Team Ruby

"QuestNest- Gamifying Chores to beat unproductivity"
Professor Kennedy
CS 410 - Professional Workplace Development I
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Lab 2

1 Introduction

1.1 Purpose

The purpose of this Software Requirements Specification (SRS) is to formally describe the functional and non-functional requirements for *QuestNest*, a mobile application designed to gamify household chores. This SRS defines the product's intended purpose, scope, major features, and user characteristics so that designers, developers, and testers share a common understanding of what the software must accomplish.

1.2 Scope

QuestNest aims to transform household chore completion into an engaging, reward-driven experience. By integrating game mechanics—such as experience points (XP), photographic verification, and family-level goals—into everyday task management, *QuestNest* motivates children while giving parents an easy-to-use oversight platform.
 Key goals include:

- Increasing children's intrinsic motivation to complete chores.

- Providing real-time task tracking and feedback.

- Encouraging family collaboration through shared rewards.

  The prototype will demonstrate chore assignment, submission, approval, and XP

accumulation to show how gamification can improve participation and accountability in

family settings (*Lab 1*)

1.3 Definitions, Acronyms, and Abbreviations

- **XP (Experience Points):** A progression metric awarded for approved chores.

- **Collaborative Family Reward:** A shared incentive unlocked when all assigned chores
  are completed.

- **Push Notification:** A real-time alert informing users of pending tasks, approvals, or
  rewards.

1.4 References

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1.5 Overview

Section 2 provides an overall product description, including its perspective, core functions, user characteristics, and any project constraints or assumptions. Subsequent sections of the full SRS will detail specific functional requirements, performance expectations, external interfaces, and future enhancements.

2 Overall Description

2.1 Product Perspective

QuestNest is a stand-alone mobile application supported by a cloud-based backend. It interacts with device hardware (camera & notifications) and an online database to manage chore data and XP tracking. The product follows a client-server model:

- **Front End:** Cross-platform mobile interface (iOS / Android) for parents and children.
- **Back End:** Use of FastAPI framework and Firestone for data storage.
  The prototype demonstrates these core interactions without full deployment of reward-redemption or parental-control extensions proposed for the final release
  (Lab 1)

2.2 Product Functions

Primary system capabilities include:

1. **Chore Assignment and Tracking** – Parents create and assign chores with deadlines.

2. **Photographic Verification** – Children upload photo evidence upon completion.

3. **Approval System** – Parents approve / reject submissions and award XP.

4. **XP Progression & Reward Unlocks** – XP accumulation unlocks custom and family-level rewards.

5. **Notifications and Reminders** – Automatic push alerts for pending or verified chores.

6. **Family Dashboard** – Overview of task completion status, XP totals, and collaborative goals.

2.3 User Characteristics

- **Parents / Caregivers:** Administrative users who create, assign, and evaluate chores. Expected to possess basic smartphone literacy.

- **Children / Participants:** Gamified-experience users who complete tasks, submit proof, and monitor XP progress.

- **Future Stakeholders (optional):** Educators or program coordinators managing group tasks in schools or childcare programs.

2.4 Constraints

N/A – No unique technical, legal, or hardware constraints identified at this stage.

2.5 Assumptions and Dependencies

N/A – System assumes availability of standard mobile hardware and stable internet connectivity.