

Detailed Architectural Design

21 Questions

Gabriel Lopez de Leon - lopezdg - 1310514

Curtis Milo - milocj - 1305877

Maxwell Moore - moorem8 - 1320009

Alexandra Rahman - rahmaa25 - 1305735

Connor Sheehan - sheehacg - 1330964

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1 Introduction

This document is called the detailed architectural design document and it will be giving the stakeholders an in depth look at how the project, *21 Questions*, is designed. More precisely, this document outlines the details concerning each class as well as how classes interact with one another.

1.1 Purpose

The detailed architectural design document outlines the functionality of the system through the State Chart diagrams, and focuses on the detail of each class through the Detailed Class diagrams. The interactions among the classes, more specifically the messages passed between classes, will be defined in the Sequence diagrams. The main purpose of this document is to explain in detail the software system to be developed, which in this case is the application, *21 Questions*. Through the use of the various diagrams mentioned before, all components of the product and their relationships with each other are revealed in more detail. The main target audience for this document is the software developers as they need to see, in greater detail, how the system and its modules interact and how they are designed to work in relation to each other.

1.2 System Description

21 Questions is an android application that can be used as a location identifier whose intended use is for any user above the age of ten. The application requires minimal training, experience or technical expertise to use, and can be easily picked up and used by anyone. *21 Questions* is a simple game that asks the user a series of twenty-one polar or binary questions to try to identify their area of interest. In this game the area of interest is limited to an establishment, building, place, or effigy with a focus on locations only with an end goal of displaying the result through Google Maps.

1.3 Overview

This document will not only outline the design, but the details of the *21 Questions* application from an implementation perspective. The document will begin from state perspective, in more detail how one gets from one state to another as well as which states follow each other. This is portrayed in the State Charts. This is followed by a sequence overview depicting how each class passes messages to one another. Finally the details of each class are illustrated in the Detailed Class diagram. These sections highlight the classes in greater detail, including how each class interacts with one another. This document easily lends itself to being a model for the implementation.

2 State Charts for Controller Classes

The following section contains state charts for the controller classes in the *21 Questions* application. Figures 1 and 2 are the state charts for the GUI and Question Controller classes, respectively.

3 Sequence Diagrams

Figure 3 contains a sequence diagram for the primary use case of the application.

4 Detailed Class Diagram

This section should provide a detailed class diagram for your application.

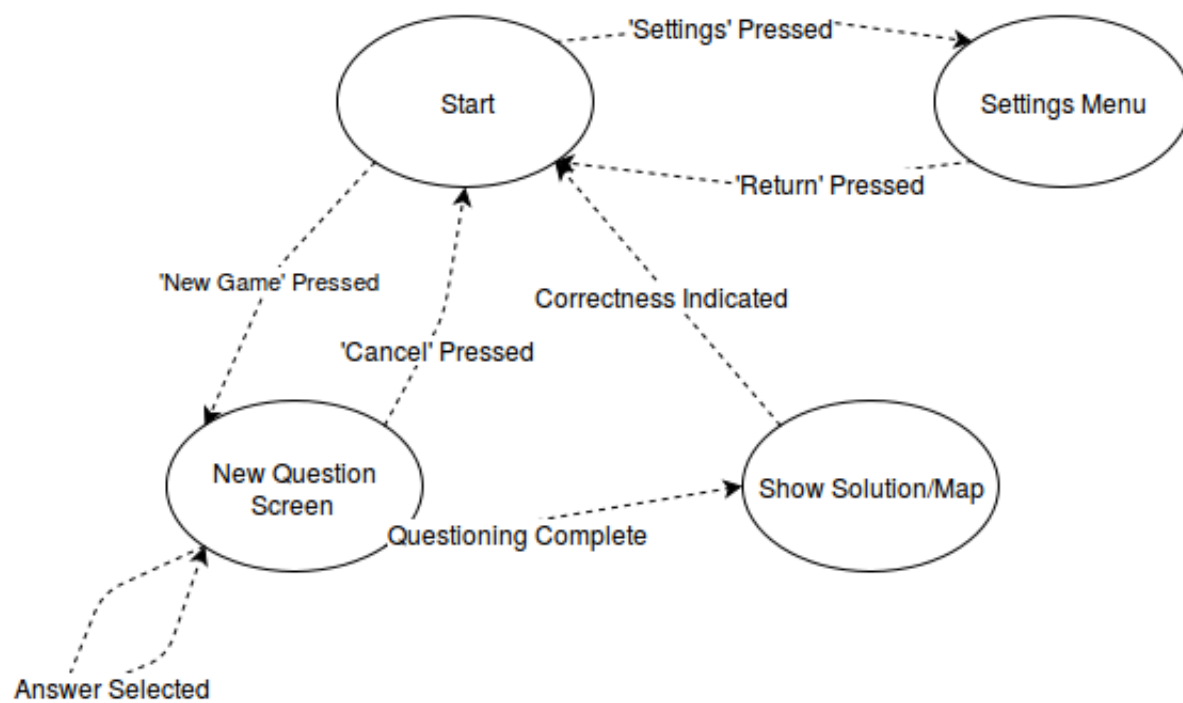


Figure 1: State chart for the GUI Controller class.

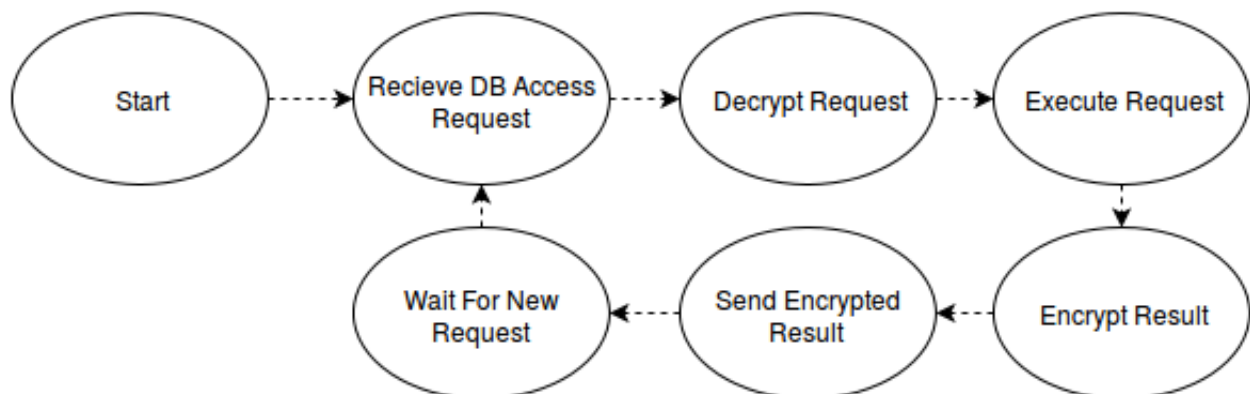


Figure 2: State chart for the Question Controller class.

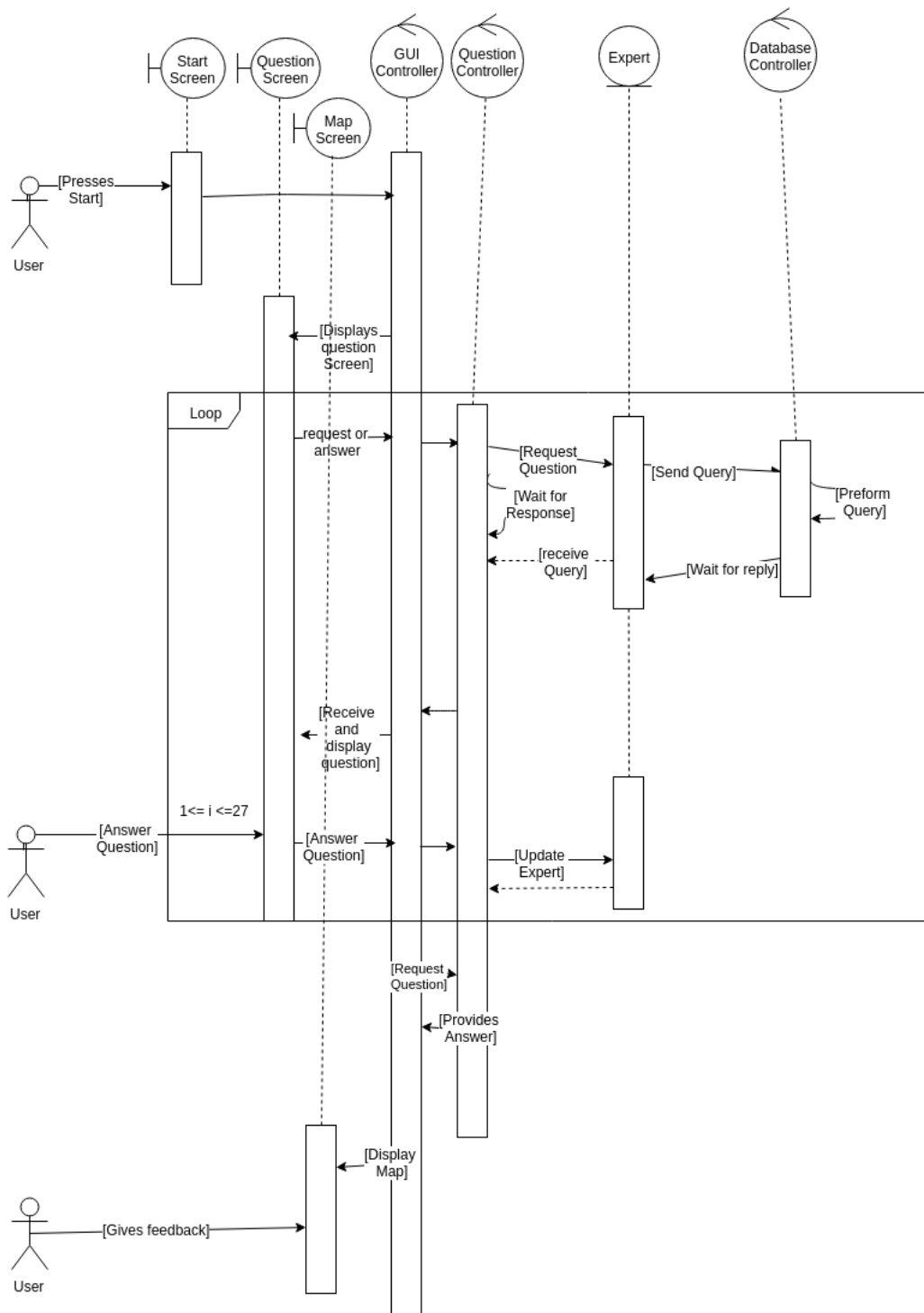


Figure 3: Sequence diagram for the primary use case.

A Division of Labour

Team Member	Contributions
Gabriel Lopez de Leon	Insert your contribution here.
Maxwell Moore	Insert your contribution here.
Curtis Milo	Insert your contribution here.
Alexandra Rahman	Completed Section 1; introduction. Contributed to a few sequence diagrams, the detailed class diagram, and all state chart diagrams. Made all necessary changes to Deliverable 2. In this case, changed the analysis class diagram, changed the use case diagrams and the scenarios related to them. Finally, changed the class responsibility collaboration cards to match the updated analysis class diagram.
Connor Sheehan	Collaborated on design of architecture. Generated state charts.

Table 1: Division of Labour

 Gabriel Lopez de Leon

 Date

 Curtis Milo

 Date

 Maxwell Moore

 Date

 Alexandra Rahman

 Date

 Connor Sheehan

 Date