Design Document

Version 1.0 | 02 June 2020

# 1 Introduction

Skywide Logic intends to design an application where the workforce development component will use a tree branch approach to asking questions. When a user answers a question, the next question that comes should be based on the answer that was given previously. Users at the end should be able to decide whether the quiz accurately reflects their personalities, skills, and interests and make a response. The end results will determine career paths that would fit them best, skills and attributes that they currently have and those that they should focus on. These career paths would be based on the personalities of those that work in those career paths.

1.1 Purpose

Most quizzes that determine personality types and career paths are often restrictive and usually reflect the creators of the quiz more, than the people who are taking the quiz. By having a less restrictive approach to questions, and to branch off based on user choices, we can obtain a greater accuracy with quiz results. Further, most quizzes of this nature are boring to take, where the individual isn’t incentivized to keep answering questions, nor to build a stronger more thorough profile of themselves.

1.2 Background

The quiz system on display in this document is inspired by the Myers-Briggs system of personality types. One of the key issues of Myers-Briggs is that it was crafted by a mother-daughter team born before 1900 and our hypothesis is that it is quite outdated. Since Myers-Briggs is the backbone of the personality quiz industry, other assessments such as DISC sprung out from it. Ideally, the quizzes we present will supplement the already existing quiz and improve upon its faults.

1.3 Scope

The starting point of this project is to create 10-20 scenario-based quizzes to identify personality traits. The scenario quiz will present an image or video and ask quick questions about what the person would do, how they would act, or think in a given scenario. The quiz will also ask them if they know their Myers-Briggs type, which will be the baseline.

1.4 Methodology

To determine the best career path for given users, a csv file containing the personalities of those with a particular field will be used. To create the csv files, Pandas will be used to convert the csv files into a dataframe, and after being used, converted back into a csv file. The Unity engine will be used to create the interactive quiz component of this project.

# 2 Scenarios

People often have difficulty deciding what career path would best suit them, and many quizzes that exist do not build themselves around the user’s choices, and will often repeat itself when attempting to determine a user’s personality. This quiz will help users not only find a career choice that fits them, but to learn more about their own personality. At the end of the quiz, a list will be displayed of matches for their personality with career fields that contain people with the same personality that they have.

# 3 System Design

There are several tools that are used in congruence with this project.

3.1 Pandas

Pandas is a common data science tool used by data scientists to create dataframes from sources such as csv files. With the dataframe, multiple options provided by Pandas can be performed on the dataframe, including converting the dataframe into an array.

3.2 Unity

Unity is an engine that contains tools for developing games. While this is the common use of the engine, it can also be used for other purposes. In our case, we are only using the engine to produce a quiz app.

# 4 Design in Detail

# 5 User Interface

# 6 Non-Functional Requirements

# 7 Explanation of Testing Used

# 8 Deliverables

1. Retrieve data from different career paths and use it to create a predictive model to determine what personalities often choose said career path.

a. For this part, Python with Pandas imported can convert csv files into a dataframe that can then be used to create a predictive model with Keras.

b. If a csv file cannot be found, a program can be created to insert data into a table to manually create a csv with the required information.

c. There will need to be (insert number here) cases in order to have an accurate predictive model.

2. Create a large csv file that contains personality types that often correspond to certain career options.

a. This part will use the previous information found

b.

3. Use the csv file in correspondence with an application that asks questions that branch off into other questions that are relevant to that user.