Intermediate level

1)Web scraping :Extract data from websites using libraries like beautiful soup.

2)Hangman : Implement the word guessing game with visual progress and hints.

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colab.research.google.com/notebook#scrollTo=NSS7fDAM4jNw

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RAM Disk Gemini

```
import requests
from bs4 import BeautifulSoup
target_url =  "https://https://en.wikipedia.org/wiki/Nelson_Mandela"

data_to_extract = ["h1", "title"]

def scrape_data(url):
    try:
        response = requests.get(url)
        response.raise_for_status()
        soup = BeautifulSoup(response.content, "html.parser")

        extracted_data = []
        for element in data_to_extract:
            data_points = []
            for item in soup.select(element):
                data_points.append(item.text.strip())
            extracted_data.append({"element": element, "data": data_points})

        return extracted_data
    except requests.exceptions.RequestException as e:
        print(f"Error occurred during request: {e}")
        return []
```

[7] 8s

```
scraped_data = scrape_data("https://en.wikipedia.org/wiki/Nelson_Mandela" )
print(scraped_data)
```

```
[{'element': 'h1', 'data': ['Nelson Mandela']}, {'element': 'title', 'data': ['Nelson Mandela - Wikipedia']}]
```

Start coding or generate with AI.

0s completed at 8:07 PM

32°C Mostly clear

Search

ENG IN

20:08 02-07-2024

hangman.py - C:/Users/Admin/OneDrive/Documents/.vscode/hangman.py (3.12.4)

File Edit Format Run Options Window Help

```
    return random.choice(words)

def display_word(word, guessed_letters):
    display = ""
    for letter in word:
        if letter in guessed_letters:
            display += letter + " "
        else:
            display += "_ "
    return display.strip()

def hangman():
    print("Welcome to Hangman!")
    word = choose_word()
    guessed_letters = []
    attempts_left = 6

    while True:
        print("\nAttempts left:", attempts_left)
        print("Current word:", display_word(word, guessed_letters))

        if "_" not in display_word(word, guessed_letters):
            print("\nCongratulations! You guessed the word:", word)
            break

        guess = input("Guess a letter or type 'hint' for a hint: ").lower()

        if guess == 'hint':
            hint = random.choice([letter for letter in word if letter not in guessed_letters])
            print(f"Hint: The word contains the letter '{hint}'")
        elif len(guess) != 1 or not guess.isalpha():
            print("Please enter a single letter.")
            continue
        elif guess in guessed_letters:
            print("You've already guessed that letter.")
            continue
        else:
            guessed_letters.append(guess)

            if guess not in word:
                attempts_left -= 1
                print(f"Oops! '{guess}' is not in the word.")

        if attempts_left == 0:
            print("Game over! The word was:", word)
            break
```

Ln: 9 Col: 23

IDLE Shell 3.12.4

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```
Python 3.12.4 (tags/v3.12.4:8e8a4ba, Jun  6 2024, 19:30:16) [MSC v.1940 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Admin/OneDrive/Documents/.vscode/hangman.py
Welcome to Hangman!

Attempts left: 6
Current word: _ _ _ _ _ _
Guess a letter or type 'hint' for a hint: o

Attempts left: 6
Current word: o _ _ _ _ _
Guess a letter or type 'hint' for a hint: r

Attempts left: 6
Current word: o r _ _ _ _
Guess a letter or type 'hint' for a hint: a

Attempts left: 6
Current word: o r a _ _ _
Guess a letter or type 'hint' for a hint: e

Attempts left: 6
Current word: o r a _ _ e
Guess a letter or type 'hint' for a hint: n

Attempts left: 6
Current word: o r a n _ e
Guess a letter or type 'hint' for a hint: g

Attempts left: 6
Current word: o r a n g e

Congratulations! You guessed the word: orange
>>>
```

Ln: 35 Col: 0