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PSNA COLLAGE OF ENGINEERING AND TECHNOLOGY

BE- ECE (2nd year)

"***This project is a Hangman game developed in Python as part of the CodeAlpha platform tasks***."

PROGRAM

```
import random
import string
WORDS = [
    "python", "hangman", "programming", "developer", "challenge",
    "function", "variable", "iteration", "keyboard", "algorithm"
]
HANGMAN_STAGES = [
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    =========""",
    """
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     O   |
         |
         |
         |
    =========""",
    """
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 O   |
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 +---+
 |   |
 O   |
/|   |
     |
     |
=========""",
"""
 +---+
 |   |
 O   |
/|\\  |
     |
     |
=========""",
"""
 +---+
 |   |
 O   |
/|\\  |
/    |
```

```
    |
  =========""",
  """
   +---+
   |  |
   O  |
  /|\\ |
  / \\ |
    |
  =========""",
  """
   +---+
   |  |
   O  |
  /|\\ |
  / \\ |
    |
  ========="""
]

def choose_word():
  """Pick a random word."""
  return random.choice(WORDS)

def display_state(secret_word, guessed_letters, wrong_guesses):
  """Show current hangman, word, and guesses."""
  print(HANGMAN_STAGES[min(wrong_guesses, len(HANGMAN_STAGES) - 1)])
  masked = " ".join(c if c in guessed_letters else "_" for c in secret_word)
  print("\nWord:", masked)
  print("Guessed letters:", " ".join(sorted(guessed_letters)))
  print(f"Wrong guesses: {wrong_guesses}\n")

def get_guess(already_guessed):
  """Ask the player for a valid guess."""
  while True:
    guess = input("Enter a letter: ").lower().strip()
    if len(guess) != 1:
```

```
            print("Enter exactly one letter.")
            continue
        if guess not in string.ascii_lowercase:
            print("Use letters only (a-z).")
            continue
        if guess in already_guessed:
            print("You already guessed that letter.")
            continue
        return guess

def play_round():
    secret = choose_word()
    guessed_letters = set()
    wrong_guesses = 0
    max_wrong = len(HANGMAN_STAGES) - 1

    print("\nLet's play Hangman!\n")
    while True:
        display_state(secret, guessed_letters, wrong_guesses)

        if all(ch in guessed_letters for ch in secret):
            print("You guessed the word:", secret)
            break

        if wrong_guesses >= max_wrong:
            print("Game over. The word was:", secret)
            break

        guess = get_guess(guessed_letters)
```

```
        guessed_letters.add(guess)

        if guess in secret:
            print(f"Good guess: '{guess}' is in the word.\n")
        else:
            print(f"Wrong guess: '{guess}' is not in the word.\n")
            wrong_guesses += 1

def main():
    print("HANGMAN GAME (Python)\n")
    while True:
        play_round()
        again = input("\nPlay again? (y/n): ").lower().strip()
        if again != "y":
            print("Thanks for playing!")
            break

if __name__ == "__main__":
    main()
```

OUTPUT

✅ Winning Example — Word: python

```
HANGMAN GAME (Python)



Let's play Hangman!

    +---+
    |   |
```

```
      |
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  =========
```

Word: _ _ _ _ _ _

Guessed letters:

Wrong guesses: 0

Enter a letter: p

Good guess: 'p' is in the word.

```
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  =========
```

Word: p _ _ _ _ _

Guessed letters: p

Wrong guesses: 0

Enter a letter: y

Good guess: 'y' is in the word.

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```

Word: p y _ _ _ _

Guessed letters: p y

Wrong guesses: 0

Enter a letter: t

Good guess: 't' is in the word.

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```

Word: p y t _ _ _

Guessed letters: p t y

Wrong guesses: 0

Enter a letter: h

Good guess: 'h' is in the word.

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```

Word: p y t h _ _

Guessed letters: h p t y

Wrong guesses: 0

Enter a letter: o

Good guess: 'o' is in the word.

```
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=========
```

Word: p y t h o _

Guessed letters: h o p t y

Wrong guesses: 0

Enter a letter: n

Good guess: 'n' is in the word.

You guessed the word: python

Play again? (y/n): n

Thanks for playing!

❌ Losing Example — Word: function

HANGMAN GAME (Python)

Let's play Hangman!

```
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=========
```

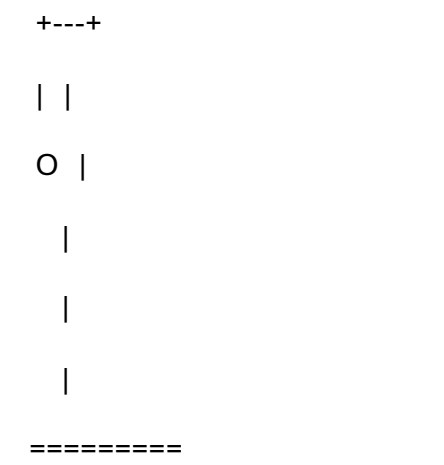
Word: _ _ _ _ _ _ _ _

Guessed letters:

Wrong guesses: 0

Enter a letter: a

Wrong guess: 'a' is not in the word.



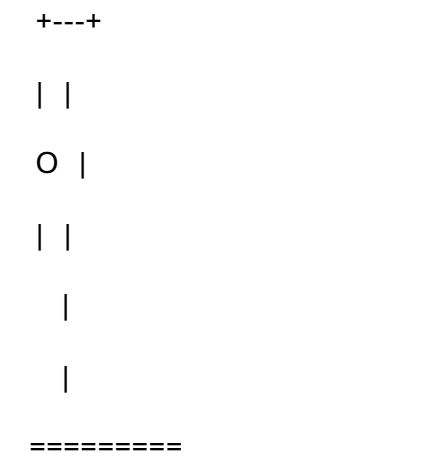
Word: _ _ _ _ _ _ _ _

Guessed letters: a

Wrong guesses: 1

Enter a letter: e

Wrong guess: 'e' is not in the word.



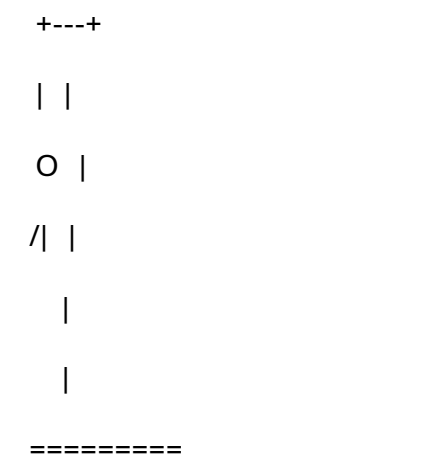
Word: _ _ _ _ _ _ _ _

Guessed letters: a e

Wrong guesses: 2

Enter a letter: s

Wrong guess: 's' is not in the word.



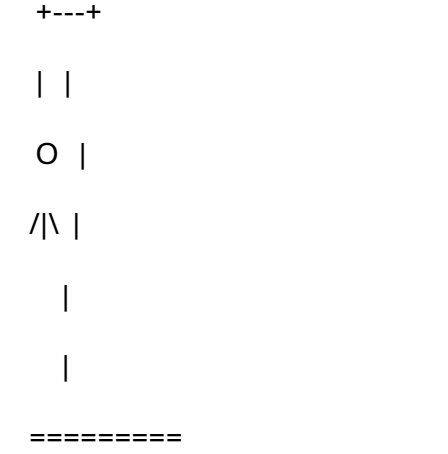
Word: _ _ _ _ _ _ _ _

Guessed letters: a e s

Wrong guesses: 3

Enter a letter: r

Wrong guess: 'r' is not in the word.



Word: _ _ _ _ _ _ _ _

Guessed letters: a e r s

Wrong guesses: 4

Enter a letter: d

Wrong guess: 'd' is not in the word.

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```

Word: _ _ _ _ _ _ _ _

Guessed letters: a d e r s

Wrong guesses: 5

Enter a letter: l

Wrong guess: 'l' is not in the word.

```
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 /|\  |
 / \  |
      |
=========
```

Word: _ _ _ _ _ _ _ _

Guessed letters: a d e l r s

Wrong guesses: 6

Game over. The word was: function

Play again? (y/n): n

Thanks for playing!