Kuwait University
College of Engineering and Petroleum
CpE-371: SOFTWARE ENGINEERING AND DEVELOPMENT

UniReserve

Project Proposal

Version 1.0

Prepared by:

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Signature Page

I did my share of the work, and I have a general understanding of the contents of the assignment

Name	Signature
----------Noura Almethen----------	------noura------
----------Mouddy Almousharji----------	------Mouddy------
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Report Evaluation and Credits

Criteria	Score	Max	Member Name				
Organization		10					
Clarity and Conciseness		10					
Grammar		-30					
Spelling		-30					
Punctuation		-30					
Cover Page and Credits Page		5					
Table of Contents		5					
Project Description		50					
Appendix A: Team Formation		50					
Total Contribution							
Individual Report Grade							

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1. Project Description

1.1 Project summary

UniReserve is a project built for a campus room and equipment booking system. The system helps faculty members, staff, and students find equipment such as projectors, lab kits, and technical tools. Users can reserve equipment and tools in one place. Bookings are usually taken through messages or in separate offices by attending, which may lead to lost or ignored booking requests, conflicts between users, and double bookings, for example, booking two places at the same time. Our system provides a clear, structured booking process: search availability, select room and equipment, submit a request, check booking rules, the admin approves or rejects the booking, and receive booking confirmation.

1.2 Stakeholders and users

Role	Needs / goals (simple bullets)
Student/requester	• Search room/equipment availability • Submit booking request (time, room, purpose) • View status and confirmation • Cancel/modify within allowed rules
Staff/Faculty	• Request restricted rooms/resources • Manage their own bookings • View approval decision and reasons
Facilities admin	• Review and approve/reject requests • Manage rules and policies for different spaces. • Prevent double bookings and resolve conflicts • Keep a history of approvals and changes

1.3 Scope and Vision

To develop a unified, reliable, and transparent system for booking campus rooms and facilities using a central system that makes it easy for students and staff to book resources, in an effort to eliminate the need for informal bookings, reduce administrative workload for faculty and staff, and reduce booking errors.

UniReserve is designed to bring clarity, transparency, and accountability to the room and equipment booking process. It is built on the premise of making real-time availability and capacity information visible, streamlining the approval process by leveraging defined business rules and ensuring a full audit trail of all decisions made.

In scope	Out of scope
• Search real-time availability of rooms and equipment. • Submit reservation requests including requester details, purpose, date, and time. • Admin review and approve/reject requests with a documented reason. • Automatic prevention of conflicting bookings. • Allow users to cancel or modify bookings according to defined rules. • Maintain an audit trail of booking history and status changes.	• Integration with official university authentication systems (if not required). • Online payment processing. • Advanced analytics and reporting dashboards. • Mobile application development (unless required later). • Full production deployment beyond the academic prototype.

2. Appendix: Team Formation

2.1 Team Leader Selection Process

We selected the Team Leader using a weighted decision matrix to ensure the choice is transparent, repeatable, and aligned with modern software project leadership expectations: predictable delivery, a clear collaboration framework, proactive risk management, strong stakeholder communication, and team enablement.

2.1.1 Selection Steps

- Agree on criteria and weights (1-10): The team defines what matters most for this project and assigns a weight to each criterion (10 = most critical).
- Independent scoring (1-5): Each team member scores each candidate on each criterion using the same anchors: 1 = weak/rarely demonstrated, 3 = acceptable/consistent with prompting, 5 = excellent/consistently demonstrated.
- Average to reduce bias: For each criterion, a candidate's score is the average of all team members' scores.
- Compute weighted totals: Weighted Score = Weight x Average Score; Total Score = Σ (Weight x Average Score).
- Select leader and document result: The candidate with the highest total score is selected as Team Leader.
- Tie-break rule: If totals are within 3%, prioritize higher scores in Planning & Delivery Execution, Stakeholder Management & Status Communications, and Risk Management & Issue Ownership; then confirm availability and commitment in a short discussion.

Integrity gate (pass/fail): Any serious ethics or academic integrity concern disqualifies a candidate (this is not scored as points).

2.1.2 Leader Selection Criteria

Scoring: 1-5 per criterion (1 = weak, 3 = acceptable, 5 = excellent). Weights: 1-10 (10 = most important).

Notes

- Stakeholder management includes identifying stakeholders, running a kickoff, and maintaining a predictable update/demo cadence.
- Collaboration system/documentation hub means one place for the plan/board/docs and clear team channels so information is discoverable.
- Risk management includes surfacing risks early, tracking them, and driving mitigations (including integration failures and critical defects).
- Technical leadership & integration includes integration planning, and code review discipline.

Criterion	Weight (Max10)	Noura	Modi	Sheikah
1) Planning & delivery execution	10	5	4	4
2) Accountability & follow-through	9	5	4	4
3) Stakeholder management & status communications	9	5	4	3
4) Collaboration system & documentation hub	8	5	4	3
5) Risk management & issue ownership	8	4	4	3
6) Prioritization & scope control	8	5	4	3
7) Requirements clarity (testable outcomes)	7	4	3	4
8) Quality & testing discipline (evidence)	7	5	4	4
9) Technical leadership & integration	6	4	3	3
10) Team culture: feedback, mentoring, motivation	6	4	3	3
Total (Σ Weight x Avg Score)		Team Leader		

Decision: Based on the weighted decision matrix, Noura Almethen is selected as the Team Leader for this project.

2.2 Team Agreement

Team Working Agreement