**AMRITA VISHWA VIDYAPEETHAM**

**Amrita School of Computing**

**Academic Year 2023-24**

# Semester: VI Sem B. Tech 19CSE314 SOFTWARE ENGINEERING

**STANDUP NOTES 1 – For Sprint 1**

Section: CSE A Project Title: **Smart Parking Management System**

**Day 1: 01-04-2024**

**Scrum Meeting 1 Key points:**

1. User Stories Review: The team discussed and reviewed user stories related to each epic, ensuring clarity, and understanding of the requirements for the Smart Parking Management System.
2. Progress Update: Each team member analyzed their impediments, schedules, plans to complete their assigned tasks.
3. Technical Challenges: Identified any technical challenges or dependencies hindering progress, particularly focusing on areas such as integrating with local businesses and detecting parking areas accurately.
4. Demo or Prototype Showcase: If applicable, a demo or prototype of completed user stories or features was showcased to gather feedback and ensure alignment with the project vision.
5. Planning and Prioritization: Discussed the prioritization of epics and user stories for the upcoming sprint, considering factors such as user value, complexity, and dependencies.
6. Risk Assessment and Mitigation: Identified potential risks to the project's timeline or success, and discussed strategies for mitigating these risks, such as reallocating resources or adjusting sprint goals accordingly.

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| **Name** | **Question** | **Answer** | **Sign** |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Worked on setting up the basic framework for user authentication and login functionality. * Researched and implemented secure authentication protocols. * Started designing the user interface for the login page. |  |
| What will you do today? | * Continuing development on the login and authentication system. * Implementing additional security measures such as password hashing and encryption. * Testing the login functionality to ensure seamless user experience. |  |
| Are there any impediments in your way? | * Currently, no major impediments are blocking progress. However, I may encounter challenges in integrating the authentication system with other components of the Smart Parking Management System. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Researched APIs for integrating with local businesses, malls, and public transport systems. * Started development on the navigation feature to find the nearest parking areas. * Explored methods for integrating real-time location data into the system. |  |
| What will you do today? | * Continuing development on the navigation feature and integrating it with external APIs. * Implementing geolocation services to accurately locate nearby parking areas. * Exploring options for seamless integration with public transport systems and malls. |  |
| Are there any impediments in your way? | * No significant impediments encountered so far. However, ensuring accurate location data and seamless integration with external services may pose challenges. Regular communication with external API providers is crucial to address any potential issues. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * Started designing the algorithm for detecting available parking slots. * Researched techniques for real-time parking space detection, considering various vehicle types. * Began development on the user interface to display the number of free slots available. |  |
| What will you do today? | * Continuing development on the parking slot detection algorithm. * Integrating sensors or camera systems for real-time monitoring of parking spaces. * Testing the functionality to ensure accurate detection and display of available slots. |  |
| Are there any impediments in your way? | * No major impediments encountered yet. However, ensuring the accuracy and reliability of the parking slot detection algorithm may require extensive testing and optimization. Coordination with hardware teams for sensor integration is essential for seamless functionality. |  |
| B. Sri Ganesh | What did you do yesterday? | * Started outlining the reservation system workflow. * Researched database models for storing reservation data securely. * Began development on the backend logic for reserving parking slots. |  |
| What will you do today? | * Continuing development on the reservation system, focusing on user interaction and slot availability checks. * Implementing backend validation to prevent double bookings and ensure reservation integrity. * Testing the reservation process end-to-end to identify and address any potential issues. |  |
| Are there any impediments in your way? | * No major impediments identified yet. However, ensuring the scalability and performance of the reservation system under high traffic conditions will be a key consideration during development. |  |
| U. Siddharth Varma | What did you do yesterday? | * Started designing the payment gateway integration for the Smart Parking Management System. * Researched secure payment protocols and compliance requirements. * Began development on the parking operator dashboard for traffic management and rate adjustments. |  |
| What will you do today? | * Continuing development on the payment gateway integration, focusing on user-friendly payment options and secure transactions. * Implementing real-time traffic monitoring features in the parking operator dashboard. * Testing payment processing and traffic management functionalities to ensure reliability and efficiency. |  |
| Are there any impediments in your way? | * No significant impediments encountered so far. However, ensuring compliance with payment regulations and optimizing traffic management algorithms for scalability may require careful attention during development. Regular coordination with payment service providers and feedback from parking operators will be crucial for addressing any potential challenges. |  |

**Day 2 : 02-04-2024**

**Scrum Meeting 2 Key Points:**

1. Progress Update:

* Reviewed progress on user authentication, UI for vehicle service availability, backend for parking availability data, reservation modification system, and payment method selection system.
* Discussed completed tasks like login button implementation, UI design, backend development, ongoing tasks, and challenges.

Integration Status

* Assessed integration of frontend and backend components for each task.

Identified dependencies and discussed resolution plans.

1. Security and Compliance Check:

* Reviewed security measures for user authentication, payment data handling, and compliance with standards.
* Discussed plans for addressing security vulnerabilities and ensuring compliance.

1. User Experience Review:

* Evaluated UI design, usability, and accessibility for implemented features.
* Gathered feedback for improvement.

1. Next Steps and Prioritization:

* Planned next steps, prioritized tasks, and allocated resources effectively for timely delivery.

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| **Name** | **Question** | **Answer** | **Sign** |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Researched user authentication protocols and began designing the authentication system. * Started development on the login button and page design. |  |
| What will you do today? | * Will Complete development on the login button and integrated it into the user interface. * Will Implementation of credential authentication functionality to verify user credentials securely. * Will Develop session management logic to ensure secure access and maintain user sessions. * Test the user authentication system to ensure functionality and security measures are in place. |  |
| Are there any impediments in your way? | * No major impediments encountered. However, ensuring secure authentication and session management requires thorough testing and potential adjustments to meet security standards. Regular security audits may be necessary to identify and address any vulnerabilities. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Researched APIs for integrating with local businesses, malls, and public transport systems. * Started development on the navigation feature to find the nearest parking areas. * Explored methods for integrating real-time location data into the system. |  |
| What will you do today? | * Design and implementation of a user interface component to visually represent the availability of vehicle services, such as nearby businesses, malls, and public transport options. * Integrating the user interface component with real-time location data to dynamically display available services based on the user's current location. * Enhancing the user experience by providing intuitive visuals and easy-to-understand information regarding nearby vehicle services. |  |
| Are there any impediments in your way? | * No significant impediments were encountered. However, ensuring seamless integration with real-time location data and maintaining accurate service availability information may require ongoing monitoring and updates to ensure reliability. Regular feedback from users may also be beneficial for optimizing the user interface component. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * Started designing the algorithm for detecting available parking slots. * Researched techniques for real-time parking space detection, considering various vehicle types. * Began development on the user interface to display the number of free slots available. |  |
| What will you do today? | * Creating a robust backend system to collect and update real-time parking availability data. * Implementing algorithms for accurate detection of available parking slots, considering different vehicle types and parking zones. * Designing a user-friendly interface to present parking availability information for different parking zones or sections. |  |
| Are there any impediments in your way? | * No major impediments identified. However, ensuring the accuracy and reliability of real-time parking data collection and updating may require extensive testing and optimization. Additionally, designing a user-friendly interface that effectively presents information for different parking zones or sections may involve iterative design processes and user feedback. Regular communication and collaboration with stakeholders will be essential to address any potential challenges. |  |
| B. Sri Ganesh | What did you do yesterday? | * Researched existing reservation systems and user modification/cancellation processes. * Designed UI elements for modifying or canceling reservations, including buttons, forms, and confirmation dialogs. * Outlined backend functionality requirements for handling reservation modifications and cancellations.. |  |
| What will you do today? | * Implementing a backend functionality to support modification and cancellation of reservations, including database updates and validation checks. * Develop a user interface components to allow users to modify or cancel their reservations seamlessly. * Implementing a validation processes to ensure that only valid reservations can be modified or canceled. * Integrating a confirmation processes to confirm reservation modifications or cancellations and provide feedback to users. |  |
| Are there any impediments in your way? | * No major impediments encountered. However, ensuring seamless integration between frontend and backend components and handling edge cases such as concurrent modifications or cancellations may require careful consideration and testing. Regular user testing and feedback will be essential to refine the system and address any usability issues. |  |
| U. Siddharth Varma | What did you do yesterday? | * Conducted research on various payment methods commonly used for parking sessions. * Designed UI components to present payment method options during the parking session initiation. * Outlined backend implementation requirements for securely handling payment data and processing transactions. |  |
| What will you do today? | * Implement a backend functionality to support the selection of preferred payment methods during parking session initiation. * Develop a UI elements to present payment method options to users in a clear and intuitive manner. * Integrating secure data handling mechanisms to encrypt and store payment information securely. * Test the system to ensure seamless user experience and secure handling of payment data. |  |
| Are there any impediments in your way? | * No major impediments identified. However, ensuring compliance with payment security standards and regulations, such as PCI DSS, may require additional attention to detail during implementation. Regular security audits and testing will be necessary to identify and address any vulnerabilities in the system. |  |

**Day 3: 03-04-2024**

**Scrum Meeting 3 Key Points:**

1. Development Progress:

* Successfully completed the implementation of various system functionalities, including user authentication, registration, and real-time data integration.
* Overcame challenges such as integration complexities and ensuring compliance with security standards.

1. Enhanced User Experience:

* Designed and implemented user-friendly interfaces, integrating real-time data visualization techniques to improve the presentation of parking availability and vehicle services information.
* Ensured clarity and usability of the interfaces through iterative design adjustments and user feedback incorporation.

1. Ongoing Challenges and Next Steps:

* Identified ongoing challenges such as algorithm optimization and integration complexities with multiple payment gateways.
* Planning to address these challenges through continuous testing, optimization, and collaboration across teams to ensure seamless system functionality and compliance with security standards.

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| **Name** | **Question** | **Answer** | **Sign** |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Completed development on the login button and seamlessly integrated it into the user interface, ensuring a smooth and intuitive user experience. * Successfully implemented credential authentication functionality, allowing secure verification of user credentials during the login process. * Developed robust session management logic to ensure secure access for users and maintain their sessions securely throughout their interaction with the system. * Conducted comprehensive testing of the user authentication system to verify functionality and ensure that all security measures are effectively in place, guaranteeing the safety of user accounts and data. |  |
| What will you do today? | * Establish the user registration system, prominently featuring the "Sign Up" button on the homepage for easy access. * Design an engaging and user-friendly registration page, focusing on intuitive layout and clear instructions. * Implement robust registration functionality, allowing users to securely create accounts with necessary validation checks. * Ensure secure password storage mechanisms are in place, safeguarding user credentials using industry-standard encryption techniques. |  |
| Are there any impediments in your way? | * Integration Challenges: Integrating the login button seamlessly into the user interface may encounter unexpected complexities, potentially causing delays in development. * Security Compliance: Ensuring compliance with stringent security standards and regulations while implementing credential authentication and session management logic may require additional time and resources to address any compliance gaps.. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Designed and implemented a user interface component to visually represent the availability of vehicle services, including nearby businesses, malls, and public transport options. * Successfully integrated the user interface component with real-time location data, enabling dynamic display of available services based on the user's current location. * Enhanced the user experience by providing intuitive visuals and easy-to-understand information regarding nearby vehicle services, ensuring a seamless and user-friendly experience. |  |
| What will you do today? | * Implementing backend functionality to retrieve vehicle services data for the parking area details page. * Designing and integrating UI components to display vehicle services information seamlessly. * Conducting testing to ensure accurate data retrieval and proper display of vehicle services on the page. |  |
| Are there any impediments in your way? | * Data Accuracy Challenges: Ensuring the accuracy and reliability of real-time location data and the availability of vehicle services may pose challenges, requiring continuous monitoring and updates to maintain accuracy. * Integration Complexity: Integrating the user interface component with real-time location data and ensuring seamless dynamic display based on user location may encounter complexities, potentially requiring additional time and resources for troubleshooting and optimization. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * Developed a robust backend system to collect and update real-time parking availability data, ensuring reliability and accuracy. * Implemented algorithms to accurately detect available parking slots, considering various vehicle types and parking zones, to enhance user experience. * Designed a user-friendly interface to present parking availability information for different parking zones or sections, focusing on clarity and ease of use. |  |
| What will you do today? | * Integrating data visualization techniques into the presentation of real-time parking availability information. * Ensuring clarity and usability of the visualization for users to easily interpret parking availability data. * Conducting testing to verify the effectiveness of the visualization techniques in enhancing the user experience. |  |
| Are there any impediments in your way? | * Algorithm Optimization: Fine-tuning algorithms for accurate detection of available parking slots may require additional time and resources to optimize performance and address any potential efficiency issues. * Integration Challenges: Integrating the backend system with real-time data sources and ensuring seamless updates of parking availability data may encounter technical complexities, potentially causing delays in development. * User Interface Feedback: Gathering and incorporating user feedback on the designed interface may pose challenges in ensuring alignment with user expectations and preferences, requiring iterative design adjustments for optimal usability. |  |
| B. Sri Ganesh | What did you do yesterday? | * Implemented backend functionality to support modification and cancellation of reservations, including database updates and validation checks. * Developed user interface components to allow users to modify or cancel their reservations seamlessly. * Implemented validation processes to ensure that only valid reservations can be modified or canceled. * Integrated confirmation processes to confirm reservation modifications or cancellations and provide feedback to users. |  |
| What will you do today? | * Designing and implementing a reservation details page UI to efficiently display reservation information. * Developing backend functionality to fetch reservation information from the database and provide it to the UI seamlessly. |  |
| Are there any impediments in your way? | * One potential impediment could be ensuring seamless integration between the backend functionality and the user interface components, particularly in handling real-time updates and feedback to users during the reservation modification or cancellation process. |  |
| U. Siddharth Varma | What did you do yesterday? | * Implemented backend functionality to support the selection of preferred payment methods during parking session initiation. * Developed UI elements to present payment method options to users in a clear and intuitive manner. * Integrated secure data handling mechanisms to encrypt and store payment information securely. * Conducted testing of the system to ensure a seamless user experience and secure handling of payment data. |  |
| What will you do today? | * Designing and implementing a system architecture that allows seamless integration with multiple payment gateways. * Developing the necessary backend functionality to facilitate communication and transactions with various payment gateways. |  |
| Are there any impediments in your way? | * Integration Challenges: Ensuring smooth integration between the backend functionality and the user interface components, particularly with multiple payment gateways, may present technical complexities and require thorough testing. * Compliance and Security: Meeting stringent security standards and compliance regulations while handling payment data can pose challenges, necessitating meticulous attention to detail and potentially impacting development timelines. |  |

**Day 4: 04-04-2024**

**Scrum Meeting 4 Key Points :**

1. Registration System Development:

* Completed establishment of the user registration system with prominent "Sign Up" button and an engaging registration page.
* Continuing implementation of robust registration functionality and secure password storage mechanisms, ensuring seamless account creation with thorough validation checks.

1. Vehicle Services Integration:

* Initiated backend functionality implementation to retrieve vehicle services data and designed UI components for seamless display.
* Continuing development and testing to ensure accurate data retrieval and proper display of vehicle services on the parking area details page.

1. Data Visualization Enhancement:

* Started integrating data visualization techniques into the presentation of real-time parking availability information.
* Ensuring clarity and usability of the visualization for users, refining based on initial testing feedback, and finalizing testing procedures.

1. Reservation Details Page Development:

* Designed and implemented a reservation details page UI to efficiently display reservation information.
* Continuing development of backend functionality to seamlessly retrieve and provide reservation data to the UI, with ongoing testing to verify functionality and integration.

1. Payment Gateway Integration Preparation:

* Initiated the design and implementation of a system architecture to enable seamless integration with multiple payment gateways.
* Continuing development of backend functionality to facilitate communication and transactions with various payment gateways, ensuring robust and reliable payment processing, with focus on thorough testing protocols for smooth integration.

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| **Name** | **Question** | **Answer** | **Sign** |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Established the user registration system by prominently featuring the "Sign Up" button on the homepage for easy access. * Designed an engaging and user-friendly registration page, focusing on intuitive layout and clear instructions. * Started implementing robust registration functionality, allowing users to securely create accounts with necessary validation checks. * Initiated the implementation of secure password storage mechanisms to safeguard user credentials using industry-standard encryption techniques. |  |
| What will you do today? | * Complete the implementation of robust registration functionality, ensuring seamless account creation with thorough validation checks. * Finalize the design of the registration page, ensuring it meets user experience standards and provides clear instructions for account creation. * Ensure the implementation of secure password storage mechanisms is completed, guaranteeing the safety of user credentials using industry-standard encryption techniques. * Conduct thorough testing to verify the functionality of the registration system and ensure a seamless user experience throughout the account creation process. |  |
| Are there any impediments in your way? | * Plan meticulously for seamless integration, employing modular code and consistent communication among teams. * For security compliance: * Prioritize security with regular audits, implementing best practices. * Stay updated with standards, allocate resources for thorough testing. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Started implementing backend functionality to retrieve vehicle services data for the parking area details page. * Designed and integrated UI components to display vehicle services information seamlessly. * Began conducting testing to ensure accurate data retrieval and proper display of vehicle services on the page. |  |
| What will you do today? | * Continuing implementation of backend functionality to retrieve vehicle services data for the parking area details page. * Continuing design and integration of UI components to display vehicle services information seamlessly. * Completing testing to ensure accurate data retrieval and proper display of vehicle services on the page. |  |
| Are there any impediments in your way? | * Implement automated monitoring for real-time location data accuracy and establish a process for continuous updates. * Break down integration tasks into manageable components, conduct thorough testing at each stage to ensure seamless dynamic display.. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * Started integrating data visualization techniques into the presentation of real-time parking availability information. * Began ensuring clarity and usability of the visualization for users to easily interpret parking availability data. * Initiated testing procedures to verify the effectiveness of the visualization techniques in enhancing the user experience. |  |
| What will you do today? | * Continuing the integration of data visualization techniques into the presentation of real-time parking availability information. * Ensuring further clarity and usability of the visualization for users, making adjustments based on initial testing feedback. * Concluding testing procedures to finalize the effectiveness of the visualization techniques in enhancing the user experience.. |  |
| Are there any impediments in your way? | * Optimize algorithms through rigorous testing and collaboration with experts for accurate parking slot detection. * Address integration challenges by breaking down tasks, prioritizing critical components, and fostering clear communication between teams.. |  |
| B. Sri Ganesh | What did you do yesterday? | * Designing and implementing a reservation details page UI to efficiently display reservation information. * Developing backend functionality to fetch reservation information from the database and provide it to the UI seamlessly. |  |
| What will you do today? | * Further refining the reservation details page UI to ensure optimal display of reservation information. * Continuing the development of backend functionality to seamlessly retrieve and provide reservation data to the UI. * Conducting testing to verify the functionality and integration of the reservation details page with the backend system |  |
| Are there any impediments in your way? | * Implement asynchronous communication methods, like WebSockets, for real-time updates. * Utilize client-side data management libraries to reduce reliance on frequent backend calls. |  |
| U. Siddharth Varma | What did you do yesterday? | * Initiated the design and implementation of a system architecture to enable seamless integration with multiple payment gateways. * Began developing the necessary backend functionality to facilitate communication and transactions with various payment gateways. |  |
| What will you do today? | * Continuing the design and implementation of the system architecture to ensure seamless integration with multiple payment gateways. * Continuing the development of backend functionality to facilitate communication and transactions with various payment gateways, ensuring robust and reliable payment processing. |  |
| Are there any impediments in your way? | * Implement comprehensive testing protocols to ensure smooth integration between backend functionality and user interface components, especially with multiple payment gateways. * Conduct thorough testing at each stage of development to identify and address any integration challenges early on, reducing the risk of technical complexities impacting the final product. |  |

**Day 5: 05-04-2024**

**Scrum Meeting 5 Key Points :**

1. Registration System Completion:

* Successfully implemented robust registration functionality with thorough validation checks and finalized the design of the registration page to meet user experience standards.
* Ensured secure password storage mechanisms were in place and conducted comprehensive testing to verify seamless user experience during account creation.

1. Password Recovery System Development:

* Initiated the development of a password recovery system, including designing the reset page for user email input and implementing functionality for seamless navigation from the login page.
* Anticipated technical complexities and user experience considerations, such as email input validation and intuitive design, for efficient password recovery.

1. Vehicle Services Integration:

* Continued the integration of backend functionality for retrieving vehicle services data and design and integration of UI components for seamless display on the parking area details page.
* Completed testing procedures to ensure accurate data retrieval and proper presentation, paving the way for enhanced user experience and informed decision-making.

1. Real-Time Parking Availability Visualization:

* Concluded the integration of data visualization techniques into the presentation of real-time parking availability information, addressing initial feedback for further clarity and usability.
* Successfully tested the effectiveness of visualization techniques in enhancing user experience, ensuring optimal presentation of parking availability data.

1. Payment Confirmation System Development:

* Progressed in developing a comprehensive system for handling payment confirmations, focusing on backend logic development, UI design for user interaction, and notification mechanisms.
* Identified and addressed potential challenges related to integration requirements and user notification management, emphasizing seamless interaction between components and effective communication of payment status updates to users.

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| **Name** | **Question** | **Answer** | **Sign** |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Completed the implementation of robust registration functionality, ensuring seamless account creation with thorough validation checks. * Finalized the design of the registration page, ensuring it meets user experience standards and provides clear instructions for account creation. * Ensured the implementation of secure password storage mechanisms was completed, guaranteeing the safety of user credentials using industry-standard encryption techniques. * Conducted thorough testing to verify the functionality of the registration system and ensure a seamless user experience throughout the account creation process. |  |
| What will you do today? | * Develop a password recovery system including a login page link and reset page design for user email input. * Implement functionality for the password recovery system, ensuring seamless navigation from the login page to the reset page and intuitive design for users to input their email for password recovery. |  |
| Are there any impediments in your way? | * Technical Complexity: Developing a password recovery system with seamless navigation and intuitive design may encounter technical complexities, particularly in handling email input validation and securely resetting passwords. * User Experience Considerations: Ensuring a seamless and intuitive user experience throughout the password recovery process may require extensive user testing and refinement to meet user expectations and preferences. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Continued implementation of backend functionality to retrieve vehicle services data for the parking area details page. * Continued design and integration of UI components to display vehicle services information seamlessly. * Completed testing to ensure accurate data retrieval and proper display of vehicle services on the page. |  |
| What will you do today? | * Develop the backend functionality to enable users to input destination locations and retrieve information on local businesses and public transport options. * Implement the frontend search interface, allowing users to input destination locations seamlessly and receive relevant information on local businesses and public transport options.. |  |
| Are there any impediments in your way? | * Backend-frontend Integration: Ensuring smooth integration between the developed backend functionality and the frontend search interface may pose challenges, requiring careful coordination and thorough testing to ensure seamless user experience. * Data Accuracy: Ensuring the accuracy and reliability of retrieved information on local businesses and public transport options could be an impediment, necessitating continuous updates and validation processes to maintain data integrity. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * Continued the integration of data visualization techniques into the presentation of real-time parking availability information. * Ensured further clarity and usability of the visualization for users by making adjustments based on initial testing feedback. * Concluded testing procedures to finalize the effectiveness of the visualization techniques in enhancing the user experience. |  |
| What will you do today? | * Design the database schema for storing space availability data, ensuring efficient storage and retrieval of information for various vehicle types. * Develop backend logic to ensure real-time updates of available space counts for different vehicle types, implementing mechanisms for data synchronization and updating as parking spaces become occupied or vacant. |  |
| Are there any impediments in your way? | * Database Optimization Challenges:   Ensuring the efficiency of the database schema design for storing space availability data may encounter challenges in balancing between storage optimization and quick retrieval of information, requiring careful consideration and testing.   * Real-Time Data Synchronization:   Implementing mechanisms for real-time updates of available space counts may face technical complexities, especially in synchronizing data across different systems or devices, potentially leading to delays in development and testing. |  |
| B. Sri Ganesh | What did you do yesterday? | * Further refined the reservation details page UI to ensure optimal display of reservation information. * Continued the development of backend functionality to seamlessly retrieve and provide reservation data to the UI. * Conducted testing to verify the functionality and integration of the reservation details page with the backend system. |  |
| What will you do today? | * Develop functionality to calculate parking fees and display them within the reservation details page, enhancing user understanding and transparency.   Top of Form |  |
| Are there any impediments in your way? | * Complex Fee Calculation Logic: Developing functionality to accurately calculate parking fees may involve intricate algorithms and business rules, potentially leading to challenges in implementing and testing the calculation logic thoroughly. * Integration Challenges: Integrating the fee calculation functionality seamlessly within the reservation details page and ensuring it aligns with the overall user experience may encounter technical complexities and require coordination between frontend and backend teams for smooth integration. |  |
| U. Siddharth Varma | What did you do yesterday? | * Continued the design and implementation of the system architecture to ensure seamless integration with multiple payment gateways. * Continued the development of backend functionality to facilitate communication and transactions with various payment gateways, ensuring robust and reliable payment processing. |  |
| What will you do today? | * Create a comprehensive system for handling payment confirmations, encompassing backend logic development, UI design for seamless user interaction, and implementation of notification mechanisms to keep users informed about payment status updates. |  |
| Are there any impediments in your way? | * Complex Integration Requirements:   Integrating backend logic with UI design and notification mechanisms for payment confirmations may pose technical challenges due to the need for seamless interaction between different components.  Addressing these integration complexities requires careful planning and coordination among development teams to ensure smooth functionality.   * User Notification Management:   Implementing effective notification mechanisms to keep users informed about payment status updates requires consideration of various factors such as timing, frequency, and user preferences.  Ensuring that notifications are delivered accurately and promptly without overwhelming users with unnecessary updates presents a potential impediment that needs to be addressed through thoughtful design and testing. |  |

**Day 6: 06-04-2024**

**Scrum Meeting 6 Key Points :**

1. Development Progress Overview:

* Recapitulate the progress made on various tasks, including the initiation and continuation of critical system components such as password recovery, search interface development, and payment confirmation system creation.

1. Challenges and Solutions Discussion:

* Address any encountered challenges, such as integration complexities and data validation requirements, and discuss the strategies and solutions implemented to overcome these obstacles.

1. Testing and Iterative Refinement Focus:

* Emphasize the importance of comprehensive testing and iterative refinement in ensuring the reliability and usability of system functionalities, particularly regarding fee calculation logic and payment confirmation mechanisms.

1. User-Centric Design Considerations:

* Highlight the ongoing efforts to prioritize user experience through user feedback incorporation and tailored notification mechanisms, aiming to enhance user satisfaction and engagement with the system.

1. Next Steps Planning:

* Outline the next steps, including the completion of pending tasks such as UI element finalization, backend logic development, and comprehensive testing before deployment, ensuring alignment with project objectives and timelines.

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| **Name** | **Question** | **Answer** | **Sign** |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Designed and implemented a system architecture to allow seamless integration with multiple components. * Began development on a password recovery system, including designing a reset page and implementing functionality for user email input..   . |  |
| What will you do today? | * Finalize the system architecture, ensuring smooth integration across all components. * Complete the development of the password recovery system, ensuring seamless navigation from the login page to the reset page and intuitive design for users to input their email for password recovery. |  |
| Are there any impediments in your way? | * Thorough Testing and Iterative Refinement: Conduct comprehensive testing throughout the development process to identify and address any technical complexities or usability issues. Iterate on the design and functionality based on user feedback to ensure a seamless and intuitive experience for users navigating the password recovery system. * User-Centric Design Approach: Prioritize user experience considerations by involving users in the design process through user testing and feedback sessions. Implement user-friendly features such as clear instructions, error handling, and feedback mechanisms to guide users through the password recovery process smoothly. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Initiated the development of backend functionality to enable users to input destination locations and retrieve information on local businesses and public transport options. * Began implementing the frontend search interface, allowing users to input destination locations seamlessly and receive relevant information on local businesses and public transport options. |  |
| What will you do today? | * Continuation of backend development to enable users to input destination locations and retrieve information on local businesses and public transport options. * Further implementation of the frontend search interface, ensuring seamless user input and retrieval of relevant information. |  |
| Are there any impediments in your way? | * Continuous Testing and Collaboration: Regular testing and collaboration between backend and frontend development teams can help identify and address any integration issues early on. This ensures that the backend functionality seamlessly communicates with the frontend interface, providing users with a smooth experience. * Data Validation and Updates: Implementing robust data validation processes and establishing mechanisms for regular updates from reliable sources can enhance the accuracy and reliability of the information presented to users. This involves verifying data sources, conducting validation checks, and implementing automated update mechanisms to maintain data integrity over time. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * Database Schema Design: Started designing the database schema to efficiently store space availability data for various vehicle types. * Backend Logic Development: Began developing backend logic to ensure real-time updates of available space counts, implementing mechanisms for data synchronization and updating as parking spaces become occupied or vacant. |  |
| What will you do today? | * Database Schema Refinement: Refine the database schema design for optimal storage and retrieval of space availability data, considering scalability and efficiency. * Backend Logic Completion: Complete the development of backend logic to ensure real-time updates of available space counts for different vehicle types, incorporating mechanisms for data synchronization and updating in response to occupancy changes. |  |
| Are there any impediments in your way? | * Database Schema Optimization:   Conduct thorough testing and performance benchmarking to identify any inefficiencies in the database schema design.  Implement indexing and partitioning strategies to optimize storage and retrieval efficiency without compromising data integrity.   * Real-Time Data Synchronization Solutions:   Utilize robust data synchronization techniques such as event-driven architectures or message queues to ensure timely updates across systems.  Implement error handling and retry mechanisms to address any synchronization failures and maintain data consistency. |  |
| B. Sri Ganesh | What did you do yesterday? | * Began developing functionality to calculate parking fees and display them within the reservation details page, aiming to enhance user understanding and transparency. |  |
| What will you do today? | * Will continue working on the functionality to calculate parking fees and integrate it seamlessly into the reservation details page. This will involve refining the fee calculation logic, ensuring accurate calculations based on parking duration and rates. Additionally, I will focus on designing clear and informative fee display components to provide users with transparent information regarding their parking costs.Top of Form |  |
| Are there any impediments in your way? | * Modular Development Approach:   Break down the complex fee calculation logic into smaller, manageable modules, focusing on individual components such as calculating base fees, additional charges, and discounts separately.  Implement unit tests for each module to ensure accuracy and reliability, allowing for easier identification and resolution of any calculation errors.   * Continuous Integration and Testing:   Adopt continuous integration practices to facilitate seamless integration of the fee calculation functionality with the reservation details page.  Conduct thorough integration testing to verify that the fee calculation logic works seamlessly within the user interface and accurately reflects parking fees, addressing any integration issues promptly to maintain a smooth user experience. |  |
| U. Siddharth Varma | What did you do yesterday? | * Initiated the creation of a comprehensive system for handling payment confirmations, including backend logic development, UI design, and implementation of notification mechanisms. * Started developing backend logic to manage payment confirmations securely. * Began designing the UI to ensure seamless user interaction during payment confirmation. * Initiated the implementation of notification mechanisms to keep users informed about payment status updates. |  |
| What will you do today? | * Complete the backend logic development to handle payment confirmations securely and efficiently. * Finish designing the UI elements to ensure a seamless and intuitive user experience during payment confirmation. * Implement notification mechanisms to provide timely updates to users regarding their payment status. * Conduct thorough testing to verify the functionality and reliability of the payment confirmation system before deployment. |  |
| Are there any impediments in your way? | * Comprehensive Testing and Iterative Development:   Conduct thorough testing at each stage of integration to identify and address any compatibility issues between backend logic, UI design, and notification mechanisms.  Implement an iterative development approach where incremental updates are made to the system, allowing for early detection and resolution of integration complexities before they escalate.   * User-Centric Notification Design:   Gather user feedback and preferences through surveys or user testing sessions to understand their expectations regarding payment status notifications.  Tailor notification mechanisms to accommodate user preferences, allowing users to customize the timing and frequency of notifications to align with their needs and preferences, thus enhancing user satisfaction and engagement. |  |

**Day 7: 07-04-2024**

**Scrum Meeting 7 Key Points :**

1. System Architecture and Password Recovery System Completion:

* Finalized the system architecture to ensure seamless integration across all components.
* Completed the development of the password recovery system, providing smooth navigation and intuitive design for users.

1. Continued Development on Destination Input and Search Interface:

* Continued backend development to enable users to input destination locations and retrieve information on local businesses and public transport options.
* Further implemented the frontend search interface to ensure seamless user input and retrieval of relevant information.

1. Search Results Page Creation and User Journey Enhancement:

* Created a search results page showcasing businesses and public transport options relevant to entered destination locations.
* Enhanced user journey planning by providing comprehensive information and options on the search results page.

1. Challenges in Data Integration and User Experience:

* Addressed challenges in data integration from various sources, ensuring accuracy and real-time updates.
* Balanced user interface complexity with comprehensive data presentation, focusing on usability and simplicity.

1. Upcoming Tasks: Payment Confirmation and Gateway Integration:

* Continuing backend logic development for secure and efficient payment confirmations.
* Finalizing UI design for intuitive payment confirmation experiences.
* Initiating the development of a robust system to seamlessly integrate with multiple payment gateways.

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| **Name** | **Question** | **Answer** | **Sign** |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Finalized the system architecture, ensuring seamless integration across all components. * Completed the development of the password recovery system, ensuring smooth navigation from the login page to the reset page and implementing an intuitive design for users to input their email for password recovery.. |  |
| What will you do today? | * Creating secure password reset functionality, which includes handling password reset requests securely. * Implementing the generation and sending of email links for password reset to users. |  |
| Are there any impediments in your way? | * Email Security: Ensuring the secure generation and transmission of password reset links via email requires robust encryption methods and adherence to email security best practices to prevent unauthorized access or interception. * User Verification: Implementing a reliable user verification process to validate password reset requests and prevent unauthorized access poses a challenge, requiring careful consideration of factors such as user identity validation and prevention of phishing attacks. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Continued backend development to enable users to input destination locations and retrieve information on local businesses and public transport options. * Further implemented the frontend search interface, focusing on ensuring seamless user input and retrieval of relevant information.. |  |
| What will you do today? | * Creating a search results page that showcases businesses and public transport options relevant to the entered destination location. * Enhancing the user journey planning by providing comprehensive information and options on the search results page. |  |
| Are there any impediments in your way? | * Data Integration Challenges: Ensuring seamless integration of data from various sources, such as business directories and public transport schedules, may pose technical complexities and require robust data processing and synchronization mechanisms. * User Experience Considerations: Balancing the presentation of comprehensive information with a user-friendly interface on the search results page may be challenging, requiring careful design considerations to optimize usability without overwhelming users with excessive details. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * The database schema design was refined to optimize storage and retrieval of space availability data, considering scalability and efficiency. * The development of backend logic was completed to ensure real-time updates of available space counts for different vehicle types, incorporating mechanisms for data synchronization and updating in response to occupancy changes. |  |
| What will you do today? | * Developing user interface components that effectively display accurate and real-time information about available spaces for different vehicle types. * Ensuring the seamless integration of these components into the overall system interface for a cohesive user experience. |  |
| Are there any impediments in your way? | * Data Synchronization Challenges: Ensuring that the displayed information remains accurate and real-time may be challenging, particularly when synchronizing data between backend systems and frontend interfaces. Any delays or inconsistencies in data updates could affect the reliability of the displayed information. * User Interface Complexity: Designing user interface components that effectively convey detailed information about available spaces while maintaining a clean and intuitive design can be challenging. Balancing the need for comprehensive data presentation with simplicity and ease of use requires careful consideration of user interface design principles.. |  |
| B. Sri Ganesh | What did you do yesterday? | * Continuing work on the functionality to calculate parking fees and integrating it seamlessly into the reservation details page. * Refining the fee calculation logic to ensure accurate calculations based on parking duration and rates. * Focusing on designing clear and informative fee display components to provide users with transparent information regarding their parking costs. |  |
| What will you do today? | * Create a centralized dashboard that presents key metrics for parking operations. This involves both UI design and backend API development for data processing. |  |
| Are there any impediments in your way? | * Data Integration Challenges: Integrating data from various sources and formats into the dashboard may present difficulties in data processing and synchronization. Ensuring seamless integration and real-time updates of parking operation metrics could require significant effort. * UI-Backend Coordination: Coordinating between UI design and backend API development to ensure smooth communication and functionality integration may pose challenges. Aligning frontend visual elements with backend data processing logic while maintaining consistency and usability could require careful planning and coordination. |  |
| U. Siddharth Varma | What did you do yesterday? | * Completing the backend logic development to handle payment confirmations securely and efficiently. * Finishing the design of UI elements to ensure a seamless and intuitive user experience during payment confirmation. * Implementing notification mechanisms to provide timely updates to users regarding their payment status. |  |
| What will you do today? | * Develop a robust system that seamlessly integrates with multiple payment gateways to accommodate different payment methods. |  |
| Are there any impediments in your way? | * Complex Integration Requirements: Integrating with multiple payment gateways may present technical challenges, including API compatibility issues and varying integration protocols. Ensuring seamless communication and functionality across different gateways could require extensive testing and troubleshooting. * Security and Compliance Concerns: Ensuring the security and compliance of payment transactions with multiple gateways may pose challenges, especially regarding data encryption, PCI DSS compliance, and adherence to regional regulations. Addressing these concerns effectively while maintaining system performance and user privacy could require additional resources and expertise. |  |

**Day 8: 08-04-2024**

**Scrum Meeting 8 Key Points :**

1. Password Reset Functionality Development:

* Continued the development process for creating secure password reset functionality.
* Continued implementing the generation and sending of email links for password reset to users.
* Aimed to complete the implementation and testing of the password reset functionality
* Ensured seamless and secure user experience throughout the process.

1. Search Results Page Enhancement:

* Continued the development of the search results page, focusing on refining the layout and functionality for a seamless user experience.
* Completed the enhancement of user journey planning by adding comprehensive information and options on the search results page, providing users with valuable insights for their travel plans.
* Employed industry-standard encryption protocols and secure transmission methods to safeguard password reset links during email generation and transmission. Additionally, implemented measures like token expiration and one-time-use links to mitigate the risk of unauthorized access or interception.

1. User Interface Development for Parking Availability:

* Initiated development of user interface components for displaying real-time information on available parking spaces.
* Began designing layouts and functionalities to ensure accurate representation of parking availability for different vehicle types.
* Continued developing user interface components, refining designs and functionalities for seamless integration.
* Focused on ensuring real-time updates and accurate presentation of parking availability data.

1. Centralized Dashboard Development:

* Continued the development of the centralized dashboard, focusing on refining the UI design to ensure clarity and usability.
* Progressed with backend API development for data processing, implementing necessary functionalities to fetch, process, and display parking operation metrics accurately.
* Implemented automated synchronization processes between backend databases and frontend interfaces to ensure real-time updates.
* Adopted an iterative design approach to address user interface complexity, prioritizing simplicity and clarity while providing options for users to access detailed information when needed.

1. Payment Gateway Integration System Development:

* Continued the development of the payment gateway integration system, implementing backend functionality to communicate with selected payment gateways.
* Configured API connections and ensured secure data transmission.
* Initiated testing procedures to verify seamless integration and functionality.
* Conducted thorough compatibility testing to identify and address any API compatibility issues and integration protocol discrepancies between different payment gateways.
* Adhered strictly to industry standards such as PCI DSS for data encryption and regional regulations for compliance, ensuring user data security during payment transactions.

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| **Name** | **Question** | **Answer** | **Sign** |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Initiated the development process for creating secure password reset functionality. * Started implementing the generation and sending of email links for password reset to users. |  |
| What will you do today? | * Continue the development process for creating secure password reset functionality.   • Continue implementing the generation and sending of email links for password reset to users.  • Aim to complete the implementation and testing of the password reset functionality.  • Ensure seamless and secure user experience throughout the process. |  |
| Are there any impediments in your way? | * Employ industry-standard encryption protocols and secure transmission methods, such as TLS, to safeguard password reset links during email generation and transmission. Additionally, implement measures like token expiration and one-time-use links to mitigate the risk of unauthorized access or interception. * User Verification Strategy: Utilize multi-factor authentication (MFA) or CAPTCHA verification to enhance user identity validation during the password reset process. Implement automated checks to detect and prevent phishing attempts, such as analyzing user behavior patterns and flagging suspicious activities for further verification. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Started developing a search results page that showcases businesses and public transport options relevant to the entered destination location. * Initiated the process of enhancing the user journey planning by planning comprehensive information and options on the search results page. |  |
| What will you do today? | * Continued the development of the search results page, focusing on refining the layout and functionality to ensure a seamless user experience. * Completed the enhancement of user journey planning by adding comprehensive information and options on the search results page, providing users with valuable insights for their travel plans. |  |
| Are there any impediments in your way? | * Robust Data Processing: Implement advanced data processing techniques like data normalization, cleansing, and transformation to ensure consistency and accuracy across different datasets. * Synchronization Mechanisms: Develop efficient synchronization mechanisms such as scheduled data updates and real-time data streams to maintain the freshness and reliability of integrated data sources. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * Initiated development of user interface components for displaying real-time information on available parking spaces. * Began designing layouts and functionalities to ensure accurate representation of parking availability for different vehicle types. |  |
| What will you do today? | * Will continue developing user interface components, refining designs and functionalities for seamless integration. * Focus on ensuring real-time updates and accurate presentation of parking availability data.. |  |
| Are there any impediments in your way? | * Automated Data Synchronization: Implement automated synchronization processes between backend databases and frontend interfaces to ensure real-time updates. Utilize technologies like WebSocket or server-sent events for efficient data transmission, reducing delays and inconsistencies in data updates. * Iterative Design Approach: Adopt an iterative design approach to address user interface complexity. Start with minimalistic designs focusing on essential information and gradually incorporate additional details based on user feedback. Prioritize simplicity and clarity while providing options for users to access detailed information when needed. |  |
| B. Sri Ganesh | What did you do yesterday? | * Initiated the development of a centralized dashboard to present key metrics for parking operations. * Began the process of UI design, outlining the layout and components necessary to display parking operation metrics effectively.. |  |
| What will you do today? | * Continued the development of the centralized dashboard, focusing on refining the UI design to ensure clarity and usability. * Progressed with backend API development for data processing, implementing necessary functionalities to fetch, process, and display parking operation metrics accurately. |  |
| Are there any impediments in your way? | * Implement standardized data exchange formats and protocols to streamline data integration processes, reducing the complexity of integrating data from diverse sources. Utilizing technologies like RESTful APIs or data serialization formats such as JSON or XML can facilitate smoother data interchange between systems. * Establish clear communication channels and collaboration frameworks between UI and backend development teams to ensure seamless coordination and integration. Regular meetings, shared documentation, and continuous feedback loops can help align frontend visual elements with backend data processing logic, fostering consistency and usability across the system. |  |
| U. Siddharth Varma | What did you do yesterday? | * Initiated the development process for a robust system capable of seamless integration with multiple payment gateways. * Outlined the system architecture and devised a plan for integrating various payment methods. |  |
| What will you do today? | * Continue the development of the payment gateway integration system. * Implement backend functionality to communicate with selected payment gateways. * Configure API connections and ensure secure data transmission. * Initiate testing procedures to verify seamless integration and functionality. |  |
| Are there any impediments in your way? | * Conduct thorough compatibility testing to identify and address any API compatibility issues and integration protocol discrepancies between different payment gateways. Implement robust error handling mechanisms to ensure seamless communication and functionality across all integrated gateways. * Adhere strictly to industry standards such as PCI DSS for data encryption and regional regulations for compliance. Employ encryption techniques and security protocols that meet or exceed regulatory requirements to safeguard user data during payment transactions. Regularly audit the system for compliance and conduct security assessments to address any vulnerabilities proactively. |  |

**Day 9: 09-04-2024**

**Scrum Meeting 9 Key Points :**

1. Password Reset Functionality Progress: Vedanth continued the development process for creating secure password reset functionality, aiming to complete the implementation and testing of the feature while ensuring a seamless and secure user experience throughout.
2. Search Results Page Enhancement: Thilaknath focused on refining the layout and functionality of the search results page, ensuring a seamless user experience, and planned to integrate mapping services for accurate business location display and efficient navigation.
3. Real-Time Parking Availability Updates: Krishna Aditya continued developing user interface components for real-time updates on parking availability, emphasizing accurate data presentation. He planned to integrate mapping/navigation services into the parking app to enhance user experience and verify functionality through thorough testing.
4. Centralized Dashboard Development: Sri Ganesh refined the UI design of the centralized dashboard for clarity and usability. He progressed with backend API development for accurate data processing and display of parking operation metrics.
5. Payment Gateway Integration and Message Viewing Feature: Siddharth Varma continued working on the payment gateway integration system, focusing on backend functionality and API communication. He also planned to develop a feature for administrators to view messages sent by users, ensuring proper authentication and authorization mechanisms for security and usability.

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| Name | Question | Answer | Sign |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Continued the development process for creating secure password reset functionality. * Continued implementing the generation and sending of email links for password reset to users. * Aimed to complete the implementation and testing of the password reset functionality. * Ensured seamless and secure user experience throughout the process. |  |
| What will you do today? | * Implement the functionality for users to enter a new password. * Integrate the system to update the user's password in the database upon submission. * Ensure proper validation checks and encryption methods are applied to maintain security. * Test the password reset feature thoroughly to verify functionality and security measures. |  |
| Are there any impediments in your way? | * Integration Complexity: Integrating the password reset functionality with the database and ensuring seamless updating of user passwords may encounter technical complexities, particularly regarding data validation and encryption. * User Experience Considerations: Balancing security measures with user-friendly design elements in the password reset process could pose challenges. Ensuring that users can easily navigate and understand the password reset procedure while maintaining security standards requires careful consideration. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Continued the development of the search results page, focusing on refining the layout and functionality to ensure a seamless user experience. |  |
| What will you do today? | * Integrate mapping services into the system to display business locations accurately on maps. * Implement navigation functionality to enable users to receive directions efficiently to selected business locations. * Ensure seamless integration of mapping services and navigation features into the user interface for a cohesive user experience. * Test the mapping and navigation functionalities thoroughly to verify accuracy and usability. |  |
| Are there any impediments in your way? | * Integrating mapping services to display business locations accurately on maps. * Implementing navigation functionality for efficient directions to selected business locations. * Ensuring seamless integration of mapping services and navigation features into the user interface. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * Continued developing user interface components, refining designs and functionalities for seamless integration. * Focused on ensuring real-time updates and accurate presentation of parking availability data. |  |
| What will you do today? | * Integrate mapping/navigation services into the parking app to provide users with directions to the nearest parking spaces. * Implement real-time data retrieval and display functionalities to ensure users have up-to-date information on available parking spaces. * Design user-friendly navigation components within the app interface to enhance the overall user experience. * Test the integrated features thoroughly to verify accuracy, usability, and seamless functionality. |  |
| Are there any impediments in your way? | * Technical Compatibility: Ensuring seamless integration of mapping/navigation services with the parking app's existing infrastructure and backend systems might pose technical challenges. Compatibility issues between different systems or APIs could require additional development effort to resolve. * Data Accuracy and Reliability: Real-time data retrieval relies on accurate and reliable information about available parking spaces. Depending on the source of this data, ensuring its accuracy and consistency could be challenging. Factors such as data latency or discrepancies in data sources may impact the reliability of the information presented to users. Regular monitoring and validation of the data sources may be necessary to address these concerns. |  |
| B. Sri Ganesh | What did you do yesterday? | * Continued refining the UI design of the centralized dashboard to ensure clarity and usability.   • Progressed with backend API development for data processing, implementing necessary functionalities to fetch, process, and display parking operation metrics accurately. |  |
| What will you do today? | * Develop a flexible backend system to dynamically adjust parking rates based on factors such as demand, time of day, and special events.   • Design intuitive user interface components to allow administrators to set and modify parking rates easily.  • Implement testing and validation procedures to ensure the accuracy and reliability of the rate adjustment system across various scenarios and conditions. |  |
| Are there any impediments in your way? | * Complex Rate Adjustment Algorithms: Developing algorithms that accurately analyze factors like demand, time of day, and special events to dynamically adjust parking rates may pose challenges due to the complexity of real-time data processing and predictive modeling required. * User Interface Complexity: Designing intuitive user interface components for administrators to set and modify parking rates easily may encounter hurdles in balancing simplicity with comprehensive functionality, requiring iterative design adjustments and user feedback analysis. |  |
| U. Siddharth Varma | What did you do yesterday? | * Continued the development of the payment gateway integration system, focusing on backend functionality and API communication.   • Implemented backend functionality to establish communication with selected payment gateways.  • Configured API connections and ensured secure data transmission protocols were in place.  • Initiated testing procedures to verify seamless integration and functionality of the payment gateway system. |  |
| What will you do today? | * Develop a feature for administrators to view messages sent by users.   • Implement backend functionality to retrieve and display user messages for administrators.  • Design a user-friendly interface within the admin panel to facilitate easy access and navigation to user messages.  • Ensure proper authentication and authorization mechanisms are in place to restrict access to user messages only to authorized administrators.  • Conduct testing to verify the functionality, security, and usability of the message viewing feature for administrators. |  |
| Are there any impediments in your way? | * Authorization Complexity: Ensuring that only authorized administrators can access user messages might require intricate permission management and role-based access controls. Managing permissions effectively without compromising security or usability could pose a challenge. * Scalability Concerns: As the number of users and messages grows, the performance and scalability of the message retrieval functionality might become a concern. Optimizing backend processes and database queries to handle increasing loads efficiently may require careful consideration and testing. |  |

**Day 10 : 10-04-2024**

**Scrum Meeting 10 Key Points :**

1. Password Reset Functionality Progress:

We've made significant progress on the password reset feature, including initiating the implementation, integrating database updates, and implementing security measures such as validation checks and encryption methods.

1. Mapping and Navigation Integration Update:

Our team has been actively integrating mapping services into the system, allowing users to efficiently receive directions to selected business locations. We've made strides in refining navigation functionality and ensuring seamless integration for a cohesive user experience.

1. Flexible Backend System for Parking Rates:

Development is underway for a flexible backend system aimed at dynamically adjusting parking rates based on various factors. We've outlined the system architecture, planned for data handling, and started implementing rate adjustment algorithms.

1. Administrator Message Viewing Feature:

We've initiated the development of a feature that allows administrators to view messages sent by users. Backend functionality for message retrieval and display has been implemented, and we're currently designing a user-friendly interface within the admin panel.

1. Challenges and Solutions Identified:

We've identified challenges such as authorization complexity for accessing user messages and ensuring scalability and compatibility for mapping and navigation integration. To address these challenges, we're implementing robust authorization mechanisms and utilizing a data-driven approach for algorithm development.

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| **Name** | **Question** | **Answer** | **Sign** |
| Vedanth Dhaval Jobunputra | What did you do yesterday? | * Initiated the implementation of the functionality for users to enter a new password. * Began integrating the system to update the user's password in the database upon submission. * Started implementing proper validation checks and encryption methods to maintain security. |  |
| What will you do today? | * Continue implementing the functionality for users to enter a new password, ensuring seamless user interaction and error handling. * Complete the integration of the system to update the user's password in the database upon submission, verifying proper data handling and security measures. * Finalize the implementation of validation checks and encryption methods to enhance security further. * Conduct thorough testing of the password reset feature to validate functionality and security measures, addressing any issues or vulnerabilities identified during testing. |  |
| Are there any impediments in your way? | * Database Integration Planning: Develop a detailed plan for integrating the password reset functionality with the database, outlining specific steps for data validation, encryption, and updating user passwords. * Collaborative Development: Foster collaboration between backend developers responsible for database integration and frontend developers working on user interface design. Regular communication and coordination can help address integration complexities more effectively. |  |
| B. Thilaknath Reddy | What did you do yesterday? | * Initiated the integration of mapping services into the system to accurately display business locations on maps. * Began implementing navigation functionality to enable users to efficiently receive directions to selected business locations. |  |
| What will you do today? | * Continued working on integrating mapping services and refining navigation functionality. * Ensured seamless integration of mapping services and navigation features into the user interface for a cohesive user experience. * Conducted thorough testing of mapping and navigation functionalities to verify accuracy and usability. |  |
| Are there any impediments in your way? | * API Compatibility and Integration: Ensure compatibility between the mapping services API and the existing system architecture to facilitate smooth integration. Develop robust API integration methods, considering factors such as data formats, authentication mechanisms, and error handling, to seamlessly incorporate mapping services into the system. * User Experience Optimization: Prioritize user experience by designing intuitive navigation functionality that provides clear and concise directions to selected business locations. Implement user-friendly interface elements and interactive features to enhance usability, such as interactive maps with draggable markers and step-by-step directions, ensuring a seamless and efficient navigation experience for users. |  |
| S.V.S Krishna Aditya | What did you do yesterday? | * Integrated mapping/navigation services into the parking app to provide users with directions to the nearest parking spaces. * Implemented real-time data retrieval and display functionalities to ensure users have up-to-date information on available parking spaces. |  |
| What will you do today? | * Designing user-friendly navigation components within the app interface to enhance the overall user experience. * Testing the integrated features thoroughly to verify accuracy, usability, and seamless functionality.. |  |
| Are there any impediments in your way? | * API Compatibility Testing: Conduct thorough testing to ensure that mapping/navigation services seamlessly integrate with the parking app's existing infrastructure and backend systems. This involves checking for compatibility issues between different systems and APIs and resolving them before deployment. * Data Source Verification: Implement mechanisms to verify the accuracy and reliability of data sources providing information about available parking spaces. This may include validating data from multiple sources and cross-referencing it to ensure consistency. |  |
| B. Sri Ganesh | What did you do yesterday? | * Initiated the development of a flexible backend system aimed at dynamically adjusting parking rates based on factors like demand, time of day, and special events. This involved outlining the system architecture and planning for data handling and processing. * Began designing intuitive user interface components tailored for administrators, allowing them to easily set and modify parking rates. This included wireframing and initial UI design concepts. |  |
| What will you do today? | * Continue developing the flexible backend system, focusing on implementing the dynamic rate adjustment algorithms and integrating them with the existing infrastructure. This will involve coding backend logic for rate calculations and data management. * Proceed with the development of user interface components for administrators, refining the design and incorporating user feedback for optimal usability. Ensure that the interface provides intuitive controls for setting and modifying parking rates seamlessly. |  |
| Are there any impediments in your way? | * Data-driven Approach: Utilize a data-driven approach to develop the rate adjustment algorithms, leveraging historical parking data, real-time sensors, and predictive analytics. By analyzing patterns and trends, the algorithms can better predict demand and adjust rates accordingly. * Modular Development: Break down the algorithm development into smaller, modular components, focusing on specific factors such as demand forecasting, time-based pricing, and event-based adjustments. This approach allows for easier testing, debugging, and refinement of individual components. |  |
| U. Siddharth Varma | What did you do yesterday? | * Initiated the development of a feature allowing administrators to view messages sent by users. * Implemented backend functionality to retrieve and display user messages for administrators. |  |
| What will you do today? | * Designed a user-friendly interface within the admin panel for easy access and navigation to user messages. * Ensured proper authentication and authorization mechanisms are in place to restrict access to user messages to authorized administrators. * Conducted testing to verify the functionality, security, and usability of the message viewing feature for administrators.a |  |
| Are there any impediments in your way? | * Authorization Complexity:   Implement a robust role-based access control (RBAC) system to manage permissions effectively. Assign specific roles to administrators based on their responsibilities and grant access to user messages accordingly.  Utilize granular permission settings to allow administrators access only to the necessary features and data, reducing the risk of unauthorized access. |  |

**Day 11 : 11-04-2024**

**Srum meeting 11 key point**

1. User Feedback:

* Gathered user feedback on various features, including login and authentication, navigation to parking areas, slot detection, reservation process, payment, and parking operator management.
* Analyzed feedback to identify user preferences, pain points, and areas for improvement.

1. Sprint Retrospective:

* Conducted a thorough sprint retrospective to evaluate the team's performance, accomplishments, and challenges faced during the development of login/authentication, navigation, slot detection, reservation, payment, and parking operator management features.
* Reviewed sprint goals, progress made, and any deviations from the initial plan.

1. Acknowledging Positives and Negatives:

* Acknowledged the positives achieved during the sprint, such as successful implementation of authentication, progress in integrating with local businesses and public transport, and effective slot detection and reservation functionality.
* Addressed negatives encountered, including challenges with payment integration, refining parking operator management features, and ensuring accurate slot availability information.

1. Planning for Next Sprint:

* Discussed and prioritized epics for the upcoming sprint, considering user feedback and sprint retrospective insights.
* Planned to focus on enhancing payment functionality, refining parking operator management features for better traffic flow management, and optimizing slot availability detection accuracy.
* Set specific goals, tasks, and timelines for each epic to ensure efficient progress and successful completion in the next sprint.

1. User Login and Authentication:

* Received positive feedback on the user login and authentication process, with users appreciating the ease of use and security measures implemented.
* Identified areas for improvement, such as streamlining the password reset process based on user suggestions and enhancing account recovery options.

1. Navigation to Nearest Parking Areas:

* Users provided valuable feedback on the navigation feature, highlighting its usefulness in finding nearby parking areas and integrated businesses like malls and public transport.
* Suggestions were made to improve route optimization and provide real-time traffic updates to enhance the navigation experience further.

1. Slot Detection and Reservation:

* Users expressed satisfaction with the slot detection and reservation functionality, finding it convenient and reliable.
* Some users provided suggestions for improving the reservation process, such as adding more customization options and integrating payment directly into the reservation flow for a seamless experience.

1. Payment Integration:

* Challenges were encountered during payment integration, including technical complexities and issues with third-party payment gateways.
* Planning to address these challenges by exploring alternative payment solutions, optimizing payment processing workflows, and ensuring robust error handling mechanisms.

1. Parking Operator Management:

* Initial feedback on the parking operator management features was positive, with users appreciating the ability to monitor and adjust parking rates based on demand.
* Planning to further enhance these features by introducing advanced analytics for traffic flow management, implementing automated rate adjustments based on real-time data, and improving user interface elements for easier operation.

1. Continuous Improvement:

* Emphasized the importance of continuous improvement and iterative development based on user feedback and sprint retrospective findings.
* Committed to refining existing features, addressing user concerns, and delivering a seamless parking experience that meets the evolving needs of users and parking operators alike.

Faculty Name and Signature: