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Sri Lanka Institute of Information Technology

Information Technology Project (IT2080)

**Batch ID - WE.IT.04**

**Group ID - WE\_B04\_G04**

**EasyRent - Vehicle Rental and Hiring Management System**

**Agile Activity Report**

Submitted by**:**

|  |  |  |  |  |
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**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. | 1. 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. | 1. 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. | 1. Implement a feature for vehicle owners to check the booking details when they receive a request. 2. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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. | 1. 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

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| --- | --- | --- | --- |
| **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 | 1. Design user interface for profile management. |
| Vehicles adding and management | 202 | As a vehicle owner, I want to add my vehicles details | 1. Develop vehicle registration form. |
| As a vehicle owner, I want to update and delete my vehicle details as needed | 1. 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 | 1. Implement notification system for vehicle approval status |
| Booking notifications | 204 | As a vehicle owner, I want to receive notifications about bookings and other updates | 1. 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 | 1. Develop financial reporting module |
| As a vehicle owner, I want to view financial histories related to my vehicles | 1. 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. | 1. Design the user interface for updating vehicle details. 2. 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. | 1. 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. | 1. Design the user interface for managing vehicle availability. 2. 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. | 1. Design the user interface for viewing rental reports and history. 2. 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. | 1. Design a user-friendly interface for renters to view vehicle details. 2. Implement the functionality to allow renters to access and view vehicle information. |

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

Epic – Driver Management System

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| --- | --- | --- | --- |
| **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

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| --- | --- | --- | --- |
| **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 | 1. Create a delete account functionality with confirmation prompt |
| Vehicle Ads Viewing | 503 | As a renter, I want to view vehicle ads within the system | 1. Design and implement vehicle ad display page |
| **Vehicle Search** | 504 | As a renter, I want to search for vehicles | 1. Develop search functionality with filters for vehicle type, location, etc. 2. Implement saving of search results for easy access |
| Requesting Vehicles | 505 | As a renter, I want to request vehicles from the system | 1. Develop booking request form |
| **Booking Management** | 506 | As a renter, I want to manage my booking requests | 1. Implement functionality to delete or update booking requests |
| **Booking Modifications** | 507 | As a renter, I want to edit confirmed bookings within 24 hours | 1. 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 | 1. Integrate driver finding functionality with booking process |
| **Vehicle Reporting** | 509 | As a renter, I want to report vehicles if necessary | 1. Implement vehicle reporting form |
| **Favourite List Management** | 510 | As a renter, I want to add vehicles to my favourite list and manage it | 1. Develop functionality to add/remove vehicles from favourites |
| **Providing Feedback** | 511 | As a user, I want to provide feedback after service | 1. As a user, I want to provide feedback after service |
| **Submitting Complaints** | 512 | As a user, I want to submit complaints at any time | 1. Implement complaint submission form |

**IT22286246 – Chandrasekara C.M.P.V**

Epic – Humana Recourses Management

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| --- | --- | --- | --- |
| **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. |
| **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

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| --- | --- | --- | --- |
| **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

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| --- | --- | --- | --- |
| **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. | 1. Create a registration form. 2. Implement backend logic for user registration. 3. 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 |
| 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**

A screenshot of a computer

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