**Name: Session:**

**Programming I**

**Lab Exercise 1.3.2022**

1. Write a program that plays the game of Fermi. Generate three **distinct** random digits from 1 to 9. These digits are assigned to positions 1, 2, and 3. The goal of the game is for the player to guess the digits in the three positions in the least number of tries. For each guess, the player provides three digits for position 1, 2, and 3. The program replies with a hint consisting of Fermi, Pico, and Nano. If the digit guess for a given position is correct, then the reply is Fermi. If the digit guessed for a given position is in a different position, then the reply is Pico. If the digit guessed for a given position does not match any of the three digits, then the reply is Nano. Here is an example. If the three digits are 6, 5, and 8 at positions 1, 2, and 3 respectively.

|  |  |  |
| --- | --- | --- |
| Guess | Hint | Explanation |
| 1 2 5 | Nano Nano Pico | The value 5 matches at the wrong position |
| 8 5 3 | Pico Fermi Nano | The value 5 matches at the correct position. The 8 value matches but at the wrong position |
| 5 8 6 | Pico Pico Pico | All values match but at the wrong position |

Play games repeatedly until the player wants to quit. After each game, display the number of guesses made.

When your game is working, print out your documented source code and a sample printout of a game you played. Attach your source code and output to this sheet and turn in.