Task-1: Web Scraping and Data

To run these we need to install requests beautifulsoup4

```
import requests
from bs4 import BeautifulSoup
import csv

# Replace this URL with the URL of the weather page you want to scrape
url = "https://weather.com/weather/today/l/USNY0996:1:US"

# Send an HTTP GET request to the URL
response = requests.get(url)

# Check if the request was successful
if response.status_code == 200:
    # Parse the HTML content of the page
    soup = BeautifulSoup(response.text, 'html.parser')

    # Extract weather data
    location = soup.find("h1", class_="CurrentConditions--location--1Ayv3").text
    temperature = soup.find("span", class_="CurrentConditions--tempValue--3KcTQ").text
    humidity = soup.find("span", text="Humidity").find_next("span", class_="value").text

    # Print the extracted data
    print("Location:", location)
    print("Temperature:", temperature)
    print("Humidity:", humidity)

    # Save the data in a CSV file
    with open("weather_data.csv", mode='w', newline='') as csv_file:
        fieldnames = ["Location", "Temperature", "Humidity"]
        writer = csv.DictWriter(csv_file, fieldnames=fieldnames)

        # Write the header row
        writer.writeheader()

        # Write the data rows
        writer.writerow({"Location": location, "Temperature": temperature, "Humidity": humidity})

    print("Data has been saved in 'weather_data.csv'")
else:
    print("Failed to retrieve the web page. Status code:", response.status_code)
```

Task 2: Text-Based Game

```
import random

# Function to play the number guessing game
def number_guessing_game():
    print("Welcome to the Number Guessing Game!")
    print("I'm thinking of a number between 1 and 100.")

    # Generate a random number between 1 and 100
    secret_number = random.randint(1, 100)

    attempts = 0
    max_attempts = 10  # You can adjust the number of attempts

    while attempts < max_attempts:
        try:
            guess = int(input("Enter your guess: "))
        except ValueError:
            print("Please enter a valid number.")
            continue

        attempts += 1

        if guess < secret_number:
            print("Too low! Try again.")
        elif guess > secret_number:
            print("Too high! Try again.")
        else:
            print(f"Congratulations! You guessed the number {secret_number} in {attempts}
attempts.")
            break

    if guess != secret_number:
        print(f"Sorry, you've run out of attempts. The secret number was {secret_number}.")

    play_again = input("Do you want to play again? (yes/no): ").lower()
    if play_again == "yes":
        number_guessing_game()
    else:
        print("Thanks for playing!")

# Start the game
number_guessing_game()
```