# Sri Lanka Institute of Information Technology

Software Engineering Practices

(IT5030)


Continuous Assignment – 2025, Semester 1/2

## DiveMaster – Diving Certificates Management System

## Product Backlog


Group Name: Code Crafters



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# 1. Introduction

The DiveMaster - Diving Certificates Management System is a digital platform designed to streamline diving certifications, scheduling, assessments, and equipment tracking. The product backlog provides a structured list of requirements and features that will be developed in an iterative manner following the Agile Scrum methodology.

# 2. Product Backlog

| ID | User Story | Initial Estimate | Sprint 1 | Sprint 2 | Sprint 3 |
|---|---|---|---|---|---|
| GU-01 | As a guest user, I want to browse available diving courses and sessions so that I can understand training opportunities before registering. | 2 | | | |
| GU-02 | As a guest user, I want to request an account so that I can enroll in a diving course or make a reservation. | 4 | | | |
| GU-03 | As a guest user, I want to reset my password in case I forget it so that I can regain access to my account. | 4 | | | |
| RD-01 | As a recreational diver, I want to create an account and log in so that I can access my diving course details, schedules, and progress. | 4 | | | |
| RD-02 | As a recreational diver, I want to book a training or recreational dive session so that I can participate in a dive at my preferred location and time. | 6 | | | |
| RD-03 | As a recreational diver, I want to modify or cancel my booking so that I can adjust my schedule based on availability. | 2 | | | |
| RD-04 | As a recreational diver, I want to view my past and upcoming dive bookings so that I can keep track of my diving schedule. | 2 | | | |
| RD-05 | As a recreational diver, I want to log my dive details (depth, duration, environmental conditions) so that I can maintain an accurate record. | 4 | | | |
| RD-06 | As a recreational diver, I want my instructor to review and approve my dive log so that my training progress is validated. | 3 | | | |
| RD-07 | As a recreational diver, I want to complete online learning modules and assessments so that I can prepare for my certification. | 3 | | | |
| RD-08 | As a recreational diver, I want to receive my digital certification after completing my | 3 | | | |

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|---|---|---|---|---|---|
| | assessments so that I can verify my credentials. | | | | |
| RD-09 | As a recreational diver, I want to download and share my certification so that I can prove my qualifications to other dive centers. | 3 | | | |
| RD-10 | As a recreational diver, I want to check available equipment before my scheduled dive so that I can ensure all necessary gear is available. | 3 | | | |
| RD-11 | As a recreational diver, I want to receive automated reminders about my assigned equipment and return schedules so that I can follow procedures. | 3 | | | |
| RS-01 | As a research diver, I want to create an account and log in so that I can book dives and access research features. | 3 | | | |
| RS-02 | As a research diver, I want to schedule a dive session with specific instructors so that I can conduct research with expert guidance. | 3 | | | |
| RS-03 | As a research diver, I want to log marine life observations and environmental conditions so that I can contribute to conservation research. | 5 | | | |
| RS-04 | As a research diver, I want to take photos and log species observations for later identification and analysis. | 3 | | | |
| RS-05 | As a research diver, I want to use an offline mobile app to capture dive data so that I can sync logs later. | 6 | | | |
| RS-06 | As a research diver, I want to generate reports of my tracking records so that I can analyze trends in marine biodiversity. | 3 | | | |
| RS-07 | As a research diver, I want to choose specific diving equipment based on my research needs so that I can ensure proper gear is available. | 3 | | | |
| RS-08 | As a research diver, I want to receive automated maintenance alerts for assigned equipment so that I can avoid faulty gear. | 3 | | | |
| IN-01 | As an instructor, I want to log in and view my assigned students so that I can track their training progress. | 4 | | | |
| IN-02 | As an instructor, I want to accept or request modifications to my assigned training sessions so that I can manage my schedule. | 6 | | | |
| IN-03 | As an instructor, I want to check confirmed bookings and assigned students so that I can prepare for upcoming sessions. | 4 | | | |

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|---|---|---|---|---|---|
| IN-04 | As an instructor, I want to validate and approve student dive logs so that their training records are accurately maintained. | 2 | | | |
| IN-05 | As an instructor, I want to report equipment maintenance issues so that necessary repairs can be scheduled. | 4 | | | |
| IN-06 | As an instructor, I want to conduct and evaluate student assessments so that I can determine their readiness for certification. | 4 | | | |
| IN-07 | As an instructor, I want to provide feedback on student assessments so that students can improve their skills and knowledge. | 2 | | | |
| CA-01 | As a certification authority, I want to review student performance records so that I can verify compliance with certification standards. | 4 | | | |
| CA-02 | As a certification authority, I want to approve or reject submitted certifications so that only qualified divers receive credentials. | 6 | | | |
| CA-03 | As a certification authority, I want to generate reports on issued certifications and pass rates so that I can track industry trends. | 2 | | | |
| CA-04 | As a certification authority, I want to verify digital certifications so that divers can authenticate their credentials easily. | 4 | | | |