



# Exploring the Unconscious 2.0

## School of Computing & Information Sciences

### Fall 2018 Senior Design Project



Engineering & Computing

School of Computing & Information Sciences

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## 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

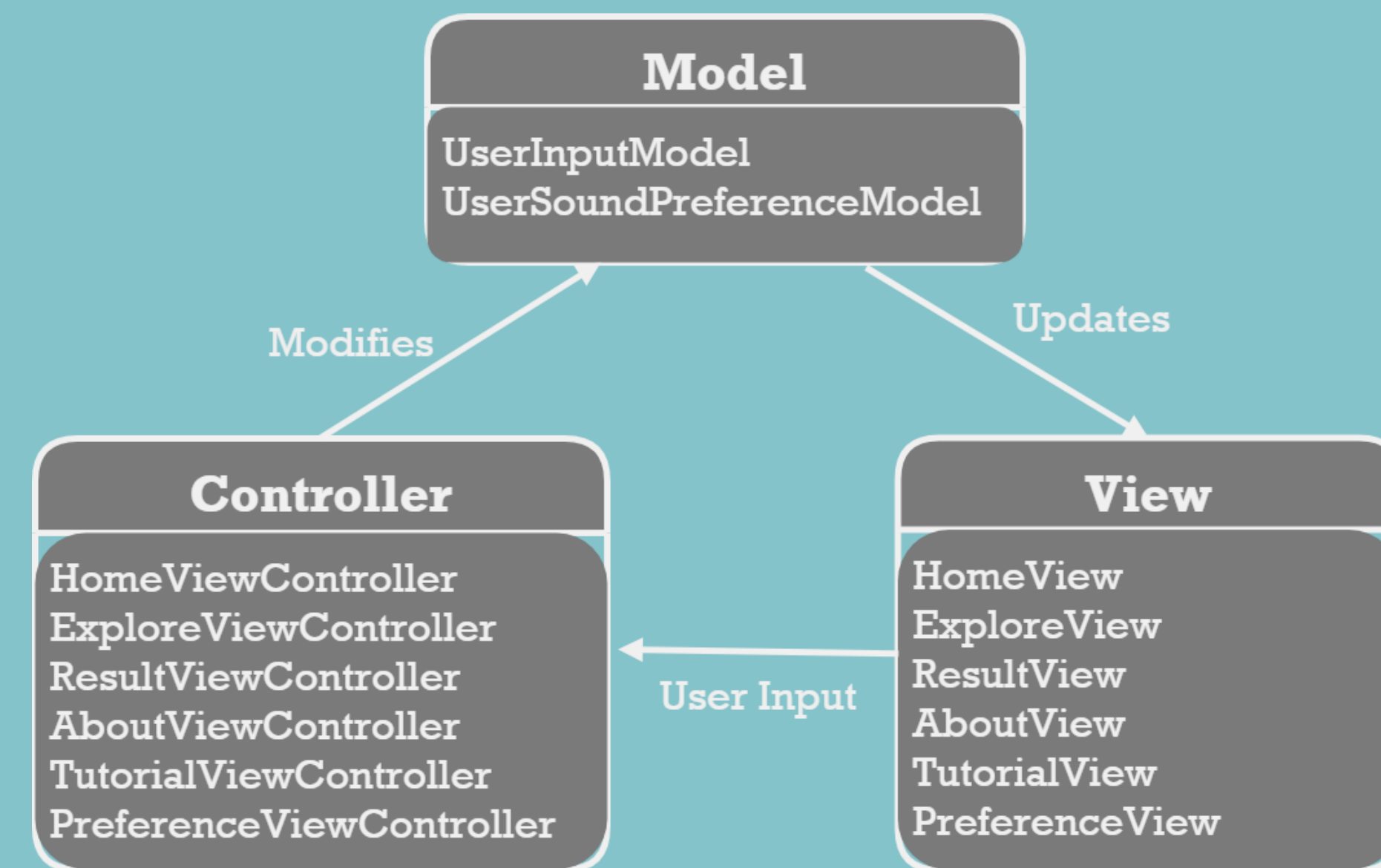
## Implementation

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

## Summary

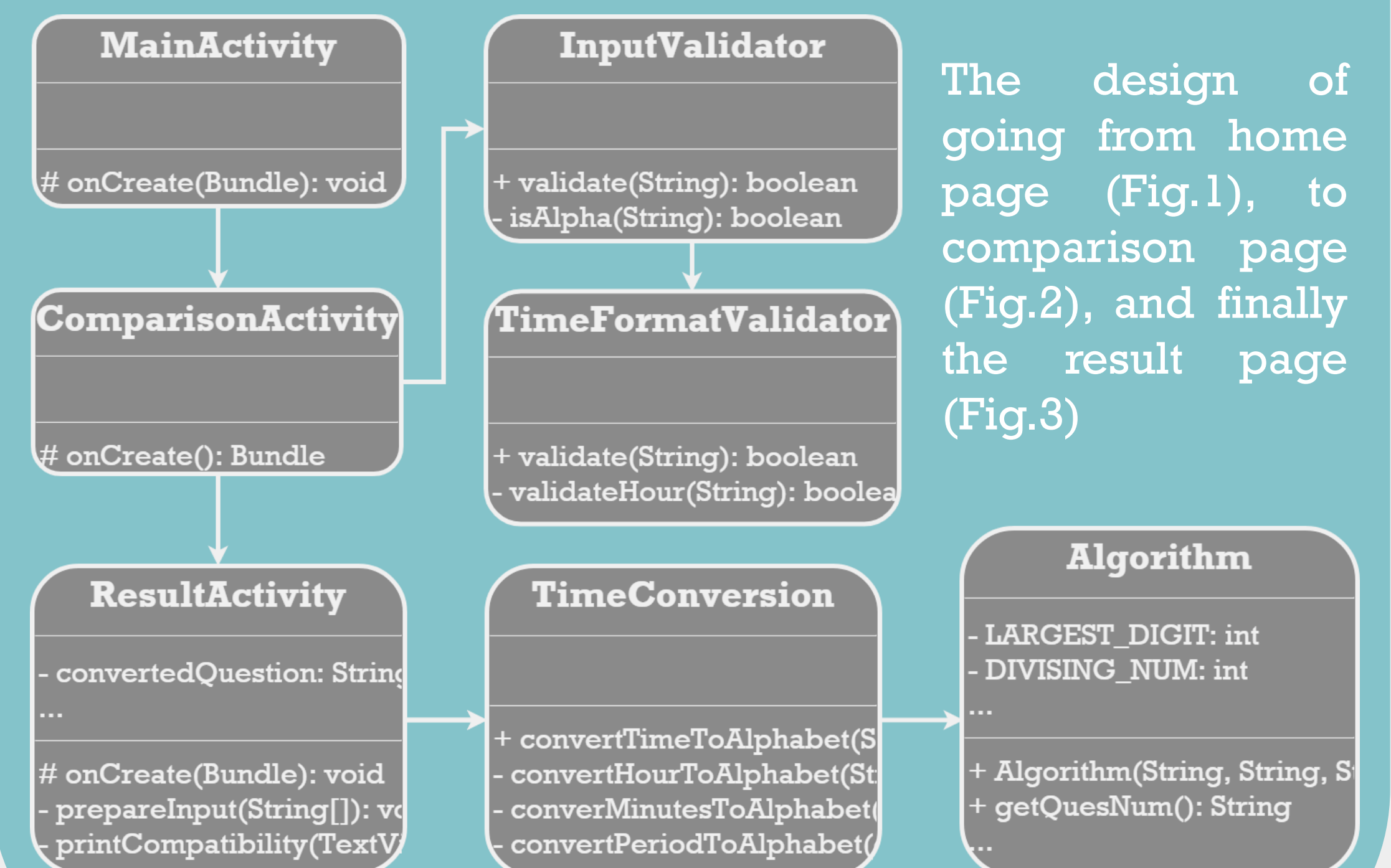
- We created an Android Application that uses Mark Mohr's algorithm.
- The application promotes mindfulness and helps users connect to their unconscious.

## 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)

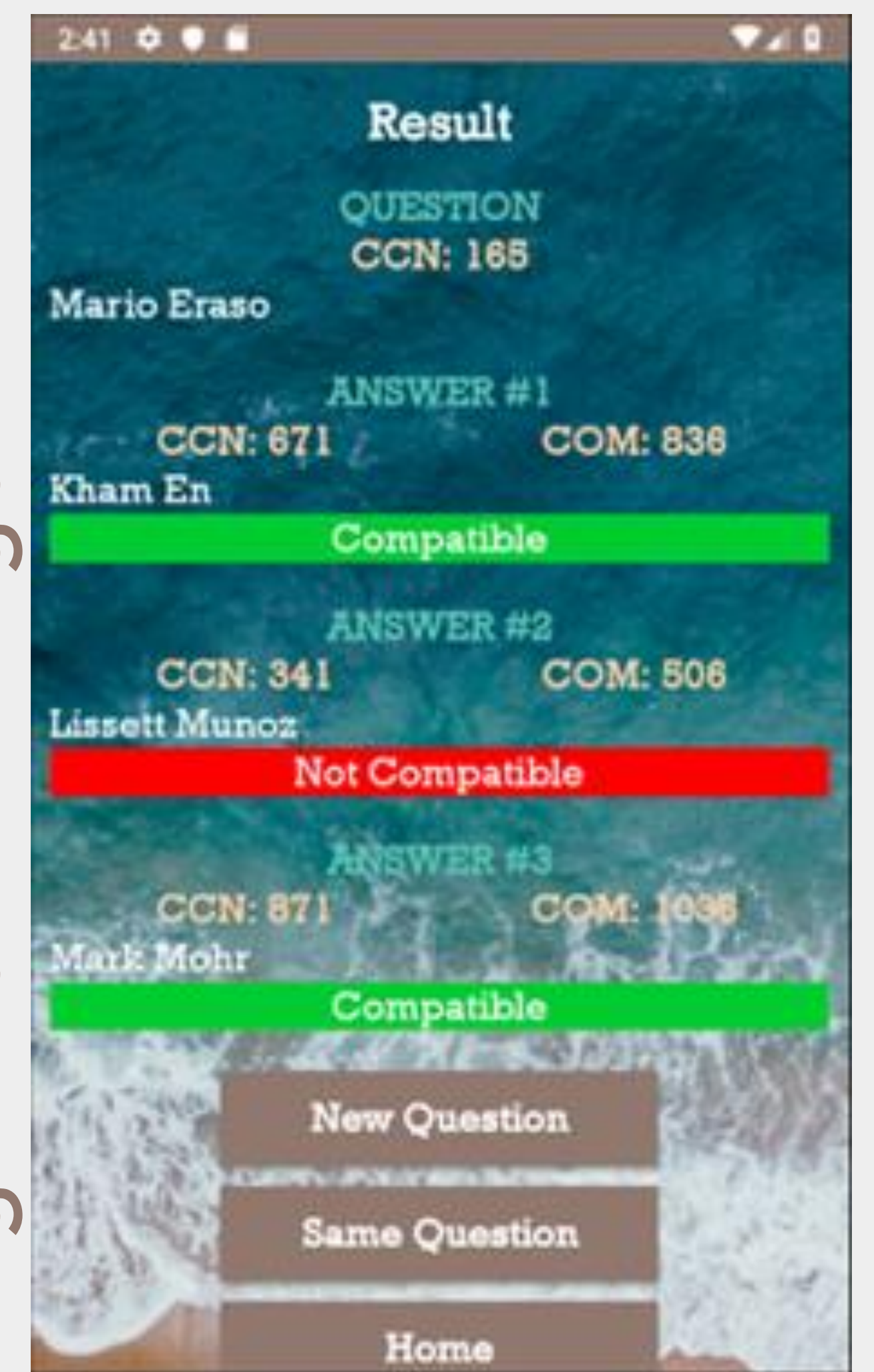
Fig1. Home Page



Fig2. Comparison Page



Fig3. Results Page



## Verification

JUnit and manual testing were used to verify the system

```

    InputValidatorTest (com.example.android.exploringtheunconscious)
    ✓ inputValidator_NotAlpha_ReturnsFalse
    ✓ inputValidator_CorrectInput_ReturnsTrue
    ✓ inputValidator_NumbersNotTime_ReturnsFalse
    ✓ inputValidator_IsAlpha_ReturnsTrue
    ✓ inputValidator_IncorrectInputSymbols_ReturnsFalse
  
```

**Description/Summary of Test:**

- On the explore page enter into the question, answer 1, answer 2, and answer 3 field a incorrectly formatted time value.
- Input that contains properly formatted time.
- This input can also have valid alphabetical input mixed in the input as well
  - i.e. Go to the gym at 16:33pm
  - i.e. Go to the gym at 3:65pm
  - i.e. Go to the gym at 2:25im
- Once everything has been entered, click the "Compare" button and this will take the user to the Results page.

**Expected Results:** When the user enters invalid input and click the "Compare" button it keeps the user on the Explore page.

**Actual Result:** The user is kept on the Compare page when they click the "Compare" button, after entering invalid input into the Question, Answer 1, Answer 2, and Answer 3 fields.

Status (Fail/Pass): Pass

## Individual Work

- Created the shell for the Android application and integrated the algorithm code.
- Implemented the sounds and sound preferences.
- Implemented the input validation and error handling

## 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 Lissett Munoz for your contributions.