

Continuous Assessment Report

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| **Only for Course Teacher** | | | | | | |
|  | | **Needs Improvement** | **Developing** | **Sufficient** | **Above Average** | **Total Mark** |
| **Allocate mark & Percentage** | | **25%** | **50%** | **75%** | **100%** | **15** |
| **Level of Content** | **03** |  |  |  |  |  |
| **Analysis** | **05** |  |  |  |  |  |
| **Development** | **04** |  |  |  |  |  |
| **Accuracy** | **03** |  |  |  |  |  |
| **Total obtained mark** | | | | | |  |
| **Comments** |  | | | | | |

**Semester: Spring 2025…. / Fall ………**

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**Student ID: 221-35-1081**

**Batch: 37 Section: D1**

**Course Code: SE331 Course Name: Software Engineering Design Capstone Project**

**Course Teacher Name: Faysal khan**

**Designation: Lecturer, DIU**

**Submission Date: 18/04/2025**

1. **Introduction**

## ****Project Title****

**Satellite Monitoring System (SMS)**

## ****Project Overview****

The Satellite Monitoring System is a web-based application designed to simulate real-time satellite tracking, command execution, and operational data visualization. The system offers an intuitive dashboard that allows users to monitor satellite metrics like speed, altitude, fuel levels, and power usage, while also providing interactive features for controlling and modifying satellite operations.

**2.Scope**

## ****Objectives****

To provide a user-friendly interface for tracking satellite data.

To simulate command transmission and satellite responses.

To demonstrate interactive visual feedback on satellite operations (e.g., crashes, additions)

To deliver an educational or demonstrative tool for learning satellite system behavior.

1. **Market Analysis**

The global space and satellite technology market is rapidly expanding, driven by increasing demand for:

* Satellite-based communication and internet services.
* Earth observation and environmental monitor
* Defense and national security applications.
* Commercial space missions and private satellite launches.

## 4. ****Core Features****

### Real-Time Dashboard

### Live satellite feed list showing speed and altitude.

### UTC time display updated every second.

* Resource monitoring for each satellite (fuel and power).

### Interactive Controls

* Add or delete satellites dynamically.
* Filter satellites by ID.
* Send commands to satellites with instant feedback.
* Simulate satellite crashes and resource removal.

**5.Technology Used**

* **Tools and Technologies:**

Frontend - HTML5, CSS3 (responsive), JavaScript

Styling/UX - CSS Animations, Media Queries, Google Fonts

Interactivity- Event-driven JavaScript DOM manipulation

1. **Conclusion**

**Summary:**This Satellite Monitoring System serves as a robust, engaging, and educational platform showcasing how space system interactions can be visualized and controlled in a browser. With its clean interface and interactive components, it lays the groundwork for both learning and expansion into more advanced aerospace applications.