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CS 1A

Fall 2017 Foothill

Assignment 4

When the user starts the game, welcome messages and instructions are displayed via the welcome() method. Then a while-loop checks if the user has already guessed 5 times, and if not, it will ask the user to enter a new guess. If the guess matches the secret number, the game ends; and if it doesn’t match, the game will display a message stating so, followed by a hint, and numbers previously guessed by the user. The game keeps going until either the user guesses the correct number or the 5 guesses run out and the user is asked whether they would like to play a new game or not. If they choose to enter “1”, the game replays and a new secret number is generated for them to guess again.

To reliably win, it is a good idea to guess either 7 or 8 first. The program will give a hint that tells whether the secret number is smaller or larger than the guess, which will eliminate half of the possibilities. The guesses afterwards should also aim to eliminate half of the rest of the possibilities by guessing numbers in the middle of the numbers left. For example, if 7 is guessed first and the hint states that the secret number is smaller than 7, 3 would be a good second guess because it eliminates 3 more choices. Then guess either 1 or 4 based on the second hint and if none of the previous guesses were correct, there should be only one choice left.