Project Progress Report for Eevee’s Retreat

Practice Module for Certificate in Designing Modern Software Systems

28th March 2025 to 11th April 2025

**Group 7**

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# Introduction

## **Project Name & Description**

**Eevee’s Retreat** is a web-based hotel booking system designed to make the reservation process simple, efficient, and hassle-free for customers. Guests can easily browse available rooms, check availability, book their stay, and manage their reservations all in one place.

The system also includes an admin dashboard, giving hotel staff the tools to manage room availability, pricing, reservations, and facility bookings with ease. With secure authentication, a user-friendly interface, and a streamlined booking engine, Eevee’s Retreat enhances both customer convenience and hotel operations.

## **Project Methodology**

The project follows an **Agile development methodology (SCRUM)**, ensuring an iterative and adaptive approach.

**Sprint Length:** 2 weeks per sprint

**Agile Artifacts:**

* **Sprint Planning:** Defining sprint goals and backlog prioritization
* **Daily Stand-ups:** Quick updates on progress and blockers
* **Sprint Review:** Demonstration of completed work
* **Sprint Retrospective:** Discussion on improvements for the next sprint

**Tracking & Tools:**

* GitHub Kanban Board for product backlog tracking
* GitHub for version control
* Microsoft Teams & Telegram Channel for team communication
* Postman & Swagger – API testing and documentation

## **Project Summary**

**Background:**

In the hospitality industry, providing a seamless and efficient booking experience is crucial for customer satisfaction and business success. Traditional hotel booking methods often lead to inefficiencies such as overbookings, manual errors, and lack of real-time availability updates. To address these challenges, there is a growing need for a modern, automated hotel booking and management system that enhances customer experience while improving hotel operations.

Eevee’s Retreat is designed as a web-based hotel management system that allows customers to browse available rooms, check availability, book their stay, and manage their reservations easily. At the same time, it provides hotel administrators with tools to efficiently manage room availability, pricing, bookings, and customer inquiries.

With an intuitive user interface, secure authentication, and a robust booking engine, the system aims to streamline hotel operations while providing a hassle-free experience for guests.

**Project Scope:**

**Deliverables**

1. A fully functional Eevee’s Retreat web application with core booking features.
2. Admin dashboard for hotel staff to manage rooms, bookings, and customer information.
3. User authentication system with secure role-based access control.
4. Database schemas & UML diagrams detailing system architecture.
5. Test cases & reports ensuring system functionality and reliability.
6. Comprehensive documentation, including user manuals and technical design specifications.

**Exclusions**

1. Integration with third-party payment gateways (payments will be manually processed in this version).
2. Mobile application development, as the focus is on a responsive web-based platform.
3. Multi-hotel chain support, as this version is tailored for a single-hotel system.

**Constraints**

1. Project timeline limitations, requiring us to focus on core booking and management features.
2. Limited familiarity with DevSecOps automation tools, requiring additional learning and setup time.
3. Resource constraints, as the team consists of a limited number of developers working within a fixed time frame.

# Project Progress Report

## **Reporting Period**

This report reflects the progress of Sprint 5, which ran from **28th March 2025 to 11th April 2025**.

Sprint 5 marked the final development sprint for Eevee’s Retreat, focusing on system validation, final refinements, and deployment preparation. This included conducting User Acceptance Testing (UAT), finalizing UI/UX optimizations, completing security audits, and deploying the platform to a staging environment.

## **Sprint Objectives**

The primary goals of Sprint 5 were:

* Conduct **User Acceptance Testing (UAT)** with real users.
* Finalize **UI/UX refinements** based on Sprint 4 feedback.
* Perform **performance testing and security audits**.
* Complete **final bug fixes** and **system optimizations**.
* **Deploy the system to a staging environment** for pre-production validation.

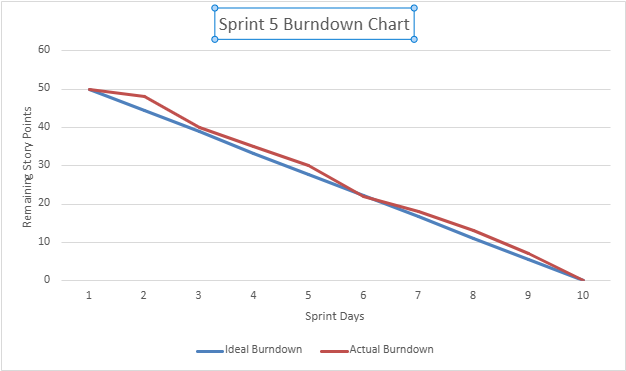
## **Sprint 5 Accomplishments (Planned vs. Actual)**

During Sprint 5, the team successfully completed all planned objectives, transitioning the project into its final pre-deployment phase. User Acceptance Testing (UAT) was carried out with real users, allowing the team to gather valuable feedback on usability, performance, and navigation. This feedback informed the final round of UI/UX refinements, which enhanced form validations, visual consistency, and the overall user journey. Performance testing was conducted through simulated concurrent user activity, confirming that the system could handle expected load with acceptable response times.

In addition, a thorough security audit was performed, during which minor vulnerabilities—such as exposed headers and insecure configurations—were identified and promptly addressed. The final bug fixes were made in response to issues found during UAT, with optimizations applied across both the frontend and backend to ensure efficiency and stability. Finally, the system was successfully deployed to a staging environment on AWS Free Tier, where it underwent final integration checks and configuration validations. With all critical milestones achieved, the platform is now ready for its official production release.

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Planned Completion | Actual Completion | Remarks |
| User Acceptance Testing (UAT) | ✅ Completed | ✅ Completed | Received valuable feedback from end-users on usability and performance |
| Final UI/UX Enhancements | ✅ Completed | ✅ Completed | Improved visual consistency, form validation, and user navigation |
| Performance Testing | ✅ Completed | ✅ Completed | Load testing validated performance under concurrent user activity |
| Security Audit | ✅ Completed | ✅ Completed | Identified and resolved minor vulnerabilities and misconfigurations |
| Final Bug Fixes & Optimizations | ✅ Completed | ✅ Completed | Addressed UAT feedback and improved system efficiency |
| Staging Deployment | ✅ Completed | ✅ Completed | Successfully deployed to AWS Free Tier staging environment |

## **Sprint 5 Burndown Chart**



## **Problems encountered, Action Plan, Status**

|  |  |  |
| --- | --- | --- |
| Problem | Action Plan | Status |
| Minor UI inconsistencies found during UAT | Applied final UI fixes based on user feedback | ✅ Resolved |
| Security scan revealed exposed headers | Adjusted server configurations and applied security headers | ✅ Resolved |
| Deployment to AWS staging failed initially due to misconfigured environment variables | Reviewed environment settings, updated .env and redeployed successfully | ✅ Resolved |

## **Sprint Retrospective**

### **What went well?**

Sprint 5 marked a successful wrap-up of the development phase, with all major goals completed on time and with solid results. The **User Acceptance Testing (UAT)** process played a crucial role in validating the system from a user perspective. Feedback gathered during UAT helped fine-tune several areas of the application, especially in terms of interface clarity and user flow. The final round of **UI/UX enhancements** significantly improved the platform’s usability and visual consistency. Backend performance testing confirmed that the system could handle concurrent usage without degradation, and a comprehensive security audit helped identify and resolve configuration gaps. The deployment to the **AWS Free Tier staging environment** went smoothly, completing the final milestone before production.

### **What could have been done better?**

While Sprint 5 was ultimately successful, a few issues surfaced that highlighted areas for improvement. During User Acceptance Testing, minor UI inconsistencies were identified—such as misaligned elements and inconsistent styling across different pages. Although these issues were resolved with final UI adjustments, conducting more thorough internal design reviews or automated UI testing earlier in the sprint could have reduced the number of last-minute changes.

Additionally, the security scan revealed that some HTTP response headers were unintentionally exposed due to default server settings. These were promptly addressed by applying the necessary security headers, but a more proactive configuration audit earlier in the process might have prevented this oversight.

Another challenge arose during the initial deployment to the AWS staging environment, where misconfigured environment variables caused deployment failure. While this was quickly resolved by reviewing and correcting the .env file, the incident emphasized the importance of using a standardized deployment checklist and validating environment setups in advance. Addressing these issues sooner could have saved time and reduced friction during the final phase of the project.

### **What will we try next?**

With Sprint 5 completed, the next steps will focus on transitioning from staging to production. This includes final deployment to the live environment on AWS, setting up monitoring and logging to track system health, and ensuring all configuration files are correctly managed. The team will also finalize project documentation, covering everything from system architecture and deployment steps to user guides and feature overviews. Additionally, a final presentation and live demo will be conducted to showcase the completed platform to stakeholders. These final activities will ensure Eevee’s Retreat is not only functional and secure but also well-prepared for long-term use and maintenance.

## **Sprint 5 Preview**

Sprint 5 represented a critical and culminating phase of the Eevee’s Retreat project, successfully bridging the gap between development and production readiness. With a clear focus on validation, polish, and final deployment preparation, the sprint delivered tangible results across all key areas of the system. Through rigorous User Acceptance Testing, the platform was evaluated from an end-user perspective, ensuring that the booking flow, dashboard navigation, and feedback mechanisms aligned with user expectations. This input directly informed the final set of refinements, resulting in a cleaner, more intuitive interface and an overall more satisfying user experience.

In the backend, performance testing confirmed that the system could support expected usage scenarios under concurrent loads, while a full security audit identified and addressed minor gaps in system configuration and data exposure. These improvements further reinforced the platform’s robustness and security posture. All critical bugs were resolved, system performance was optimized, and the platform was deployed to a staging environment where final validation checks were completed. This deployment tested not just the system itself but the entire deployment pipeline, giving the team confidence in the process ahead of the live release.

Importantly, this sprint was not just about final testing and fixes, but about ensuring that the platform is sustainable post-launch. Documentation is being finalized to provide clear guidance for both technical maintenance and user onboarding, ensuring a smooth handover and long-term usability. With the completion of Sprint 5, Eevee’s Retreat has reached a point of maturity—fully functional, user-validated, secure, and performance-tested.

As the team prepares for final production deployment, the focus will now shift to post-launch support activities, including monitoring, user onboarding, and collecting early feedback from real-world use. This marks not just the end of a development journey, but the beginning of the platform’s operational life. The work accomplished in Sprint 5 has laid a strong foundation for a reliable and user-friendly web application, one that meets the core objectives of the project and is ready to deliver value to its users from day one.