

**Report 2 Deliverable #3**  
**Software Specification Requirement**

**1. PROJECT NAME:**

- EduCertify (Learning and Certification System)

**2. PROJECT IDEA:**

- The project is a learning and certification platform, in which it facilitates that learning process for learners all over the globe. Instructors create courses, assignments, and interactive sessions to interact with their learners. Learners can learn in a flexible and easy environment for the benefit of our learners.

**3. PROJECT DRIVERS:**

**a. The goal of the project**

- The goal of the project is to create a learning environment that facilitates and enhances the teaching and learning process for instructors and learners.

**b. Client, Customer, Stakeholders**

- **Clients:**
  - Freelance Instructors, Learners
- **Stakeholders:**
  - Instructors
  - Learners
  - Internal Operational Stakeholders (administrators, IT Team, Customer Service)
  - External Executive stakeholders (Investors)
  - Internal Executive Stakeholders ( board of directors, senior managers)

**c. Users of the project**

- Instructors and Learners
- Administrators, IT Team, Customer Service, Investors, Board of Directors, Senior Managers.

**4. PROJECT CONSTRAINTS:**

**a. Mandated Constraints**

- We will be integrating many technologies into our system like payment methods, video conferencing apps, database system to store data, and much more that will be discussed in the design part.

**b. Naming Conventions and Definitions**

- **EduCertify:** The System name.
- **Actors:** Stakeholders (people who have interest in the system or interact with the system) like (learners, instructors, administrators).

- **Certificate:** A digital document issued upon successful course completion.

c. **Relevant Facts and Assumptions**

**Business Rules**

- Only certified instructors can create and publish courses.
- Learners must complete all modules before receiving a certificate.

5. **FUNCTIONAL REQUIREMENTS:**

a. **The Scope of the Work**

**The Current Situation:**

- EduCertify Provides a seamless and comprehensive learning environment in which instructors can create courses and handle assignments and learners can enroll in theses courses and follow up at their own paths.

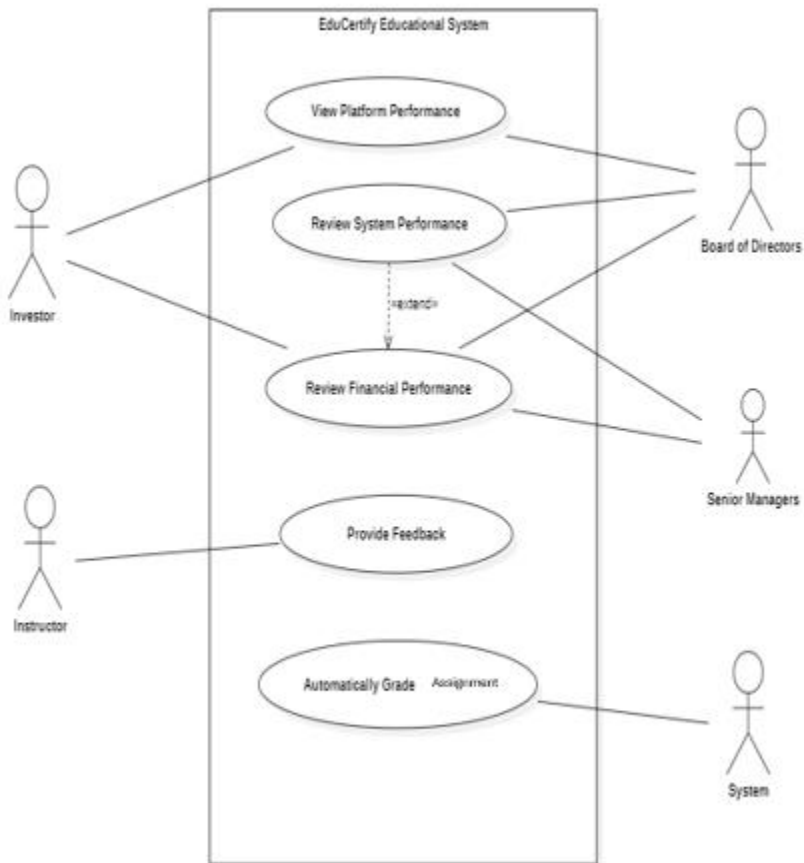
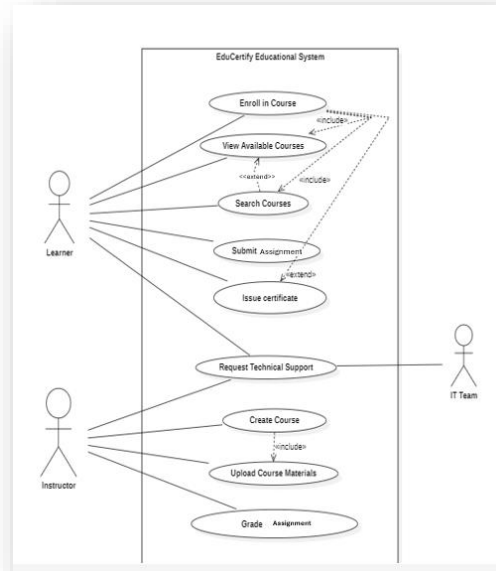
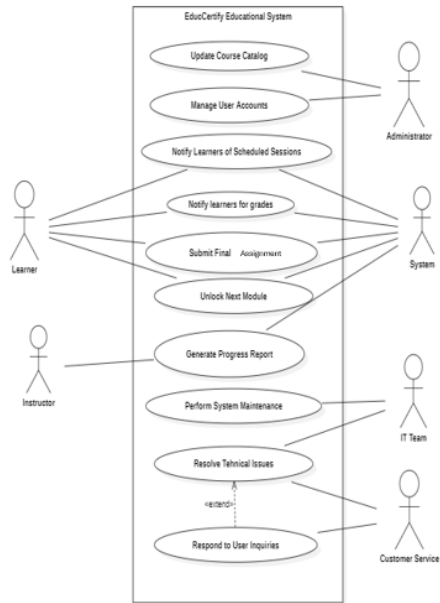
**The Context of the Work:**

- The system will handle many functional requirements such as creating courses, enrolling in courses, generating certificates, and reporting to higher boards.

**Work Partitioning:**

- *Actors:*
  - Instructors: Create Course, grade assignment, and provide feedback.
  - Learners: Enroll in courses, finish assignments, and earn certificates.
  - Administrator: manage user accounts, Update course catalog.
  - IT Team: Resolve technical issues, perform system maintenance.
- *System:*
  - Automatically grade assignments.
  - Issue certificates for learners.
  - Generate progress reports for instructors.
  - Generate quarterly reports for investors and executives.

## b. The Scope of the Product



c. Atomic Functional Requirements Shell (Volere) (cards)

Requirement #:EDU100 Requirement Type:Functional Event/BUC/PUC #: 1- View available courses  
2- Search Courses  
3- enroll in course

Description:

Learner selects a course to enroll in, and the system registers the learner and grants access to course materials.

Rationale:

This feature allows learners to enroll in courses from anywhere in the world, offering flexible timing and scheduling options. By creating a supportive and adaptable learning environment, it boosts learners' mental well-being and encourages sustained engagement.

Originator: Learner

Fit Criterion:

- 1- Learners can enroll in a course easily, by searching/viewing desired/suggested course.
- 2- Prerequisite validation, if applicable, must clear error messages for any unmet requirements.
- 3- Successful enrollment must be confirmed.
- 4- Learners should be able to access and begin the enrolled course immediately after the enrollment process is completed.

Customer Satisfaction: 5

Customer Dissatisfaction: 5

Priority: High, as it's a cornerstone feature that defines the platform's accessibility and usability. Conflicts: No identified conflicts

Supporting Materials: Use Case Diagram: "Enroll in Course" (Deliverable #1).  
Domain Class Diagram: Course, Learner (Deliverable #2).

History:

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Requirement #: **EDU101** Requirement Type: **Functional** Event/BUC/PUC #: **Create Course**

Description: **Instructors enter course details, sets objectives, and schedules it. The system creates and lists the new course.**

Rationale: **This requirement is important because it helps instructors create courses in which in provides a learning experience for learners everywhere.**

Originator: **Instructor**

Fit Criterion:

- **Validate all required fields (course title, objectives, etc..).**
- **Course must appear in course catalog as soon as course confirmed.**

Customer Satisfaction: **5**

Customer Dissatisfaction: **2**

Priority: **High**

Conflicts: **None**

Supporting Materials:

History: **Use case description table from Deliverable #1.**  
**Use case Diagram UML.**

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Requirement #: **EDU102** Requirement Type: **Functional** Event/BUC/PUC #:

Description: **Instructor uploads multimedia content to a course**

Rationale: **Ensures course content is available for learners**

Originator: **Instructor**

Fit Criterion:

- **Files must be uploaded, and can accessible to learners in the course section.**

Customer Satisfaction: **5**

Customer Dissatisfaction: **2**

Priority: **High**

Conflicts: **The file type or size may be too large**

Supporting Materials:

History: **Use case description**  
**Use case diagram UML**

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Requirement #: **EDU103** Requirement Type: **Functional** Event/BUC/PUC #: **Issue Certificate**

Description: **Learner completes all course requirements, and the system issues a certificate of completion for the learner.**

Rationale: **Certifications are important to provide learners with a credential of their achievements. It helps with the credibility of the platform**

Originator: **Learners**

Fit Criterion:

- **When all course modules are marked complete, the system generates a digital certificate/ credential.**
- **The learner receives certificate completion notification to earn the certificate.**

Customer Satisfaction: **5**

Customer Dissatisfaction: **3, if there is a course with no certificate**

Priority: **high**

Conflicts: **None**

Supporting Materials: **Use case description table from Deliverable #1,**

History: **Use case Diagram UML.**

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Requirement #: **EDU104** Requirement Type: **Functional** Event/BUC/PUC #:

Description: **Learner views available courses**

Rationale: **Helps learners browse courses easily**

Originator: **Learner**

Fit Criterion:

**Courses displayed correctly**

**Easily navigatable courses based on categories or tags**

Customer Satisfaction: **5**

Customer Dissatisfaction: **1**

Priority: **High**

Conflicts:

Supporting Materials:

**Overlapping categories or course misclassification**

History: **Use case diagram UML**

**Use case description table from deliverable #1**

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Requirement #: **EDU105** Requirement Type: **Functional** Event/BUC/PUC #:

Description: **Learner searches for courses using categories, tags, keywords**

Rationale: **Allows learners to find courses easily based on criteria**

Originator: **Learner**

Fit Criterion:

**Relevant courses appear based on tags, keywords and categories**

Customer Satisfaction: **5**

Customer Dissatisfaction: **0**

Priority: **High**

Conflicts: **Incorrect data keywords entry**

Supporting Materials:

History: **Use case diagram UML**  
**version 1.0 Use case description table from deliverable #1**

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Requirement #: **EDU106** Requirement Type: **Functional** Event/BUC/PUC #:

Description: **Learner submits completed assignment for grading**

Rationale: **Submitting assignment for grading**

Originator: **Learner**

Fit Criterion:

**Assignment successfully submitted and saved**  
**Correct file type and file size**

Customer Satisfaction: **4**

Customer Dissatisfaction: **3**

Priority: **High**

Conflicts: **None**

Supporting Materials:

History: **Use case diagram UML**  
**version 1.0 Use case description table from deliverable #1**

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Requirement #: **EDU107** Requirement Type: **Functional** Event/BUC/PUC #:

Description: **Instructor reviews and grades assignment**

Rationale: **Enables grading and feedback for learners**

Originator: **Instructor**

Fit Criterion:

**Grade and feedback are assigned**

**All submitted files must be saved for instructor review**

Customer Satisfaction: **5**

Customer Dissatisfaction: **1**

Priority: **High**

Conflicts: **None**

Supporting Materials:

History:

**Use case diagram UML**

**Use case description table from deliverable #1**

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Requirement #: **Edu108** Requirement Type: **Functional** Event/BUC/PUC #: **1- Respond to user inquiries  
2- Resolve Technical Issues**

Description: **Learner submits a support request ticket, and the system notifies Customer Service for assistance.**

Rationale: **This feature ensures a smooth user experience by addressing issues quickly, helping users stay engaged with the platform without disruptions.**

Originator: **Instructor, learner**

Fit Criterion:

**Users can complete a support request submission through a clearly labeled and easy-to-navigate form.**

**The system automatically categorizes requests into predefined categories (e.g., login issues, course access problems)**

**The system allows users to check the status of their tickets and view resolution updates through their account dashboard.**

Customer Satisfaction: **4**

Customer Dissatisfaction: **3**

Priority: **Medium**

Conflicts: **None identified.**

Supporting Materials: **Use Case: "Request Technical Support" (Deliverable #1).  
Domain Class Diagram: Request, Ticket (Deliverable #2).**

History:

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Requirement #: EDU-109 Requirement Type: FR Event/BUC/PUC #: Update Course Catalog

Description: Instructors enter course details, sets objectives, and schedules it. The system creates and lists the new course.

Rationale: updating the course catalog prevent the system from being outdated and flexible to changes and add more services like adding a new course

Originator: administrator

Fit Criterion:

- If there is a course that needs update like (change in schedule or adding new course)
- The instructor asks the administrator for updates.

Customer Satisfaction: 5

Customer Dissatisfaction: 4

Priority: medium

Conflicts: none

Supporting Materials: use case diagram UML, use case description and use case SSD.

History:

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Requirement #: Edu110 Requirement Type: Event/BUC/PUC #: 1- Request Technical Support  
2- Manage User Accounts

Description: Learner submits a support request ticket, and the system notifies Customer Service for assistance.

Rationale: When learners get quick, accurate responses to their questions or problems, they feel supported and valued, building trust in the platform and bringing them satisfaction, keeping them coming back.

Originator: Learner

Fit Criterion: 1- learners should be notified with response.  
2- Most inquiries must be resolved and responded to within 24 hours to ensure learner's satisfaction.

Customer Satisfaction: 4

Customer Dissatisfaction: 4

Priority: medium-high

Conflicts: None identified.

Supporting Materials: Use Case: "Respond to User Inquiries" (Deliverable #1).

History:

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Requirement #: EDU-111 Requirement Type: FR Event/BUC/PUC #: Manage User Accounts

Description: The administrator creates, updates, or deletes user accounts as requested.

Rationale: manages user accounts helps the system to expand as it allows adding new users to the system and delete unnecessary users and be more organized and it also synchronize the accounts.

Originator: administrator

Fit Criterion:

- New user signing up to the system.
- User updating details like (change payment details, change password, change email)
- User requests to delete account.

Customer Satisfaction: 5

Customer Dissatisfaction: 5 no users will join the system making the system useless.

Priority: high

Conflicts: none

Supporting Materials: use case diagram UML, use case description and use case SSD.

Requirement #: Edu112 Requirement Type: Functional Event/BUC/PUC #: 1- View platform performance  
2- Review system performance  
3- Review financial performance

Description: Investors of the system might request a performance report in which the system generates some key performance metrics.

Rationale: This feature ensures providing stakeholders with comprehensive, up-to-date performance metrics and insights ensuring transparency, and builds confidence in the platform's success.

Originator: Investor/manager

Fit Criterion: 1- Reports must include user engagement data, course popularity, and financial performance, and to be presented in a readable format.  
2- Reports can be accessed anytime and regenerated on demand or automatically every specified period.

Customer Satisfaction: 5

Customer Dissatisfaction: 4

Priority: high

Conflicts: None identified

Supporting Materials: Use Cases: "View Platform Performance," "Review System Performance," "Review Financial Performance."  
Domain Class Diagram – "Report"

History:

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Requirement #: EDU113 Requirement Type: Functional Event/BUC/PUC #: Notify Learners of Scheduled Sessions

Description: The system sends out notifications to learners to remind them of any upcoming scheduled session.

Rationale: Timely reminders to ensure learners attend sessions and engage with the course.

Originator: System, Instructor, Learner (notification sent to)

Fit Criterion:

Notifications should include accurate details such as session title, date, time, and instructor's name.  
Notifications should be sent before the time of the session.

Customer Satisfaction: 5 (learners won't miss the sessions) Customer Dissatisfaction: 3

Priority: 3

Conflicts: None

Supporting Materials: Use case description table from Deliverable #1.  
Use case Diagram UML.

History:

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Requirement #: Edu114 Requirement Type: Functional Event/BUC/PUC #: 1- Submit assessment  
2- Submit final assessments

Description: The system prompts learners to submit their final assessments before the course is completed.

Rationale: This feature enables learners to submit final assessments securely and efficiently ensures smooth experience during course completion and timely grading by instructors.

Originator: Learner

Fit Criterion: 1- The system notifies learner of successful submission, including a timestamp and confirmation number, immediately after submission.  
2- Assessments must be marked as "Submitted" in the learner's profile.  
3- Submissions must be accessible to instructors.

Customer Satisfaction: 4

Customer Dissatisfaction: 5

Priority: high

Conflicts: None identified

Supporting Materials: Use Cases: "Submit Assessment," "Submit Final Assessments."  
Domain Class Diagram : "Submission" class to manage assessment uploads.

History:

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Requirement #: **EDU-115** Requirement Type: **FR** Event/BUC/PUC #: **Perform System Maintenance**

Description: **The IT team performs specific scheduled maintenance times in which the system undergoes necessary updates and optimizations.**

Rationale: **scheduled maintenance that prevents the system from fails and maintain security avoiding threats**

Originator: **IT Team**

Fit Criterion:

- **system bugs need maintenance.**
- **Security threats.**

Customer Satisfaction: **5**

Customer Dissatisfaction: **5 they system needs maintenance to work smoothly**

Priority: **high**

Conflicts: **none**

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Requirement #: **EDU116** Requirement Type: **Functional** Event/BUC/PUC #: **Review System Performance**

Description: **The Executives of the platform requests a quarterly system performance report with details about the metrics, response times, and rates.**

Rationale: **This helps with the transparency and assessment of the platform for the high board executives of the system. It helps them understand the performance of the system for future planning.**

Originator: **Executives like board of directors, Senior managers, and investors.**

Fit Criterion:

- **The system generates a system performance report every quarter to assess performance.**
- **It should keep specific metrics like (user activity, response time, and errors logged)**

Customer Satisfaction: **5**

Customer Dissatisfaction: **5 (It may lead to decision making problems from the stakeholders)**

Priority: **High**

Conflicts: **None**

Supporting Materials: **Use case description table from Deliverable #1.**

History: **Use case Diagram UML.  
System Sequence Diagram.**

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Requirement #: EDU117 Requirement Type: Functional Event/BUC/PUC #: Review Financial Performance

Description: The system provides executives with quarterly financial reports in order to access the profitability they are getting from investing in this system. It includes many financial metrics like ROI and general costs.

Rationale: It ensures the executives and investors the profitability of the platform in order for them to make wiser decisions.

Originator: Board of Directors, Senior Managers, Investors.

Fit Criterion:

- Reports should include the revenue, expenses, and net profits of each quarter
- Different financial insights.

Customer Satisfaction: 5

Customer Dissatisfaction: 5

Priority: High

Conflicts: None

Supporting Materials: Use case description table from Deliverable #1.  
Use case Diagram UML.

History:

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Requirement #: EDU118 Requirement Type: Functional Event/BUC/PUC #: Generate Progress Report

Description: The system generates weekly progress reports for instructors in order to summarize the engagement and performance of the learners.

Rationale: Progress reports assists instructors to evaluate their learners engagement and overall insights that would help them adjust any strategies.

Originator: Instructors

Fit Criterion:

- Reports include learners' information and grades.
- it also includes completion rates and more insights.
- it is generated weekly.

Customer Satisfaction: 5

Customer Dissatisfaction: 2

Priority: Medium

Conflicts: None

Supporting Materials: Use case description table from Deliverable #1.  
Use case Diagram UML.

History:

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Requirement #: Edu119 Requirement Type: Functional Event/BUC/PUC #: 1- Grade assessment  
2- Provide feedback

Description: The instructor reviews learners' assessment and provides feedback. Then, the system sends it to the learner.

Rationale: This feature ensures feedback from Instructors to learners is beneficial, enhancing the learning experience and overall satisfaction.

Originator: Instructor

Fit Criterion: 1- Instructors must be able to review assessments and provide grades and feedback  
2- Learners must receive a notification after feedback is posted.  
3- Feedback must include a grade, written comments, and any attached files (if exists)

Customer Satisfaction: 5

Customer Dissatisfaction: 4

Priority: medium

Conflicts: None identified.

Supporting Materials: Use Cases: "Grade Assessment," "Provide Feedback."  
Class Diagram – "Feedback"

History:

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Requirement #: EDU-120 Requirement Type: FR Event/BUC/PUC #: Resolve Technical Issues

Description: Customer Service resolves reported technical issues, and the system records the solving of the issue.

Rationale: solving issues reported by user keeps user satisfied and the system works smoothly

Originator: IT Team

Fit Criterion:

- User report issue.
- Issue discovered from it team

Customer Satisfaction: 5

Customer Dissatisfaction: 5 they system needs maintenance to work smoothly

Priority: high

Conflicts: none

Supporting Materials: use case diagram UML, use case description and use case SSD.

History:

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Requirement #: EDU-121 Requirement Type: FR Event/BUC/PUC #: Unlock Next Module

Description: When the learner completes a module, the system unlocks the next module for the learner to start.

Rationale: when the learner completes a module the system informs the learner that the next module is unlocked

Originator: Lerner, system

Fit Criterion:

- Completing a module
- Learner registers in a new course

Customer Satisfaction: 4

Customer Dissatisfaction: 3 user may not complete the course

Priority: mediums

Conflicts: Submit Assessment

Requirement #: EDU-122 Requirement Type: FR Event/BUC/PUC #: Notify Learners of Grades

Description: The system notifies learners once all assessments have been graded and updated in their personal records.

Rationale: after the learner submits assessment and the assessment is graded by instructor or automatically graded by the system the system will notify the learner that the assessment is graded

Originator: Learner, system

Fit Criterion:

- Assessment graded
- 

Customer Satisfaction: 3

Customer Dissatisfaction: 2

Priority: low

Conflicts: Submit Assessment, grade assesment

Supporting Materials: use case diagram UML, use case description and use case SSD.

History:

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Requirement #: **EDU123** Requirement Type: **Functional** Event/BUC/PUC #:

Description: **System auto-grades objective assignment**

Rationale: **Automates grading for quicker feedback**

Originator: **System**

Fit Criterion:

**Predefined rules (answer keys for multiple-choice).**

Customer Satisfaction: **3**

Customer Dissatisfaction: **3**

Priority: **Low**

Conflicts:

Supporting Materials:

**Incorrect answer keys leading to incorrect marks**

History:

**Use case diagram UML**

**Use case description table from deliverable #1**

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