**C++ Final Project Documentation**

**Fortune Teller**

* Note: To get the source code converted and functioning properly, we first analyzed the existing C++ logic to ensure a smooth translation of key functionalities. We identified differences in syntax, data handling, and structure between the languages, adjusting variables, loops, and conditionals accordingly. Through teamwork and careful troubleshooting, we transformed the project into a functional and dynamic experience.

1. The web source where the code is located
   1. Web source code location:
   2. https://www.codewithc.com/fortune-teller-project-c/#google\_vignette
2. Explanation of each block of code
   1. House Keeping: #Includes & Using namespace std;
      1. This part of the code includes libraries that the program needs to work.
         1. iostream is for printing to the screen and taking input.
         2. vector is for using lists of items (like zodiac signs).
         3. string is for working with text.
         4. cstdlib and ctime are for generating random numbers.
         5. algorithm is for using helpful functions like find to search in lists.
         6. using namespace std makes it easier to write code without typing std:: everywhere.
   2. Horoscope Class Declaration **(From Source Code)**
      1. This starts the definition of a class called Horoscope. A class is like a blueprint for creating objects that can store data and perform actions.
         1. Private section
         2. Public Section & bool functions
         3. Constructor
         4. isValidSign Function
         5. isValidDate Function
         6. setSign Function
         7. setDate Function
         8. displayHoroscope Function
   3. Daily Affirmations Function
      1. Vector affirmations
      2. Function to display random affirmations
   4. Zodiac Taglines Function
      1. Function to display zodiac taglines
      2. Array of zodiac taglines
   5. Zodiac Advice Function
      1. Vector zodiac signs
      2. While loop input validation
      3. if, else if, else
         1. advice
   6. Energy level Function
      1. isLevel Function
      2. energyLevel Function
      3. While loop input validation
      4. if, else if, & else statements
         1. self-care ideas for energy level
      5. return entry returns the variable so it can be used elsewhere in the program
   7. Main
      1. Sets up horoscope class
      2. Do menu loop
      3. User input switch statement
         1. Cases
            1. Executes chosen function (&,||) exits
            2. default – input validation
      4. Program ends
3. What changes you made to the existing code
   1. **Bri** – Zodiac Tagline
      1. This code acts as a zodiac tagline section. This code asks the user their zodiac sign, then displays a tagline that describes each zodiacs’ characteristics.
   2. **Noah** – Zodiac Related Advice
      1. This code acts as a zodiac advice section. This code will ask for the user’s zodiac sign, then display an advice message based on the related zodiac sign.
   3. **Tylyn** – Daily Affirmations
      1. This code acts as an added daily affirmation section. This code displays a randomized affirmation along with a reminder that you are enough.
   4. **Nicole** – Energy Level
      1. This code acts as an energy check in section. This code asks the user their energy level, then displays a recommended self-care task based on the selection of energy level made.