to know about what are the best and worst vehicles.	1. Provide a way for managers of automobiles to see reviews and comments about their cars. 2. Give vehicle managers insights that display the best and worst-rated cars.

Notification system	703	As a renter I want to know, if is it successful when I update or delete the rating.	1. Send out notifications to tenants as soon as their attempts to edit or remove their ratings are successful. 2. Create a notification interface so that tenants can get action-related feedback.
Driver complains form	704	As a renter, I want to complain to drivers about some specific situations that happened.	1. Design a form for renters to submit complaints about vehicles. 2. Implement backend functionality to process and store vehicle complaints.
Vehicle complains form	705	As a renter, I want to complain to vehicles about some specific things that happened.	1. Create a form that renters can use to report issues with cars. 2. Provide backend features to handle and record car concerns.
Reply emails	706	As an owner, I want to know why the system deleted my vehicle from the system.	1. Set up email notifications to let car owners know why their vehicles are being removed.
		As a renter, I want to know what are the actions that get for my complaints.	1. Provide a way for renters to receive feedback regarding how their complaints were resolved.

IT22281128 JAYASUNDARA J.M.T.P

Epic: Vehicle Maintenance Management System

Feature	User Story ID	User Story	Tasks
Maintenance Manager Registration	801	• As a maintenance manager, I want to register with the system to start using the service. • As a maintenance manager I can log into the system after the registration.	2. Create a registration form. 3. Implement backend logic for user registration. 4. Integrate email verification for account activation.
Maintenance Manager Profile Management	802	• As a maintenance manager, I want to create and update my profile information. • As a maintenance manager I want the profile delete option if needed.	1. Design and implement a profile page. 2. Enable profile update functionality. 3. Delete account.
Vehicle Condition Management	803	• As a maintenance manager, I want a user-friendly interface to update vehicle's condition.	1. Design a vehicle condition page. 2. Implement filtering and sorting options.
Notification System	804	• As a maintenance manager, I want to receive notifications for repairing confirmations.	1. Integrate a notification service. 2. Implement triggers for repairing event.
Payment Integration	805	• As a maintenance manager, I want a secure and efficient payment system for the services I provide.	1. Integrate a payment gateway for transactions. 2. Implement a billing system for repairing payment.

Product Backlog

Priority Scale

1. Highest Priority
2. Normal Priority
3. Less Priority

Order ID	User Story ID	UserStory	Estimated Hours	Priority	Status
11	201	As an unregistered vehicle owner, I want to create a profile and register in the system	2	1	To be Started
21	501	As a new user, I want to register easily on the platform	2	1	To be Started
36	401	As a new driver, I want to register with the system to start using	2	1	To be Started
43	601	As an HR manager, I want to be able to register new employees into the system and make sure they have their own set of authentication credentials	2	2	To be Started
46	202	As a vehicle owner, I want to add update and delete my vehicle details as needed	1	3	To be Started
51	101	As a renter, I want to check the availability of a vehicle before placing a booking request so that I can ensure the vehicle is available for my desired time period.	2	1	To be Started
60	102	As a renter, I want to place a booking request if the vehicle is available so that I can reserve it for future use	1	1	To be Started

Priority	Product Backlog Item	Tasks	User Story ID	Estimated Hours	Owner
70	203	As a vehicle owner, I want my added vehicles to be approved by the maintenance manager	2		To be Started

1ˢᵗ Sprint

In this, we have mentioned the tasks for our first sprint.

Priority	Product Backlog Item	Tasks	User Story ID	Estimated Hours	Owner
High	Owner profile management	Implement user registration and profile creation functionality.	201	0.5	**IT22101242**
		Design user interface for profile management.		1	
High	User Registration	Develop user registration form with necessary fields	501	0.5	**IT22137128**
		Implement validation for email and password		0.5	
High	Driver Registration	As a new driver, I want to register with the system to start using the service.	401	1	**IT22124876**
		As a driver I can log into the system after the registration		0.5	

Medium	Employee Registration & Authentication	Create the employee registration user interface.	601	0.5	**IT22286246**
		Execute validations for input.		0.25	
		Implement backend logic for storing employee information securely.		1	
High	Vehicles adding and management	Develop vehicle registration form.	202	0.5	**IT22101242**
		Create interface and implement logic for vehicle update and deletion		1	
High	Filter vehicles	Implement a feature for renters to filter and select a vehicle based on their preferences.	101	1	**IT22580344**
High	Check vehicle availability	Implement a feature for renters to check the availability of a vehicle before placing a booking request.	102	1	**IT22580344**
High	Vehicle Manager Login	Implement a secure login mechanism.	301	0.5	**IT22230638**
		Design and develop the dedicated interface for the vehicle manager.		05.	

High	Maintenance Manager Registration	Create a registration form.	801	0.5	**IT22281128**
		Implement backend logic for user registration.		0.5	
		Integrate email verification for account activation.		0.5	
Medium	Rating through the stars	Put in place a star rating system so that tenants can evaluate their experiences.	701	0.5	**IT22271150**
		Include user-profiles and vehicle listings in the rating system.			
		On car classifieds, show both average and individual ratings.			

Kanban Board

BackLog

101. As a renter, I want to filter and select a vehicle based on my preferences so that I can find the best vehicle for my needs.
👁 **SJ**

201. As an unregistered vehicle owner, I want to create a profile update and delete profile information
ST

202. As a vehicle owner, I want to add update and delete my vehicle details as needed
ST

601. As an HR manager, I want to

+ Add a card

Up Next

501. Task 2) Implement validation for email and password
🕐 Mar 24 **WI**

202. Task 1) Develop vehicle registration form.
🕐 Mar 24 **ST**

202. Task 2) Create interface and implement logic for vehicle update and deletion.
🕐 Mar 26 **ST**

601. Task 3) Implement backend logic for storing employee information securely.
🕐 Mar 21 **PV**

+ Add a card

In Progress

201. Task 2) Design user interface for profile management.
🕐 Mar 12 **ST**

101. Task 1) Implement Vehicle Filter
👁 🕐 Mar 16 **SJ**

601. Task 2) Execute validations for input.
🕐 Mar 23 **PV**

+ Add a card

Done

201. Task 1) Implement user registration and profile creation functionality.
🕐 Mar 10 **ST**

601. Task 1) Create the employee registration user interface.
🕐 Mar 13 **PV**

501. Task 1) Develop user registration form with necessary fields
🕐 Mar 9 **WI**

+ Add a card

+ Add another li