**Automated Task Management System**

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# Declaration of Sole Authorship

We, Group 4, confirm that this work submitted for assessment is our own and is expressed in our own words. Any uses made within it of the works of any other author, in any form (ideas, equations, figures, texts, tables, programs), are properly acknowledged at the point of use. A list of the references used is included.

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# Abstract

The Task Management System (TR) discussed below is an automated solution designed to transform the way assignments, tests, quizzes, and tracking are managed within organizational structures. The main goal of the project is to optimize these procedures to increase productivity overall, minimize manual errors, and boost efficiency. The system provides a user-friendly interface for easy task access by utilizing enhanced automation, guaranteeing a more transparent and organized workflow. This project is important because it will trigger a radical change in the way that organizations carry out their work. By automating repetitive operations, the suggested system can boost efficiency and lower the possibility of human error. Moreover, it claims to increase overall output through resource allocation optimization and real-time insights via extensive tracking features. It is recommended that organizations think about implementing this automated task management system as a calculated step toward achieving operational excellence. Adopting this technology innovation is a proactive approach to solving the problems related to manual work management, not just an upgrade. By putting this system into place, companies may expect more productivity, better accuracy, and a more organized method of handling tasks, all of which will help them succeed in a fast-paced work environment.**Table of Contents**

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# 1.0 INTRODUCTION

The growing complexity of task management in organizations frequently results in inefficiencies, delays, and an increased risk of manual errors. To tackle these challenges, our team has embarked on the creation of an Automated Task Management System. The technical issue at hand revolves around optimizing internal processes concerning task allocation, monitoring, and fulfillment. The conventional manual approaches have been proven to be time-consuming and susceptible to mistakes, thus necessitating a technological resolution.

The goal of this project is to develop an online platform that is easy for users to navigate. It will have features like a smooth task assignment interface, real-time progress tracking, and automated notifications. The aim is to increase task completion efficiency by 20% and reduce manual errors by 15%. The system not only focuses on improving efficiency but also promotes better collaboration and communication among users. However, it's worth mentioning that the project does not include mobile applications, localized versions, or server-related aspects.

The team will develop certain completion requirements, such as a fully working website, successful user authentication, and approval through user acceptability testing, in response to the particular obstacles it faced in integrating a dependable database adapter and guaranteeing user authentication standards. This introduction emphasizes the Automated Task Management System project's potential to transform task management inside the company completely and lays the groundwork for understanding its goals, problems, and purpose.

# 2.0 METHODOLOGY AND RESULTS

## 2.1 Literature Review

The literature showcases both strengths and weaknesses that inform the development of the proposed Automated Task Management System (ATMS). Several systems have demonstrated effectiveness in addressing the challenges associated with manual task management.

Strengths:

The user-friendly interface of this task management system will make it possible to assign and monitor tasks effectively. This interface improves the user experience by making it easier for users to organize and keep track of their chores. Real-time tracking features will also prove to be quite helpful, providing transparency and the most recent data on task advancement. Automation will be a big benefit since it will help users keep aware of future chores and deadlines by sending out notifications and reminders. All of these characteristics work together to increase job completion time and workflow efficiency.

Weakness:

On the other hand, the suggested ATMS has prospects because of the noticeable shortcomings of the current systems. Some systems have excellent user interface designs, while others don't have the kind of intuitiveness that makes them widely adopted by users. This disparity in usability has the potential to impede a task management system's overall performance by provoking opposition from end users. One prevalent flaw is integration with third-party apps, which restricts the smooth transfer of data across computers. Furthermore, some systems don't have strong analytics and reporting features, which prevents businesses from learning important lessons about how best to assign resources and complete tasks.

## 2.2 Proposed Solution

The suggested solution is an Automated Task Management System created to streamline and enhance task assignment, tracking, and overall productivity within an organization. The system provides a user-friendly interface for task assignment, real-time tracking, and automated notifications. The main advantages of this solution are its capacity to greatly improve task completion efficiency, decrease the chance of manual errors, and enhance communication among users.

Strengths:

1. Efficiency Boost: The system aims to increase task completion efficiency by 20%, allowing for a more streamlined workflow and quicker access to assignments.

2. Error Reduction: Automation reduces the possibility of human errors in task assignment and tracking, contributing to a 15% reduction in manual errors.

3. Improved Communication: The centralized platform facilitates better communication and collaboration among stakeholders, ensuring everyone stays informed about task progress.

4. Real-time Tracking: Users can track the progress of tasks in real-time, providing transparency and up-to-date information on task status.

Automated Notifications: The system sends automated notifications and reminders, helping users stay on top of their tasks and deadlines.

Weakness:

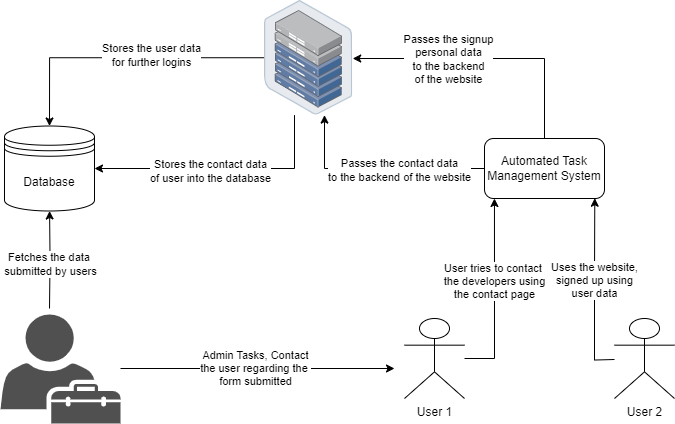
1. Scope Limitations: The project scope excludes mobile applications, third-party integrations, and localized versions, limiting the system's versatility.

2. Server Dependency: The acquisition or setup of servers for hosting the system is not within the project scope, potentially requiring additional resources for server management.

3. Limited Customization: The system may lack certain custom features beyond the defined scope, limiting adaptability to specific organizational needs.

Developer Perspective Diagram:

This diagram illustrates Automated task management infrastructure, comprising server for data operations, Database for storing user’s profiles and learning data, and users facing front-end interface. The servers interact with the databases to deliver personalised content to Users throng appropriate route, creating a dynamic and automated system.



## 2.3 User Role Modelling

### 2.3.1 Brainstorm and Group

During the initial phase, our team brainstormed and identified a range of users and their roles based on various factors, including frequency of use, expertise level, proficiency with software and application, and their goals for using the online platform. The following initial roles were identified:

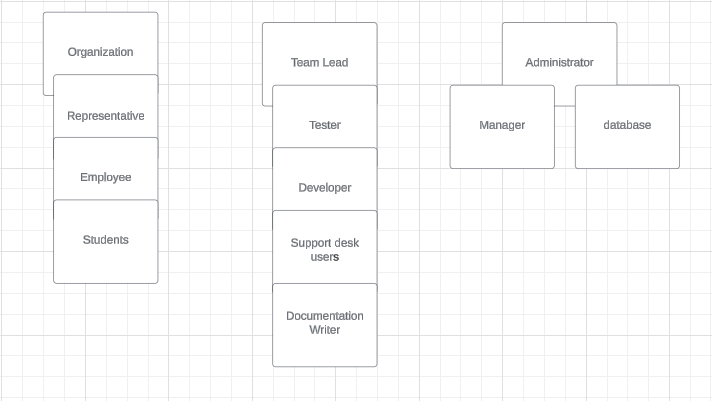


Figure 1: Organizing the user role cards in a group.

**2.3.2 Consolidated User Roles**

The initial set of user roles was divided into clusters based on resemblance criteria. The organisation process included assessing aspects such as skill level, app competence, and specific aims for utilising Automated system. Our team worked together to ensure that the organisation was logical and efficient. The end outcome was the formation of three major clusters:

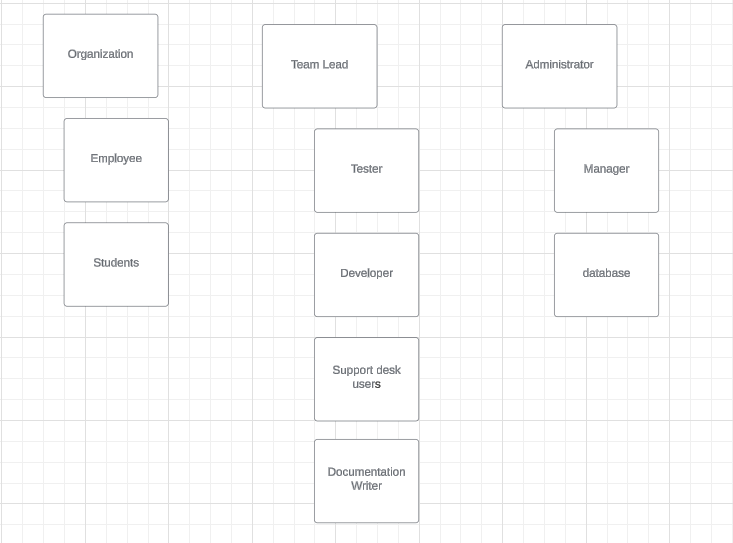


Figure 2: The consolidated user cards.

**Clusters**

1. Organization Cluster: This cluster includes the Organization, Employee, and Students roles. These roles are directly involved in the day-to-day operations and tasks within the system.

2. Team Lead Cluster: This cluster includes the Team Lead, Tester, Developer, and Documentation Writer roles. These roles are more specialized and have specific responsibilities within the system.

3. Administrator Cluster: This cluster includes the Administrator and Manager roles. These roles have the highest level of access and control in the system. They are responsible for strategic decision-making and system management.

**2.3.3 Description of User role and Persona**

**User Roles**

1. Organization:

* Frequency of Use: Moderate
* Expertise Level: Diverse
* Proficiency with Computers and Software: Average
* Proficiency with Automated System: Novice to Intermediate
* Goal: Improve language skills for job opportunities abroad.

1. Employee:

- Frequency of Use: Regular

- Expertise Level: Diverse

- Proficiency with Computers and Software: Average

- Proficiency with Automated System: Novice to Intermediate

- Goal: Executing tasks and assignments within the system.

1. Students:

* Frequency of Use: Regular
* Expertise Level: Diverse
* Proficiency with Computers and Software: Proficient
* Proficiency with Automated System: Intermediate to Advanced
* Goal: Completing assignments and tasks assigned to them within the system.

1. Team Lead:

* Frequency of Use: Regular
* Expertise Level: High
* Proficiency with Computers and Software: Proficient
* Proficiency with Automated System: Intermediate to Advanced
* Goal: oversees a group of Employees or Students, responsible for assigning tasks, tracking progress, and ensuring that their specific team's objectives align with those of the Organization.

1. Tester:

* Frequency of Use: Regular
* Expertise Level: Diverse
* Proficiency with Computers and Software: Proficient
* Proficiency with Automated System: Advanced
* Goal: Ensure the system functions as expected, identify and fix bugs and errors.

1. Developer:

* Frequency of Use: Regular
* Expertise Level: Diverse
* Proficiency with Computers and Software: Proficient
* Proficiency with Automated System: Advanced
* Goal: They design, build, and maintain the system's functionalities.

1. Documentation Writer:

* Frequency of Use: Occasional
* Expertise Level: Diverse
* Proficiency with Computers and Software: Average
* Proficiency with Automated System: Novice to Intermediate
* Goal: for creating user manuals and technical documentation to support the system's ongoing use and maintenance.

1. Support Desk Users:

* Frequency of Use: Regular
* Expertise Level: Diverse
* Proficiency with Computers and Software: Average
* Proficiency with Automated System: Novice to Intermediate
* Goal: Provide support to other users of the system. They help resolve issues and answer queries about the system.

1. Administrator:

* Frequency of Use: Occasional
* Expertise Level: High
* Proficiency with Computers and Software: Proficient
* Proficiency with Automated System: Novice to Intermediate
* Goal: smooth operation and configuration of the Automated Task Management System (ATMS).

1. Manager:

* Frequency of Use: Regular
* Expertise Level: High
* Proficiency with Computers and Software: Average
* Proficiency with Automated System: Novice to Intermediate
* Goal: oversees the entire operation. They make strategic decisions and ensure that all user roles work together towards the Organization's objectives.

### 2.3.4 Additional Documentation

YouTube Link: - <https://youtu.be/SHaaC1gisB0>

Name: COMP 231| User Role Modelling

## 2.4 Release 1.0

### 2.4.1 User Stories

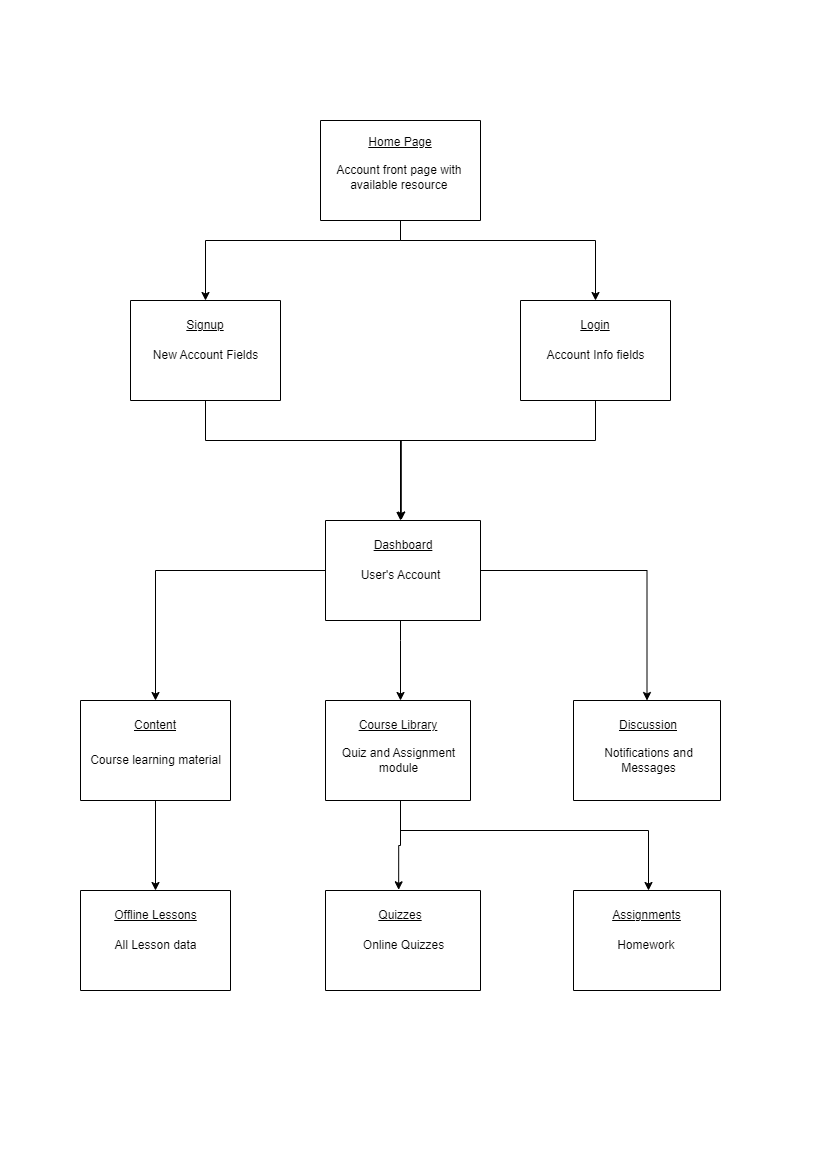


Figure 3: Example of a “consolidated” low-fidelity prototype. Note that each “individual” low-fidelity prototype is developed for each user role.

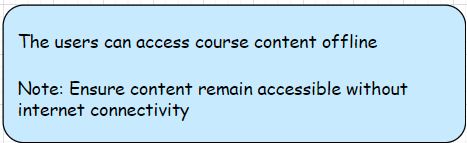


Figure 4: A story with notes providing additional detail.

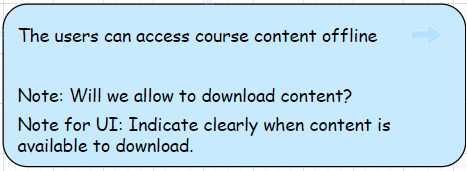


Figure 5: The revised front of a story card with only the story and questions to be discussed.

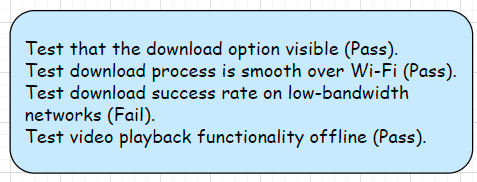


Figure 6: Details that imply test cases are separated from the story itself. Here they are shown on the back of the story card.

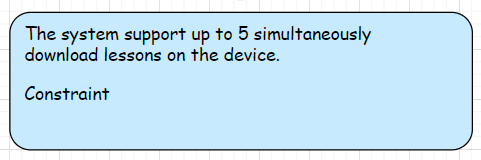
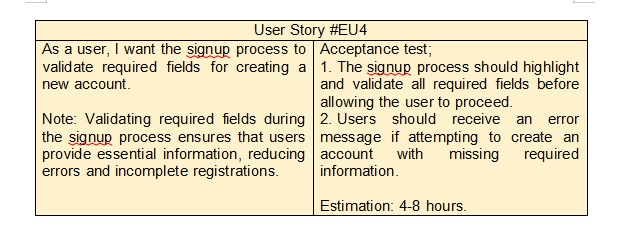
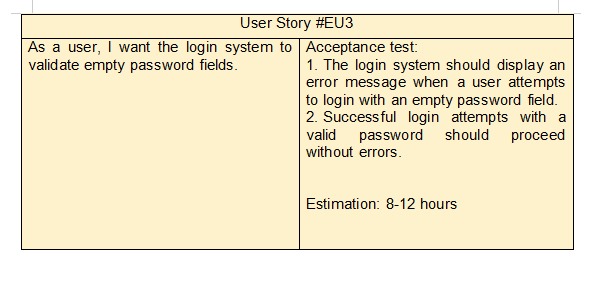
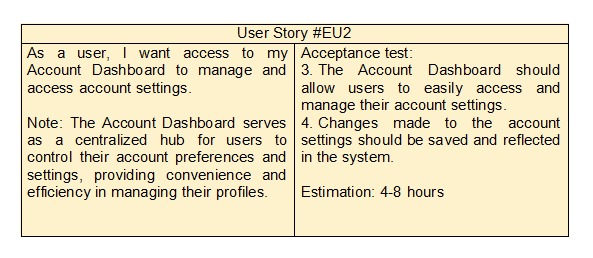
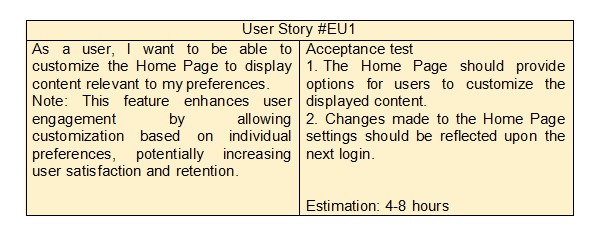
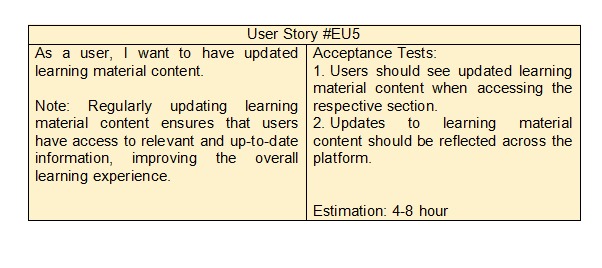
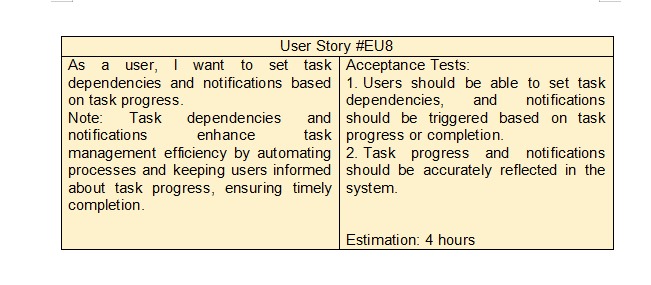
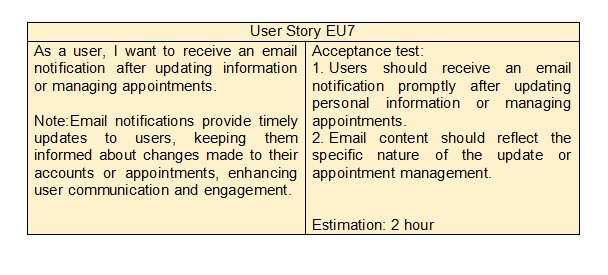
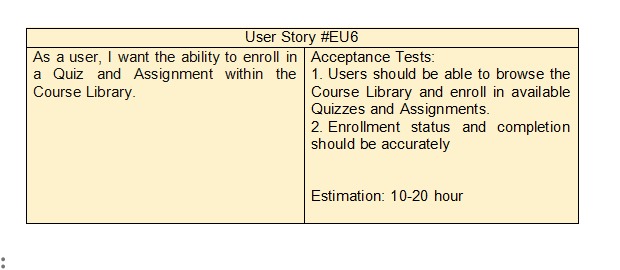


Figure 7: An example of a constraint story card.







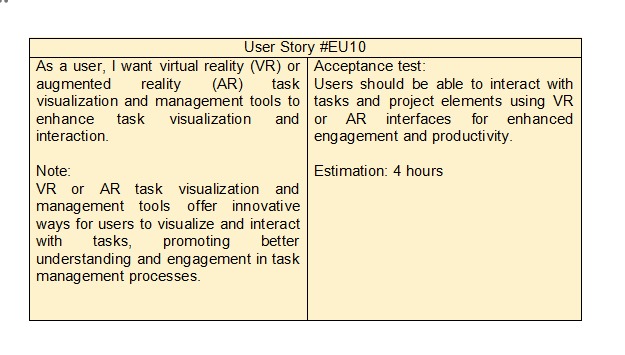
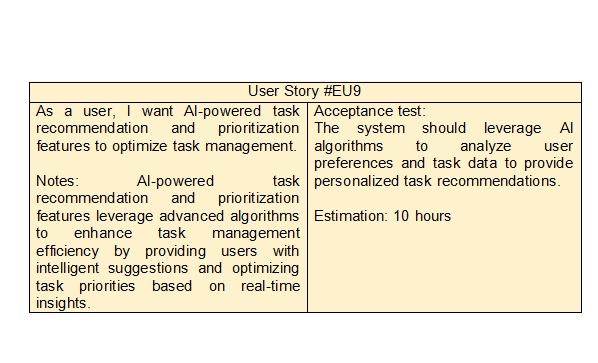


Figure 8: Possible electronic representation of a physical story card.

Table 1: The Must-Have stories for Release 1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **User Story ID** | **User Story Description** | **Estimate (hours)** | **Iteration 1** | **Iteration 2** | **Iteration 3** |
| A01 | Home Page - Available Resource | 4-8 | X |  |  |
| A02 | Account Dashboard – user’s Account | 4-8 | X |  |  |
| A03 | Login - Account info fields | 8-12 | X |  |  |
| A04 | Signup - New account fields | 4-8 | X |  |  |
| A05 | Content – Learning material | 4-8 | X | X |  |
| A06 | Offline lessons: All offline data | 10-20 |  |  | X |
| A07 | Course library - Quiz & Assignment module | 4-8 |  | X |  |
| A08 | Quizzes – Answer online quiz | 8-12 |  |  | X |
| A09 | Assignments - Complete homework | 8-12 |  |  | X |
| A10 | Discussion – Notification | 4-8 |  | X |  |

Table 2: The Should-Have stories for Release 1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **User Story ID** | **User Story Description** | **Estimate (hours)** | **Iteration 1** | **Iteration 2** | **Iteration 3** |
| EU1 | Home Page - Change front page | 4-8 |  |  | X |
| EU2 | Account dashboard - Access account settings | 4-8 | X |  |  |
| EU3 | Login - Validate empty password field | 8-12 |  | X |  |
| EU4 | Signup - Validate required fields | 4-8 |  | X |  |
| EU5 | Content – update learning material | 4-8 |  | X |  |
| EU6 | Course Library - Enroll in a Quiz and Assignment | 10-20 |  | X |  |

### 2.4.2 Additional Documentation

YouTube Link: - <https://youtu.be/wHoR8S3aonI>

Name: COMP 231| User Stories Gathering

### 2.4.3 Release Plan 1.0

**Product Development Roadmap:**

We have structured our development roadmap into appropriate-sized themes to enhance our planning process. Our Roadmap outlines the strategic direction for the Automated Task Management System, ensuring that development efforts are aligned with project goals and user needs. Each identified theme in the roadmap enhances the planning process by providing a clear focus for upcoming releases. These themes help us maintain a logical flow in our development process and prioritize work effectively. The themes are as follows:

1. **Iteration 1**:

* Theme: Core Functionalities
* Focus: Developing fundamental features including user registration, account login, and access to basic functionalities.

1. **Iteration 2**:
   * Theme: Expanding Functionality
   * Focus: Enhancing the system by adding additional features like the course library, offline quizzes, and lessons.
2. **Iteration 3**:
   * Theme: Refinement and Testing
   * Focus: Ensuring the system's quality by refining features and conducting thorough testing.

**Story Prioritization:**

We have demonstrated our ability to prioritize stories effectively by ranking them from core features to non-distinguishing features. This prioritization ensures that critical functionalities are addressed first, maximizing the value delivered to users. Our ranking reflects a thorough understanding of the system's requirements and user priorities, minimizing deductions and optimizing project outcomes. In each iteration, we aim to deliver a set of user stories that align with the specific theme, providing a functional and tested system.

Table 3: The Must-Have stories for Release

|  |  |
| --- | --- |
| Story | Estimate |
| As a user, I want to access the ATMS homepage upon launching the application, enabling me to seamlessly navigate through general information, initiate login/signup processes, and efficiently search for specific tasks or assignments. | 1 |
| As a user, I desire a streamlined login experience, presenting a login form with fields for email and password. Additionally, I expect to find a prominent prompt for registration, guiding me to the signup form for new account creation. | 2 |
| As a user, upon logging in, I anticipate accessing a personalized dashboard tailored to my role, providing convenient access to features such as calendar scheduling, profile viewing, record management, and appointment administration. | 3 |
| As a user, I require robust functionality to manage my assigned tasks efficiently, including the ability to view, prioritize, and update task statuses in real-time. | 3 |
| As a user, I expect seamless communication capabilities within the ATMS, facilitating collaboration with team members, supervisors, or stakeholders regarding task-related discussions, updates, and feedback. | 2 |
| As a user, I anticipate comprehensive reporting and analytics module within the ATMS, enabling me to gain insights into task performance, resource allocation, and workflow efficiency for informed decision-making. | 4 |
| As a user, I value robust security measures integrated into the ATMS, ensuring the confidentiality, integrity, and availability of sensitive data and system functionalities. | 3 |
| As a user, I require seamless integration capabilities with third-party tools and services commonly used within my organization's ecosystem, facilitating interoperability and data exchange between systems. | 4 |
| As a user, I anticipate comprehensive user support resources, including documentation, tutorials, and responsive customer support channels, to assist with onboarding, troubleshooting, and system usage queries. | 2 |
| As a user, I value continuous improvement and innovation within the ATMS, expecting regular updates, feature enhancements, and bug fixes to ensure optimal system performance and user satisfaction. | 3 |

Table 4: The Should-Have stories for Release

|  |  |
| --- | --- |
| Story | Estimate |
| As a user, I seek a user-friendly interface for configuring system settings, user permissions, and other administrative tasks, empowering me to tailor the ATMS to the specific needs and workflows of my organization. | 3 |
| As a user, I desire a streamlined login experience, presenting a login form with fields for email and password. Additionally, I expect to find a prominent prompt for registration, guiding me to the signup form for new account creation. | 2 |
| As a user, I require seamless accessibility features within the ATMS, ensuring that individuals with diverse abilities can navigate, interact, and utilize the system effectively. | 2 |
| As a user, I expect robust data backup and recovery mechanisms integrated into the ATMS, safeguarding against data loss or corruption and ensuring business continuity in the event of system failures or disasters. | 4 |
| As a user, I value scalability and performance optimizations within the ATMS, ensuring that the system can accommodate growing user bases, increasing workloads, and evolving business needs without sacrificing responsiveness or reliability. | 3 |
| As a user, I expect comprehensive user training and onboarding programs offered alongside the ATMS implementation, empowering users to maximize their proficiency and productivity within the system. | 2 |
| As a user, I value transparent communication and collaboration between the development team and system stakeholders, ensuring that user feedback, feature requests, and system enhancements are actively solicited, considered, and prioritized throughout the product lifecycle. | 3 |
| As a user, I anticipate seamless migration and upgrade paths for transitioning between different versions or editions of the ATMS, minimizing disruption to workflows and ensuring compatibility with existing data and configurations. | 4 |
| As a user, I value proactive security monitoring and threat detection capabilities within the ATMS, ensuring timely identification and mitigation of potential security vulnerabilities, breaches, or malicious activities. | 3 |
| As a user, I require comprehensive audit trail and logging features within the ATMS, providing detailed records of user actions, system events, and data modifications for compliance, accountability, and forensic analysis purposes. | 4 |

Table 5: The Could-Have stories for Release

|  |  |
| --- | --- |
| Story | Estimate |
| As a user, I can receive an email after updating information and managing appointment (e.g., booking, reschedule, cancel). | 2 |
| As a user, I can set task dependencies and notifications to trigger automatically based on task progress or completion. | 4 |
| As a user, I can customize task views and dashboards to prioritize important tasks, track progress, and monitor team performance. | 3 |

Table 6: The Won't-Have Stories for Release

|  |  |
| --- | --- |
| Story | Estimate |
| Integration with Social Media Platforms for Task Sharing or Collaboration. | 0 |
| AI-Powered Task Recommendation and Prioritization Features. | 0 |
| Virtual Reality (VR) or Augmented Reality (AR) Task Visualization and Management Tools. | 0 |

Table 7: The actual release Plan

|  |  |  |
| --- | --- | --- |
| **Iteration 1** | **Iteration 2** | **Iteration 3** |
| Create Homepage - Available Course, tips | Create Discussion | Home Page - Change course preference |
| Create Available resource page | Create messages & Email UI | Code lessons |
| Create Signup page UI - New account fields | Create Course Library – quizzes UI | Code Assignments & quizzes |
| Create Signup page DB | Create Course Library – lessons DB | Create Course Library – quizzes DB |
| Create Login page - Account info fields | Create offline lessons | Create Course Library – Assignments DB |
| Dashboard – modified Homepage with Account info | Signup - Validate required fields |  |
| Create Content - Learning material UI | Login - Validate empty password field |  |

Iteration 1 release date: Beginning Date Feb 19, 2024 – Ending Date March 17, 2024

Iteration 2 release date: Beginning Date March 18, 2024 – Ending Date April 7, 2024

Iteration 3 release date: Beginning Date March 25, 2024 – Ending Date April 7, 2024

Release Plan release date: April 7, 2024

### 2.4.4 Iteration Plan (Release 1.0)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 8: Disaggregated tasks per story for Iteration 1.   |  |  |  |  | | --- | --- | --- | --- | | **Task** | **Who** | **Estimate (Ideal Hours)** | **Actual (Hours Taken)** | | Design and create the home page layout | Ravi | 1-2 |  | | Implement the UI elements for view updates and events | Ravi | 2-3 |  | | Design the layout of the dashboard page | Ravi | 1-2 |  | | Implement UI elements for entering account information | Prachi Patel | 1-2 |  | | Implement user authentication for accessing the home page | Prachi Patel | 1-2 |  | | Design the layout of the course list page | Prachi Patel | 2-4 |  | | Retrieve and display the list of courses from the database | Sakshi Shingala | 2-4 |  | | Implement user authentication for accessing the Account dashboard | Sakshi Shingala | 1-2 |  | | Design and create the login page layout | Sakshi Shingala | 1-2 |  | | Implement the UI elements for entering account information (Id and password) | Khushi Bishnoi | 1-2 |  | | Design and create the sign-up page layout | Khushi Bishnoi | 1-2 |  | | Implement the UI elements for creating a new account (name, email, password) | Khushi Bishnoi | 2-4 |  | | Ensure that new accounts can be registered and saved | Dilakshan | 1-2 |  | | Implement validation for required fields | Dilakshan | 1-2 |  | | Implement user authentication for newly registered accounts | Dilakshan | 1-2 |  | | Design and create the page layout for displaying the list of available courses | Chamara | 1-2 |  | | Create and link necessary database tables for storing signup information | Chamara | 2-4 |  | | Design the layout of the course library | Chamara | 1-2 |  | | Design and create the Assignment and quiz page layout | Ravi | 2-4 |  | | Implement the UI elements for accessing the quiz and Assignment module | Dilakshan | 1-2 |  | |

Table 9: Disaggregated tasks per story for Iteration 2.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Who** | **Estimate (Ideal Hours)** | **Actual (Hours Taken)** |
| Design and create the content page layout | Ravi | 1-2 |  |
| Implement the UI and navigation for available lessons | Ravi | 2-3 |  |
| Design and create the discussion page layout | Prachi Patel | 1-2 |  |
| Implement UI elements for notifications and messages | Prachi Patel | 2-3 |  |
| Implement user authentication for accessing the  content of available courses | Sakshi Shingala | 1-2 |  |
| Create database schema for storing lesson-related data | Sakshi Shingala | 2-3 |  |
| Implement data models for lessons | Khushi Bishnoi | 1-2 |  |
| Design and implement functionality to enable downloading lessons for offline access | Khushi Bishnoi | 2-3 |  |
| Implement offline storage for downloaded lessons | Dilakshan | 2-4 |  |
| Validate and extensively test the login and signup page | Dilakshan | 1-2 |  |
| Design the layout of the offline lessons page | Chamara | 1-2 |  |
| Implement the UI elements for accessing lessons module | Chamara | 1-2 |  |

### 2.4.5 Additional Documentation

### Name - 04 Team ATMS Iteration Planning

<https://drive.google.com/file/d/1PC4nONCc0Pnbjps7ZkNX37elcjL_DQSt/view?usp=sharing>

### 2.4.6 Acceptance Tests for Release 1.0

The following are required for this section:

1. A table of stories and their associated acceptance tests for this Release as shown below in the sample in Table 5.
2. The link to your video demo for Release 1.0 stored either in a cloud drive, or your YouTube channel.

Table 10: Stories, acceptance tests, and contributors for Release 1.0 (Green=Passed; Red=Failed).

|  |  |  |
| --- | --- | --- |
| **Full description of user story** | **Acceptance test(s)** | **Name(s) of contributing Developer(s)** |
| As an User, I can … so that ….[[1]](#footnote-1) | Test with inputs ….  Expected outcome: ...  Test with inputs ….  Expected outcome: ... | Susan Smith,  Jay Johnson |
| As an Administrator, I can … so that ….[[2]](#footnote-2) | Test with inputs ….  Expected outcome: ...  Test with inputs ….  Expected outcome: ...  Test with inputs ….  Expected outcome: ... | Susan Smith,  Jay Johnson,  Shannon Shore,  George Gavinson |
| As an User, I can … so that …. | Test with inputs ….  Expected outcome: ...  Test with inputs ….  Expected outcome: ...  Test with inputs ….  Expected outcome: ... | Jay Johnson,  Shannon Shore,  George Gavinson |
| As an User, I can … so that ….[[3]](#footnote-3) | Test with inputs ….  Expected outcome: ... | Shannon Shore |
| As a Guest, I can … so that …. | Test with inputs ….  Expected outcome: ...  Test with inputs ….  Expected outcome: ...  Test with inputs ….  Expected outcome: ... | Susan Smith,  Jay Johnson,  Shannon Shore,  George Gavinson,  Abbey Appleby,  Brian Bolt |

*<Insert url to video demo of Release 1.0 here>*

## 2.5 Release 2.0

Release 2.0 has essentially the same structure as Release 1.0.

### 2.5.1 User Stories

If your team wrote enough stories to cover up to or beyond Release 2.0 during your first story-writing workshop as described in the *User Stories* section 2.4.1, then your team will not need to hold a second formal workshop.

If a second workshop was held, submission for this section is the same as section 2.4.1.

### 2.5.2 Additional Documentation

Include this section in your Technical Report only if your team required a second formal story-writing workshop. If a second workshop was held, submission for this section is the same as section 2.4.2.

### 2.5.3   Release Plan 2.0

The requirements for this section are the same as section 2.4.3; update or add sections if required.

### 2.5.4   Iteration Plan (Release 2.0)

The requirements for this section are the same as section 2.4.4.

### 2.5.5   Additional Documentation

This section is required ONLY IF your team submitted materials for section 2.4.5.

### 2.5.7   Acceptance Tests for Release 2.0

The requirements for this section follow the same requirements as in section 2.4.7 except acceptance testing is for stories allocated for Release 2.0 and incomplete stories subsequently moved from Release 1.0.

# 3.0 CONCLUSIONS

A conclusion interprets the data found in the Body. It is reasoned judgment and not opinions. Consider the variables. Relate cause and effect. Analyze, evaluate, make comparisons and contrasts. Base the conclusion on fact.

# 4.0 RECOMMENDATIONS

Recommendations are not required for all studies. They suggest a course of action and would generally be provided when there are additional areas for study, or if the reason for the TR was to determine the best action going forward.

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Author of the template explanation text : John Doe <[john.doe@centennialcollege.ca](mailto:john.doe@centennialcollege.ca)>

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## References

[1] Cohn, Mike. 2004. *User Stories Applied: For Agile Software Development*, Addison-Wesley Professional.

# APPENDIX A (DESIGN DOCUMENT)

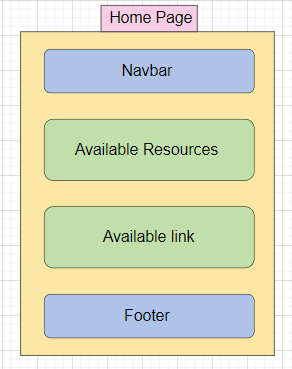
Overview:

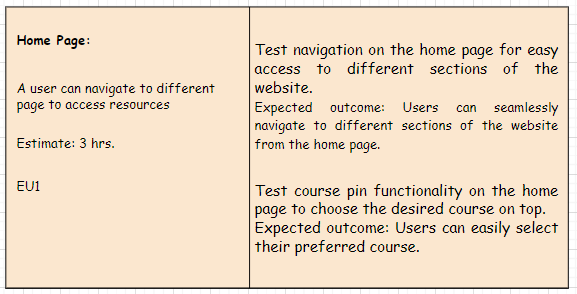
Our team initiated the system design phase by crafting a paper prototype of the ATMS application. This prototype served as the foundational visual representation of our interface and core functionalities.

Components:

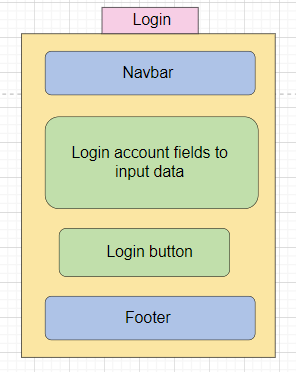
The paper prototype encompassed key screens and interactions vital to the user experience. It included sketches of the homepage, language selection screens, user account creation, lesson library interface, quiz modules, and offline access functionalities.

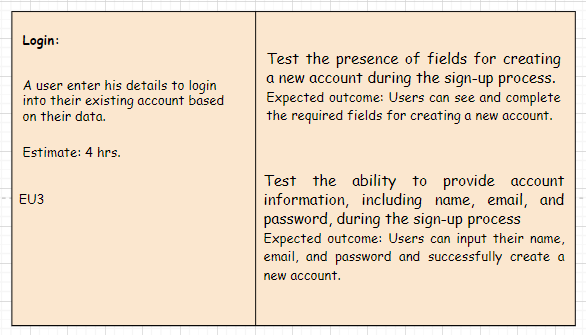
Home Page



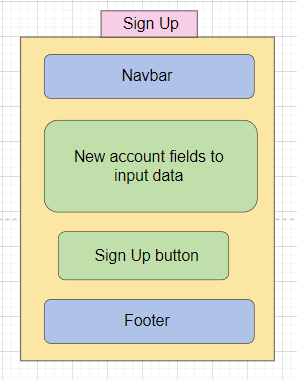


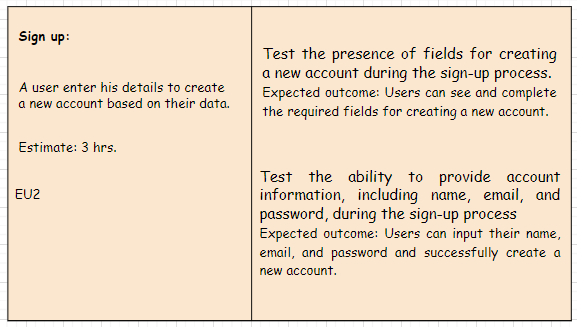
Login



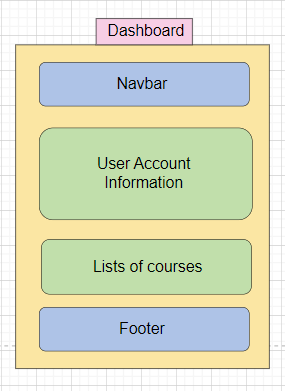


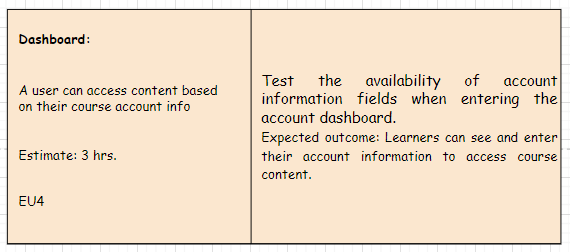
Sign Up



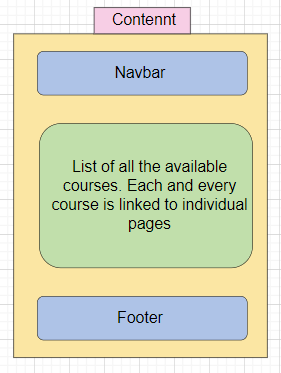


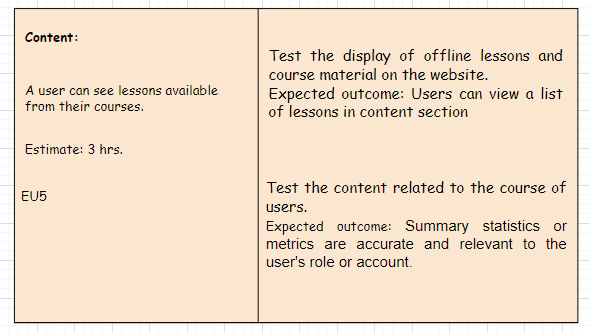
Dashboard



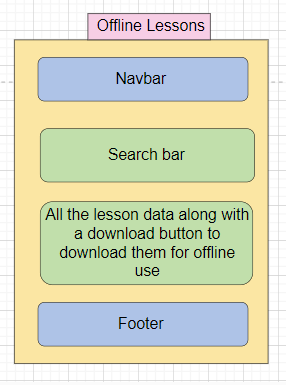


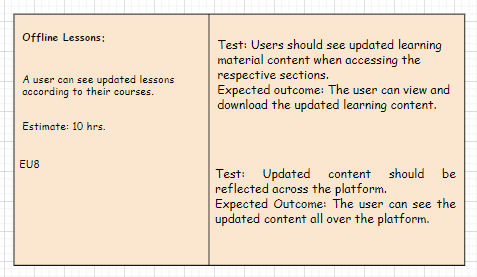
Content



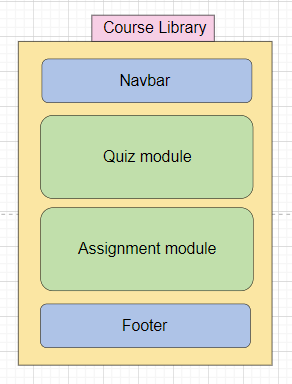


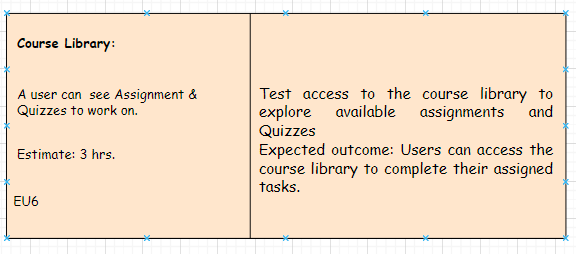
Offline Lessons



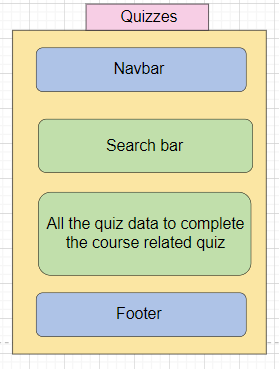


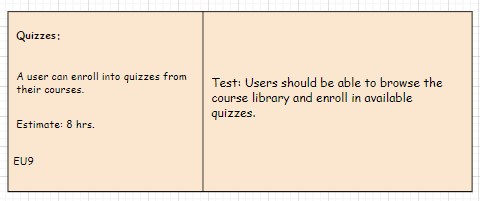
Course Library



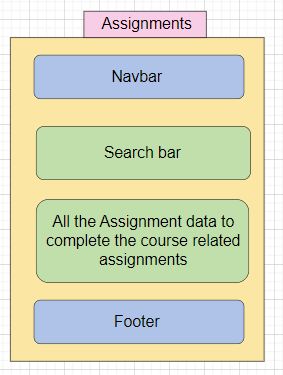


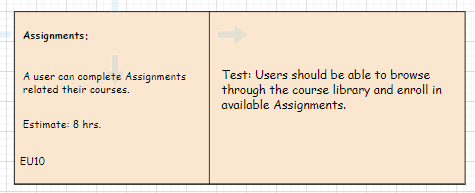
Quizzes



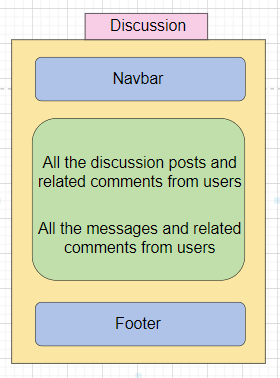


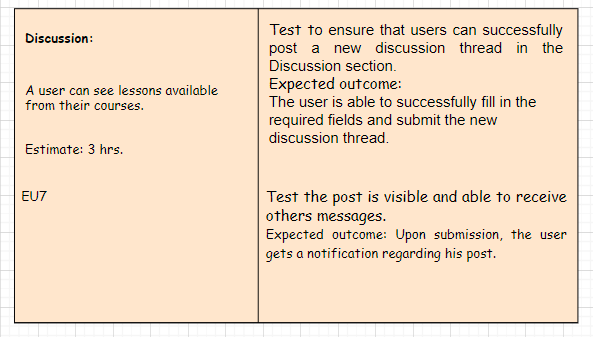
Assignments





Discussion





# APPENDIX B (TEST PLAN)

## 1.0 Introduction

### 1.0.1   Goals

Summarize the testing goals for the project.

### 1.0.2   Assumptions

Any assumptions which may affect the understanding or execution of this plan should be recorded here.

### 1.0.3   Risks and Asets

Describe the elements (software or hardware) that are not part of your application but still may impact its correctness and must be checked.

### Describe the elements that might positively influence testing on the project.

## 2.0 Scope

### 2.0.1   Features To Be Tested

Describe the features and functions that will be tested during the project. This should include functional and non-functional requirements.

### 2.0.2    Features Not To Be Tested

Describe the features that will not be tested and reason why.

## 3.0 Testing Procedures

Describe the testing procedures that the project will use. This includes the test lifecycle, types of testing, test objectives, and test criteria.

### 3.0.1   Test Objectives

Describe the objectives of the testing process.

### 3.0.2   Types Of Testing

Describe the types of testing that the project will use.

#### 3.0.2.1   Unit Testing

Describe the strategy for unit testing of the individual subsystems. This includes an indication of the subsystems that will undergo unit tests or the criteria to be used to select subsystems for unit test. Test cases are NOT included here.

#### 3.0.2.2   Integration Testing

Specify the integration testing strategy used. Describe the tests that will be performed in order to verify the interfaces between the subsystems of the software system. This section includes a discussion of the order of integration of subsystems. Test cases are NOT included here.

#### 3.0.2.3   Acceptance Testing

Specify the strategy for testing the software once it has been deployed. This section includes a discussion of the order of acceptance by software function. Test cases are NOT included here.

#### 3.0.2.4   Stress Testing

Identify the limits under which the program is expected to perform (memory constraints, disk space constraints, etc).

#### 3.0.2.5   Performance Testing

Refer to the functional requirements that specify acceptable performance.

### 3.0.3   Testing Tools

Describe the tools that you will use for testing.

## 4.0 Schedule and Deliverables

Describe the test deliverables that will be created during the project lifecycle. Include two tables, one for the schedule of tasks, another for the list of deliverables:

* Acceptance test
* Unit test
* System/Integration test
* Stress test
* Performance test
* Screen prototypes
* Defect reports and summaries
* Test logs and reports

Describe the reports that will be generated by the testing process.

Examples include:

Test Summary Report - A final report of the testing results from the project. Can include items such as total number of test cases, number of test cases executed, % test cases passed, etc.

# APPENDIX C (END-USER & ADMINISTRATOR MANUALS)

In this section, include a user manual for your system/application. The user manual should include the following items:

1. Instructions on how to install and configure your system/application, documenting all external software dependencies that need to be setup manually.
2. A user guide for the administrator (use screen shots of your system/application and briefly discuss each screen shot).
3. A user guide for the normal user (use screen shots of your system/application and briefly discuss each screen shot).

# APPENDIX D (PROGRESS MONITORING)

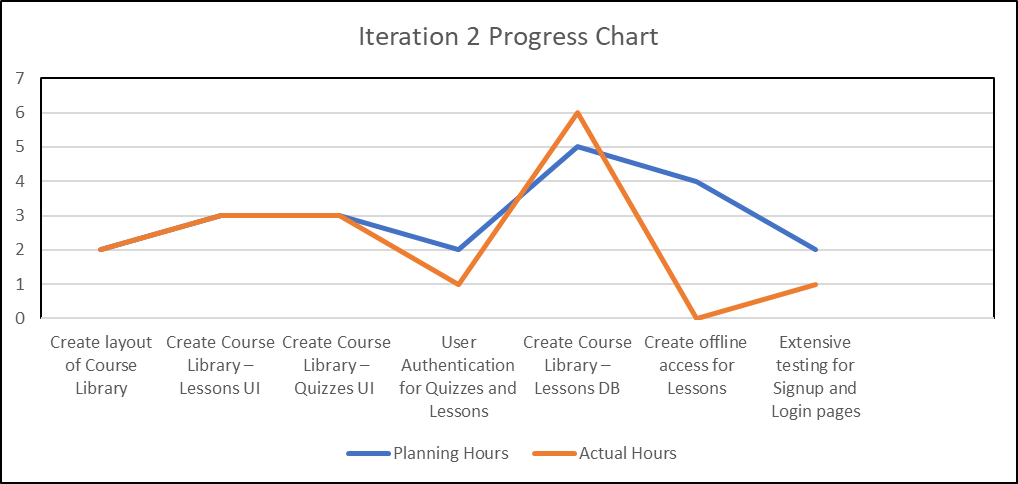
Table 11: Progress and changes for all iterations].

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Iteration 1** | **Iteration 2** | **Iteration 3** |
| Story points at start of iteration | 56 | 36 | 19 |
| Completed during iteration | 19 | 16 | - |
| Changed estimates | 1 | 1 | - |
| Story points from new stories | 0 | - | - |
| Story points at end of iteration | 36 | 19 | - |

|  |  |  |
| --- | --- | --- |
| **Iteration 2** | **Planning Hours** | **Actual Hours** |
| Create layout of Course Library | 2 | 2 |
| Create Course Library – Lessons UI | 3 | 3 |
| Create Course Library – Quizzes UI | 3 | 3 |
| User Authentication for Quizzes and Lessons | 2 | 1 |
| Create Course Library – Lessons DB | 5 | 6 |
| Create offline access for Lessons | 4 | To be completed in next iteration |
| Extensive testing for Signup and Login pages | 2 | 1 |

A graph with a line going up

Description automatically generatedFigure 9: Iteration burndown chart for data from Table 5.



1. Green colour code indicates that all tests passed successfully as intended. [↑](#footnote-ref-1)
2. Red colour code indicates that at least one test unintendedly failed. [↑](#footnote-ref-2)
3. When all tests for a given story fails, this may suggest that implementation of the story has not even begun and indicates poor planning on the part of the team. [↑](#footnote-ref-3)