Design Document

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Abstract

The Forge VR Explorer branches from an Autodesk prototype project called Vrok-It, which is a simple web-based 3D model viewer and mobile virtual reality (VR) explorer. The project will expand upon its ability to display uploaded 3D models in browser and in VR, and improve its accessibility. Conventionally, viewing 3D models in VR is a challenge if you have model files on many devices, or have a headset that only works in conjunction with a smart-phone. The Forge VR Explorer aims to do this by utilizing a web-based software that uses the features of the Autodesk Forge API. The project will also be expanded with new ideas and stretch goals as the project is developed.

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Tenative, unsure if this is needed:The software implemented is a cross-platform application capable of accomplishing several tasks. The software allows for the upload of CAD files, renders them on the website using the Forge API, allows the transfer and rendering of the models onto a user's mobile device, and then has the capability to allow the user to view the models in 3D with Google Cardboard. This document aims to delve into the design of each piece of functionality and seeks to expand its design and structure.

1.1 Scope

The scope of this document only covers the information regarding user experience data flows, the software design description and the design structure of the software. This document does not cover implementation decisions or specific quality requirements.

1.2 Purpose

The purpose of this software design document is to describe the user experience flows and provide the software design description to its intended audience. Additionally, this document provides a design framework that the developers will be using in order to assess the progression of the software through its development lifespan.

1.3 Intended audience

The intended audience of this software design document are the developers planning and building the software, and the stakeholders who include: Autodesk's Forge team, the clients and the advisors to the developers.

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