

NAME : THILSHANTH N

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 = [
```

```
    """
```

```
    +---+
```

```
    | |
```

```
    |
```

```
    |
```

```
    |
```

```
    |
```

```
    =====",
```

```
    """
```

```
    +---+
```

```
    | |
```

```
    O |
```

```
    |
```

```
    |
```

```
    |
```

```
    =====",
```

```
    """
```

+---+

| |

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!

+---+

| |

|

|

|

|

=====

Word: _ _ _ _ _

Guessed letters:

Wrong guesses: 0

Enter a letter: p

Good guess: 'p' is in the word.

+---+

| |

|

|

|

|

=====

Word: p _ _ _ _

Guessed letters: p

Wrong guesses: 0

Enter a letter: y

Good guess: 'y' is in the word.

+---+

| |

|

|

|

|

=====

Word: p y _ _ _ _
Guessed letters: p y
Wrong guesses: 0

Enter a letter: t
Good guess: 't' is in the word.

+---+

| |

|

|

|

|

=====

Word: p y t _ _ _
Guessed letters: p t y
Wrong guesses: 0

Enter a letter: h
Good guess: 'h' is in the word.

+---+

| |

|

|

|

|

=====

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.

+---+

| |

|

|

|

|

=====

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!

+---+

| |

|

|

|

|

=====

Word: _ _ _ _ _

Guessed letters:

Wrong guesses: 0

Enter a letter: a

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

+---+

| |

O |

|

|

|

=====

Word: _____

Guessed letters: a

Wrong guesses: 1

Enter a letter: e

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

+---+

| |

O |

| |

|

|

=====

Word: _____

Guessed letters: a e

Wrong guesses: 2

Enter a letter: s

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

+---+
| |
O |
/| |
|
|
=====

Word: _____

Guessed letters: a e s

Wrong guesses: 3

Enter a letter: r

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

+---+
| |
O |
/\ |
|
|
=====

Word: _____

Guessed letters: a e r s

Wrong guesses: 4

Enter a letter: d

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

+---+
| |
O |
/\ |
/ |
|
=====

Word: _____

Guessed letters: a d e r s

Wrong guesses: 5

Enter a letter: l

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

+---+
| |
O |
/\ |
/\ |
|
=====

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!