Step File Analyzer

Centre for Computational Technologies

Transforming human life by democratization of technology

https://www.cctech.co.in

Centre for Computational Technologies - CCTech
403, Pushpak Business Hub, Wakad
Pune, 411057, India

1 Introduction

The Step File Analyzer is a web application designed to load, visualize Step files and extract their properties and save them into an Excel spreadsheet. This document outlines the purpose, scope, system overview, functional requirements, tools, milestones, timeline, and user interface of the Step File Analyzer.

1.1 Purpose

The purpose of the Step File Analyzer is to provide a user-friendly interface for analyzing Step files and facilitating easy extraction of their properties.

1.2 Scope

The Step File Analyzer will include features for:

- Reading Step files using Autodesk Platform Services Viewer
- Loading Step files in a web browser
- Extracting properties from Step files
- Saving properties in Excel spreadsheet

2 System Overview

The Step File Analyzer will be a web-based application developed using React and TypeScript. It will use Autodesk Platform Services Viewer for rendering Step files and interacting with their properties.

3 Functional Requirements

1. **File Loading**
   - The user should be able to select and load a Step file.
   - The Step file should be displayed in the Autodesk Platform Services Viewer.

2. **Property Extraction**
   - The application should extract properties from the loaded Step file and display in the Viewer.

3. **Data Export**
   - The user should be able to save the extracted data into an Excel spreadsheet.

4 Tools

- **React:** Frontend framework for building the user interface.
- **TypeScript:** Superset of JavaScript for type-checking and improved code quality.
- **Autodesk Platform Services Viewer:** Viewer for displaying Step files and interacting with their properties.
- **Excel:** Spreadsheet software for storing and organizing extracted data.
- **Code Editor/IDE:** Visual Studio Code

5 Milestones and Timeline

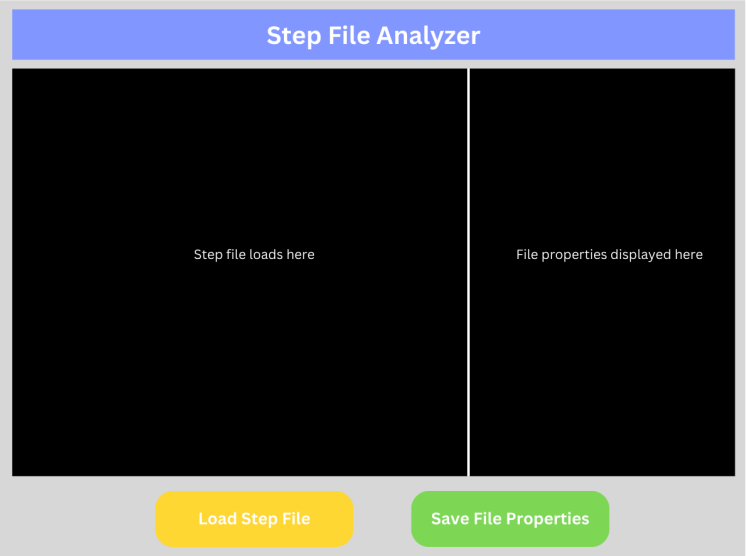
Sr. No.	Milestones	Date and Time
1	Project Problem Statement	06 Mar 2024 15:00 IST
2	Project Planning and SRS Preparation	07 Mar 2024 14:00 IST
3	SRS Approval	07 MAR 2024 19:00 IST
4	Frontend Development	08 Mar 2024 19:00 IST
5	Autodesk Platform Services Viewer Integration	10 Mar 2024 19:00 IST
6	Data Extraction	10 Mar 2024 19:00 IST
7	Testing	11 MAR 2024 19:00 IST
8	Finalization	12 Mar 2024 19:00 IST
9	Project Presentation	13 Mar 2024 19:00 IST

6 Conclusion

The Step File Analyzer will provide a valuable tool for engineers and designers working with Step files, enabling them to easily visualize and extract data from these files. Its user-friendly interface and efficient data extraction capabilities will make it a valuable asset in the field of computer-aided design.

7 User Interface

The Step File Analyzer's user interface (UI) is designed to be intuitive and user-friendly, providing easy access to its key features. The UI consists of a main viewer window and several buttons for interacting with the loaded Step file.



1. **Viewer Window -** The viewer window is the central element of the Step File Analyzer's user interface.

    a. Left side of the viewer provides a screen where the user-selected Step file will be loaded and displayed.

    b. Right side of the viewer window provides a screen where the file properties will be displayed.

2. **Buttons -**
    a. Load Step File: This button allows users to select a Step file from their system. Once selected, the Step file will be loaded into the viewer window, enabling users to view its contents.

    b. Save File Properties: This button extracts the properties of the loaded Step file from the viewer and saves them in an Excel spreadsheet. The spreadsheet will be saved in the Downloads folder, providing users with a convenient way to analyze the extracted data.