Game: Hacking Game

Version:V3

Description

When the game starts, a 800 pixels wide by 800 pixels high window and with the title , instructions are displayed, explaining how the game works. Words are then displayed in ALL CAPS. Each are on separate lines. The user is then prompted for their guess at the

password, number of guesses remaining displayed. If the word is correct, a congratulation message is displayed. If the number of guesses now equals 0 and the guess is incorrect, there is a condolence message displayed. **If the user still has more guesses, the program checks to see if any letters are correct, and in the correct location, and displays the number of correct letters. It also displays a message saying the attempt failed** The program then prompts the user to try again, until the user is out of guesses. When the game is over, a prompt for the enter key to end the game is displayed in the bottom left corner. When pressed, the window closes and the game ends. (All other writing starts in the top left, and goes down. No words are erased, and neither are the previous guesses. All text is 24pt font. White text on a black background.)

**Functional Tests**

1. **Start the program**
   1. **Does the game window open?**
   2. **Does the game display instructions, followed by the possible passwords?**
   3. **Does the game prompt for a guess, and tell the user how many guesses remain?**
2. **Enter a word**
   1. **Does the game compute the number of correct letters, and display it?**
   2. **Does the game prompt for a guess, and tell the user how many guesses remain?**
   3. **Does the game repeat step 2 until the user is out of guesses?**
3. **Enter a fully correct answer**
   1. **Does the game display a congratulations message?**
   2. **Does the game prompt for the enter key to close the window?**
   3. **Does the window close?**
4. **Enter incorrect answer**
   1. **Does program display that the password is incorrect?**
   2. **Does the program display the number of correct letters**
   3. **D**
5. **Enter 4 incorrect answers**
   1. **Does the game display a condolence message?**
   2. **Does the game prompt for the enter key to close the window?**
   3. **Does the window close?**

* **List of input cases to test**
  + **“HUNTING” response means "HUNTING" not "hunting" or "HUNT" etc.**
  + **Non-”HUNTING” response does not means"HUNTING etc.**
* **List of incorrect inputs**
  + **Your input is not a word: does the program crash?**
  + **Your input is lowercase, but the correct letters: does the program return it as being correct?**
  + **Are you allowed to enter more than 4 guesses?**

Algorithm

main program

**create window (U)**

**Display instructions(U)**

**Display words(U)**

**Prompt for guess(U)**

**Check # of correct letters(U)**

**Display result(U)**

Prompt for enter(L)

**end game (U)**

**function create window (in:dne out:surface)**

initialize graphics library (L)

open window with title 'Window title', with size 500 by 400 (L)

Fill background with black(L)

**function Display instructions(in:surface, location out:location)**

Create an instruction list

Get string height

Compute initial location

For each instruction in instruction list

Display the instruction

Increment the y position by the string height

**function Display words(in:surface, location out:location)**

Create an word list

Get string height

Compute initial location

For each word in word list

Display the word

Increment the y position by the string height

**Function Prompt for guess (in:surface, numGuesses, location out:guess)**

**Prompt for a word(L)**

**Return the word(L)**

**function Check answer(in:surface, location out:correctLetters == len(answer) [a comparison that returns True or False])**

**while the player has more guesses**

**#correctletters=0**

**Prompt for guess(U)**

**For each letter in the guess**

**If the letter in the guess = the letter(at the same position) in the answer**

**#correctletters + 1**

**Else**

**(Do nothing)**

**If all the letters are correct (#correctletters = 7)**

**No more guesses, because they’ve won**

**Else**

**Prompt for new guess(U)**

**Display #correctletters**

**Decrease the number of guesses remaining**

**Display result(U)**

**function display result (in:surface, location, win out:dne)**

If answer is correct

Display congratulations(L)

Else

Display condolence(L)

**function end game(in:dne out:dne)**

close window (L)