



Exploring the Unconscious 2.0

School of Computing & Information Sciences

Fall 2018 Senior Design Project



Engineering & Computing

School of Computing & Information Sciences

Student: Lissett Munoz

Mentor: Dr. Mario Eraso, Florida International University

Instructor: Dr. Masoud Sadjadi, Florida International University



Problem

We all have personal questions, naturally we come up with possible answers to these questions. The struggle lies in deciding which answer best suits our question, the solution we seek is often locked within our unconscious mind. However, we are disconnected from their unconscious.

Current System

- Mark Mohr developed a mathematical algorithm, influenced by Carl Jung's works and the book I Ching, to explore the unconscious
- To connect people with their unconscious, we created an Android application that uses Mark Mohr's algorithm
- Version 1.0 used Java to turn Mark Mohr's algorithm into code

Requirements

- Android application that implements Mark Mohr's algorithm, by using the Java code
- The application accepts user input of one question and three answers
 - Supports alphabetical and time input
- Plays chimes, music, and narration that can be controlled by the user.
- Tutorial and about pages for users to understand the application
- Create a UI design that is inspired by Carl Jung's works and the book I Ching

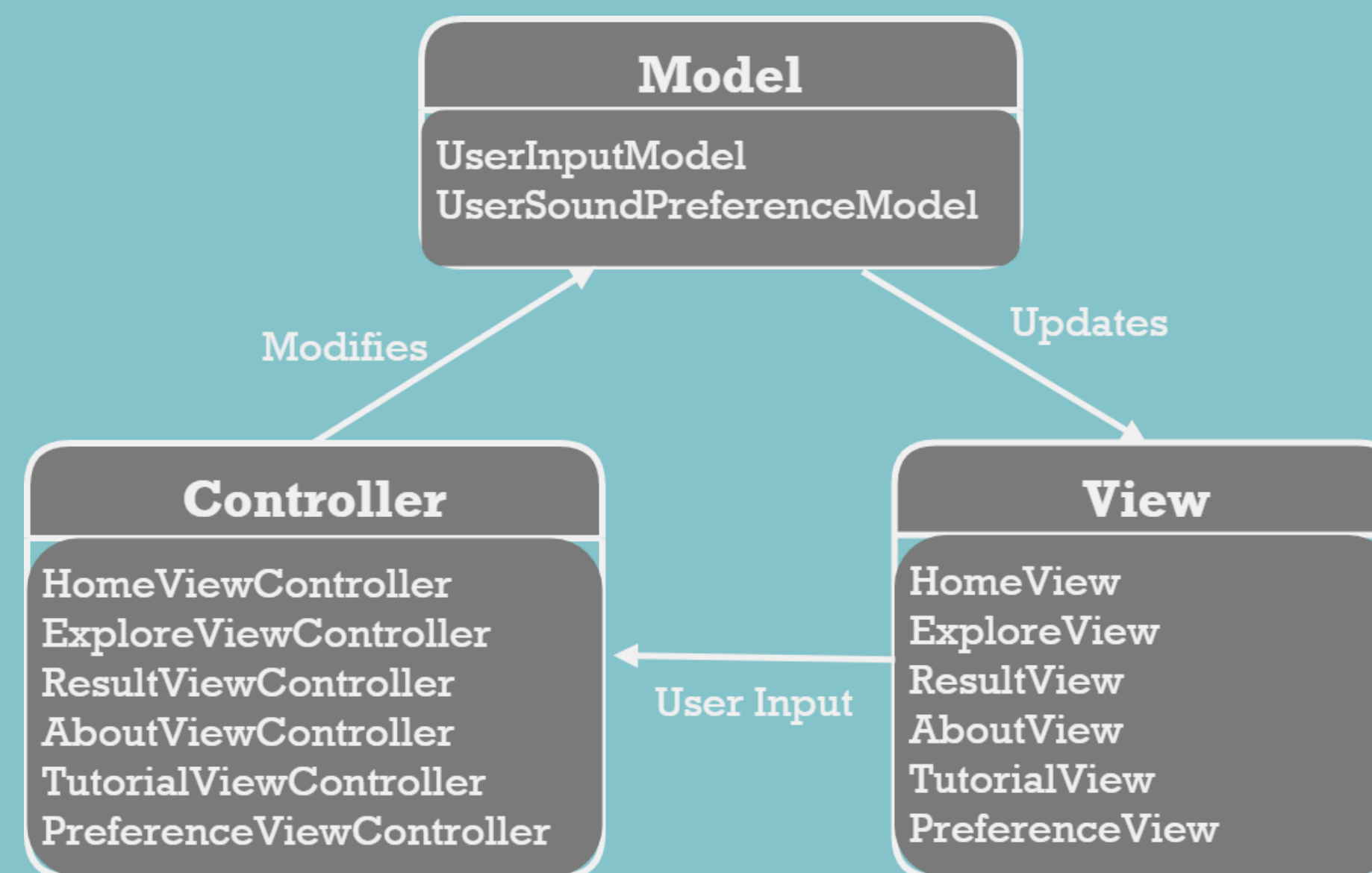
Implementation

- Android Framework:
 - Android Studio
 - Java
 - XML
- Git & Bitbucket
- Axure

Summary

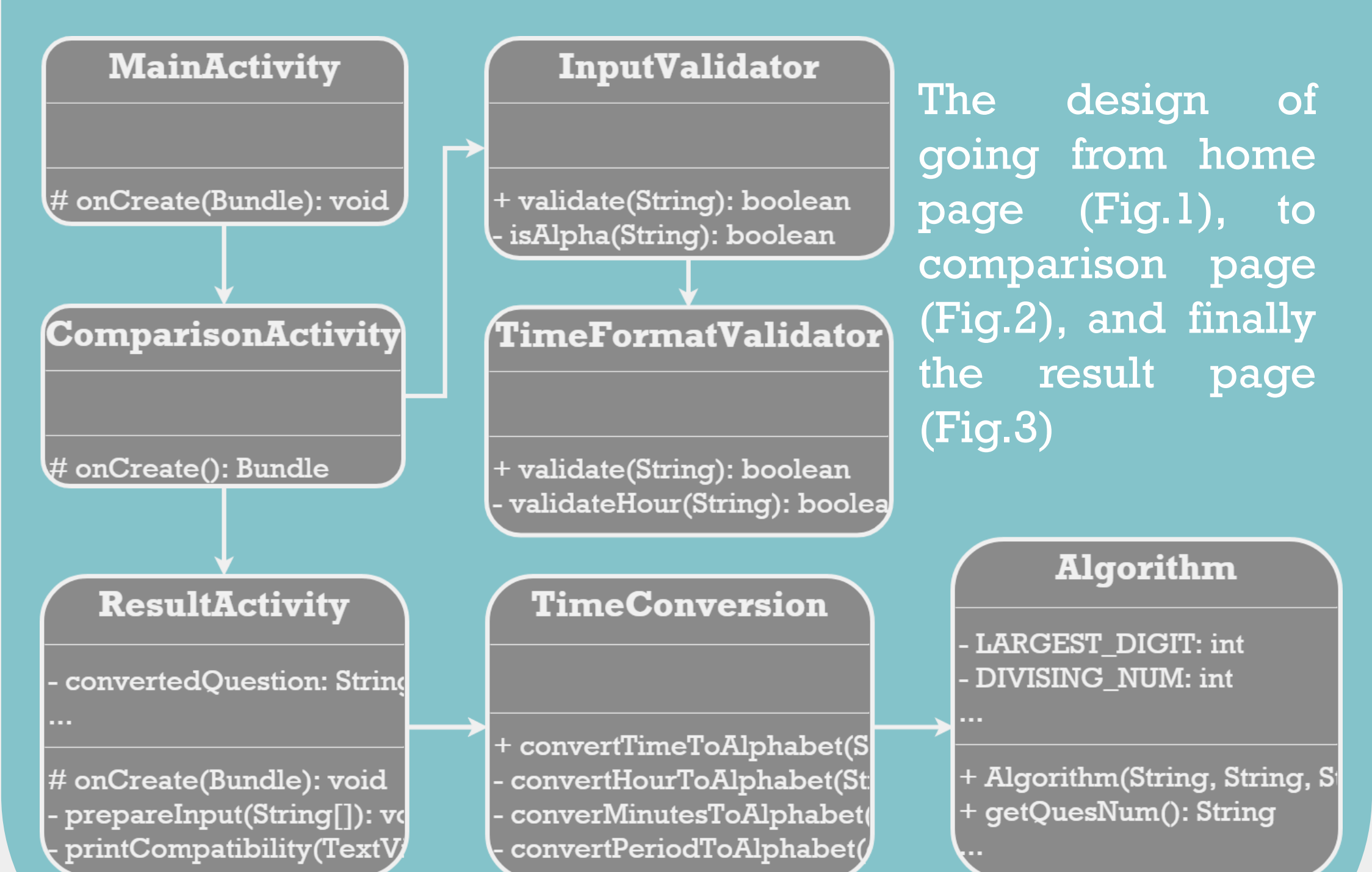
- We created an Android Application that uses Mark Mohr's algorithm.
- The application promotes mindfulness and helps users connect to their unconscious.

System Design



Architecture Pattern: MVC
The View and Controller is implemented, however Current version has no database

Object Design



The design of going from home page (Fig.1), to comparison page (Fig.2), and finally the result page (Fig.3)

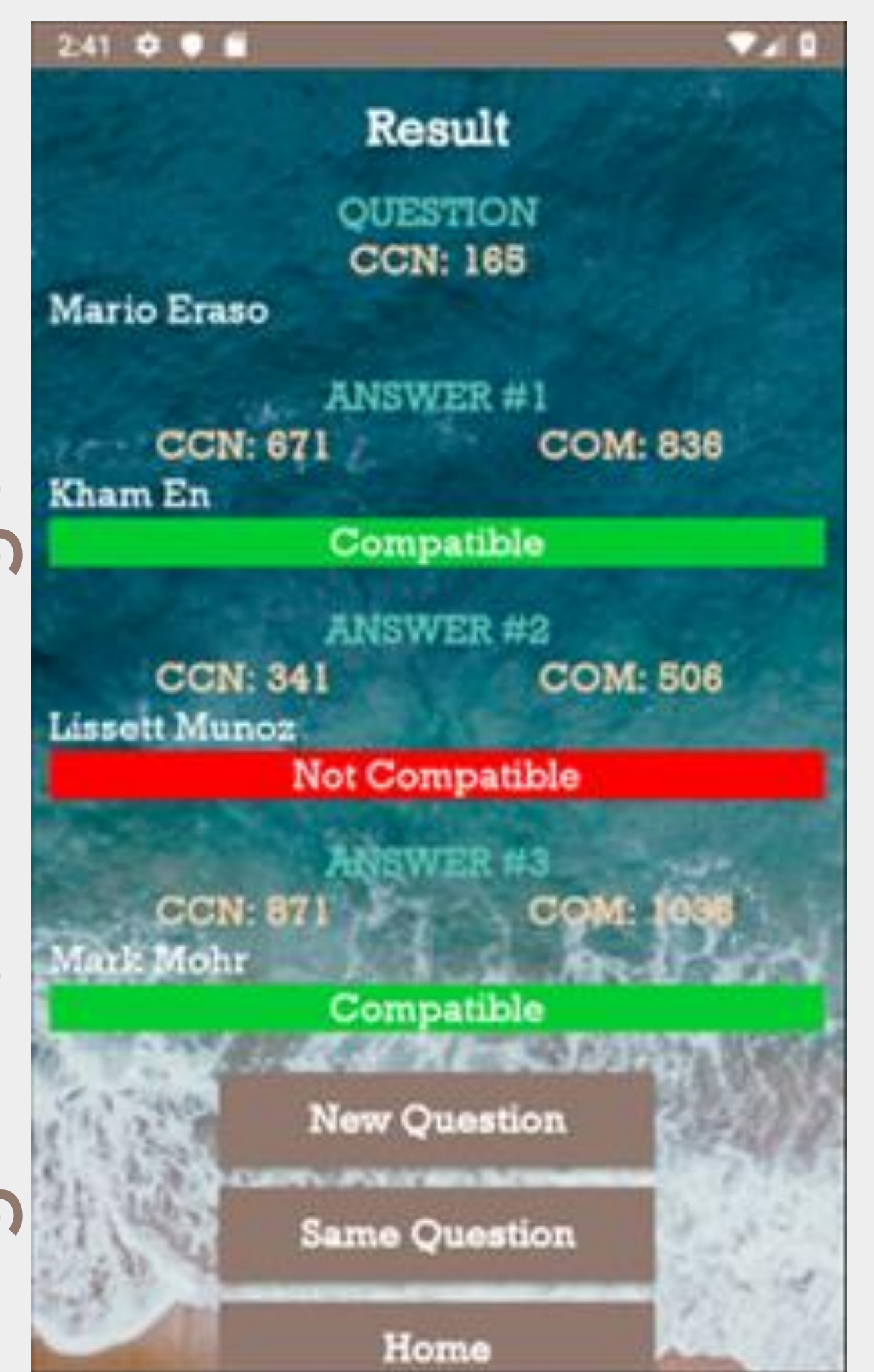
Fig1. Home Page



Fig2. Comparison Page



Fig3. Results Page



Verification

JUnit and manual testing were used to verify the system

```

AlgorithmTest (com.example.android.exploringtheunconscious)
  algorithm_NotCompatible_ReturnsFalse
  algorithm_CorrectComputeSum_ReturnsTrue
  algorithm_Compatible_ReturnsTrue
  algorithm_IsIncompatible_ReturnsFalse
  algorithm_IsCompatible_ReturnsTrue
  algorithm_IncorrectComputeSum_ReturnsFalse
  
```

```

Integration Test
Test case ID: 23
Description/Summary of Test:
  User is able to compare their inputs using the algorithm and see their results.
Expected Results:
  User is able to navigate from the home page to the results page.
  When user presses the Explore button on the home page they are taken to the Explore page.
  Users sees in Explore page:
  Inputs for a question, answer 1, answer 2, and answer 3.
  When invalid inputs are provided the user is given a message telling their input is invalid.
  Explore buttons that when pressed leads them to the results page when all inputs are provided with valid input.
  User sees on results page:
  Their input for the question, answer 1, answer 2, and answer 3 input in the results page.
  The calculated CCN for each of the inputs, displayed next to each of their respective inputs
  The calculated CCN for each answers compatibility with the questions, displayed next to each of the respective answers
  The phrase "Compatible" or "Not Compatible" next to each answer (this depending on the compatibility result).
  Button to ask a new question.
Actual Result: User is able to navigate from the home page to results page as long as they provide valid inputs for all of the fields in the Explore page.
Status (Fail/Pass): Pass
  
```

Individual Work

- Refactored Version 1.0 algorithm code to be integrated into an Android Application.
- Integrated the final UI design into the application.
- Wrote and implemented the verbiage for the tutorial and about pages.

Collaborative Work

- Created the UI design for the application
- Implemented the time conversion.

The material presented in this poster is based upon the work supported by Mark Mohr and Dr. Mario Eraso. Special thanks to my teammate Kham En for your contributions.