Software Requirements Specification for QuestNest

Lab 2 Section 1 & 2 Version 1

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November 24, 2025

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1 Introduction

This section, at a high level, will discuss QuestNest's purpose, scope, definitions, acronyms, abbreviations, references, and the overview of the other sections in the Software Requirements Specification (SRS).

1.1 Purpose

This document presents a detailed software requirements specification (SRS) for QuestNest, an application for chore tracking.

1.2 Scope

QuestNest is designed to make chores easier to track and manage for all household members. It will introduce a structured reward system to motivate and reinforce positive behavior.

1.3 Definitions, Acronyms, and Abbreviations

- *Experience Points (XP)* - points awarded as a progression indicator.
- *Family-Level Goal* - collaborative custom chores awarded if all members of the family complete their assigned tasks.
- *Push Notification* - an alert received from an application to notify when there is a new event or message to view.

1.4 References

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1.5 Overview

The SRS will consist of two other sections:

- Section 2 of this document will provide an overview of QuestNest.
- Section 3 of this document will describe specific requirements, organized by feature.

2 Overall Description

Section 2 will discuss QuestNest's product perspective, product functions, and user characteristics. Constraints, assumptions, and dependencies will be listed in this section; however, it will be marked as N/A, not containing any content.

2.1 Product Perspective

QuestNest is a mobile application designed to help families manage chores with a reward system. Caregivers can manage and assign chores to family members and track their progress, such as their chores' status and current Experience Points (XP) amount. Children can view chores that have been assigned to them and earn XP upon verified completion. XP will be used as a currency to redeem rewards. When a child has completed a chore, they are responsible for uploading a media file (photograph or video). The caregiver is responsible for viewing the media file to determine if the completed chore meets standards.

2.2 Product Functions

QuestNest will be developed using Python 3.13.5 and follow a Model-View-Controller (MVC) architectural pattern. The Model will consist of Google Firestore, a cloud-based NoSQL database. Python Admin SDK will be responsible for querying and interacting with the Firestore database. The View will format and display information and is developed with Flet, a Python framework built on Flutter. The Controller contacts the Model to access information and then allows the View to receive that information. The Controller is developed with the framework FastAPI. Uvicorn is QuestNest's web server and will be responsible for receiving user input,

parsing that data, and giving it to FastAPI, then receiving that response and delivering it to the user for access.

2.3 User Characteristics

QuestNest is designed to make chores fun and engaging while promoting consistency and accountability. Users include all family members, such as parents and caregivers, seeking to establish better habits for kids and Children seeking an engaging way to make mandatory chores more rewarding.

2.4 Constraints

N/A

2.5 Assumptions and Dependencies

N/A