

## Documentation

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### 1. Project Overview

The Hangman project is a simple word-guessing game implemented in Python. In this game, a player tries to guess a randomly chosen word by suggesting letters or the entire word within a limited number of attempts.

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### 2. Project Structure

- **hangman.py** - The main script that runs the Hangman game.
  - **words.py** - A module that contains a list of words from which a random word will be chosen for the game.
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### 3. Code Explanation

#### **get\_valid\_word()**

This function selects a random word from the word list provided in the words.py file. The word is returned in uppercase for uniformity during comparison in the game.

#### **play(word)**

This function handles the core game logic. It:

- Initializes variables for tracking the game state (word completion, guessed letters/words, tries left).
- Asks the player for their name and welcomes them.
- Runs a loop where the player can guess letters or the entire word until they either win or run out of tries.
- Updates the game state based on the player's guesses and displays the current hangman figure and the guessed portion of the word.

#### **display\_hangman(tries)**

This function returns a string representing the current state of the hangman figure based on how many incorrect guesses the player has made.

#### **main()**

The main() function starts the game by calling get\_valid\_word() and play(). After the game ends, the player is asked if they want to play again.

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### 4. How to Run the Code

1. Clone the repository to your local machine:

git clone <repository-url>

2. Ensure you have Python 3 installed.
3. The words.py file must include a list named word\_list, which contains the words for the game:

```
word_list = ["python", "hangman", "random", "coding", "programming"]
```

4. Run the script using:

```
python hangman.py
```

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## 5. Requirements

- Python 3.x
- words.py file with a list of words.

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## 6. Features

- Random word selection from the provided word list.
- Option for players to guess letters or entire words.
- Hangman figure updates with every wrong guess.
- Ability to replay the game after a win or loss.

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## 7. Example Run

What is your name? John

Hello John! Let's Play Hangman!

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Please guess a letter or word: P

Good job! P is in the word!

P \_ \_ \_ \_ \_

...

Sorry, you ran out of tries. The word was PROGRAMMING.



The screenshot shows the Visual Studio Code editor with the file `hangman.py` open. The code defines two functions: `get_valid_word()` and `play(word)`. The `play` function prompts the user for their name and then asks them to guess a letter or word. The terminal output shows the user has entered 'p' and the program responds with 'Good job! P is in the word!'. The hangman figure is represented by a dashed outline of a person.

```
1 import random
2
3 from words import word_list # imported from words.py file
4
5 def get_valid_word():
6     word = random.choice(word_list) #randomly chooses something from the list
7     return word.upper()
8
9 def play(word):
10     word_complete = "_" * len(word)
11     guessed = False
12     guessed_letters = []
13     guessed_words = []
14     tries = 6
15     name = input("What is your name? ")
16     print("Hello " + name + "! Let's Play Hangman!")
17     print(display_hangman(tries))
18     print(word_complete)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

... Please guess a letter or word: p  
Good job! P is in the word!

Python

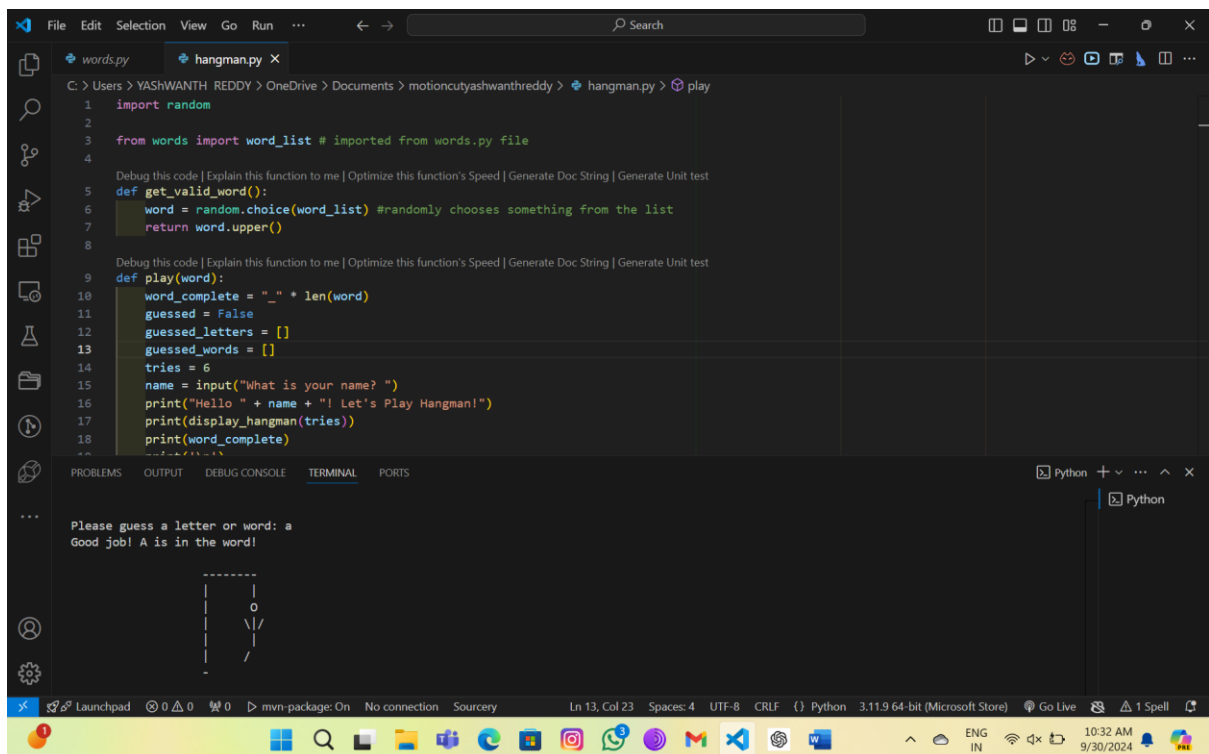
This screenshot shows the same Visual Studio Code editor with the `hangman.py` file. The terminal now shows the user has entered 's' and the program responds with 'Good job! S is in the word!'. The hangman figure in the terminal has been updated to include the letter 'O' on its head.

```
1 import random
2
3 from words import word_list # imported from words.py file
4
5 def get_valid_word():
6     word = random.choice(word_list) #randomly chooses something from the list
7     return word.upper()
8
9 def play(word):
10     word_complete = "_" * len(word)
11     guessed = False
12     guessed_letters = []
13     guessed_words = []
14     tries = 6
15     name = input("What is your name? ")
16     print("Hello " + name + "! Let's Play Hangman!")
17     print(display_hangman(tries))
18     print(word_complete)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

... Please guess a letter or word: s  
Good job! S is in the word!

Python



```
File Edit Selection View Go Run ... Search
words.py hangman.py X
C:\Users\YASHWANTH REDDY>OneDrive>Documents>motioncutyashwanthreddy>hangman.py>play
1 import random
2
3 from words import word_list # imported from words.py file
4
5 Debug this code | Explain this function to me | Optimize this function's Speed | Generate Doc String | Generate Unit test
6 def get_valid_word():
7     word = random.choice(word_list) #randomly chooses something from the list
8     return word.upper()
9
10 Debug this code | Explain this function to me | Optimize this function's Speed | Generate Doc String | Generate Unit test
11 def play(word):
12     word_complete = "_" * len(word)
13     guessed = False
14     guessed_letters = []
15     guessed_words = []
16     tries = 6
17     name = input("What is your name? ")
18     print("Hello " + name + "! Let's Play Hangman!")
19     print(display_hangman(tries))
20     print(word_complete)
21     ...
22
23 PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
24
25 ...
26 Please guess a letter or word: a
27 Good job! A is in the word!
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