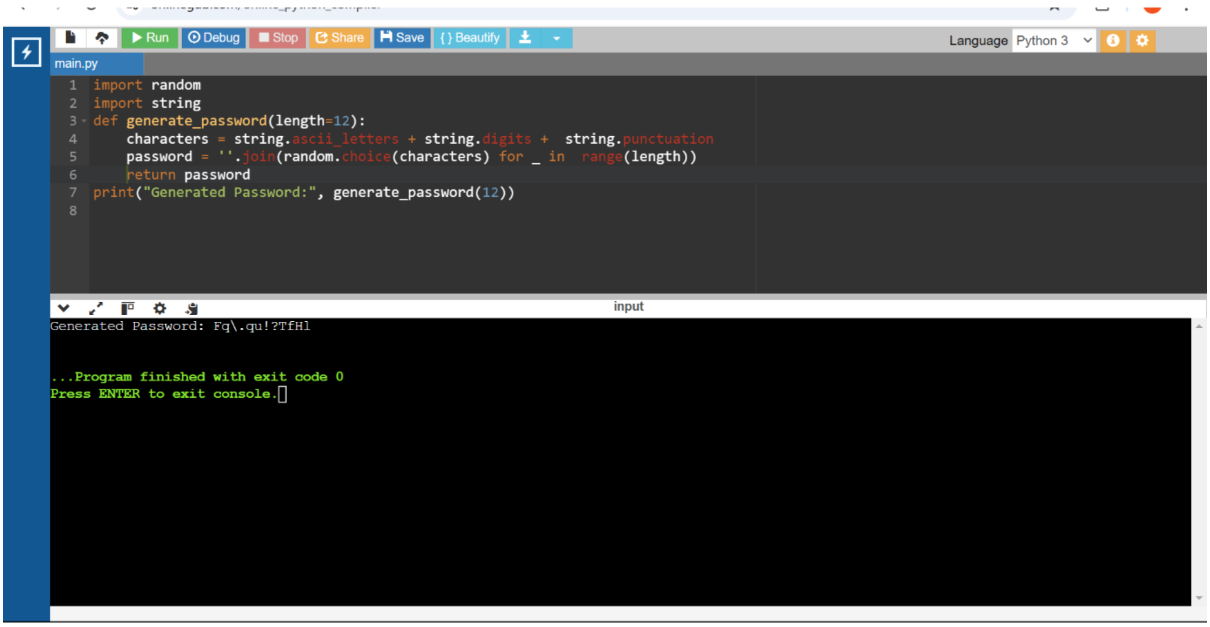
PYTHON CASE STUDY

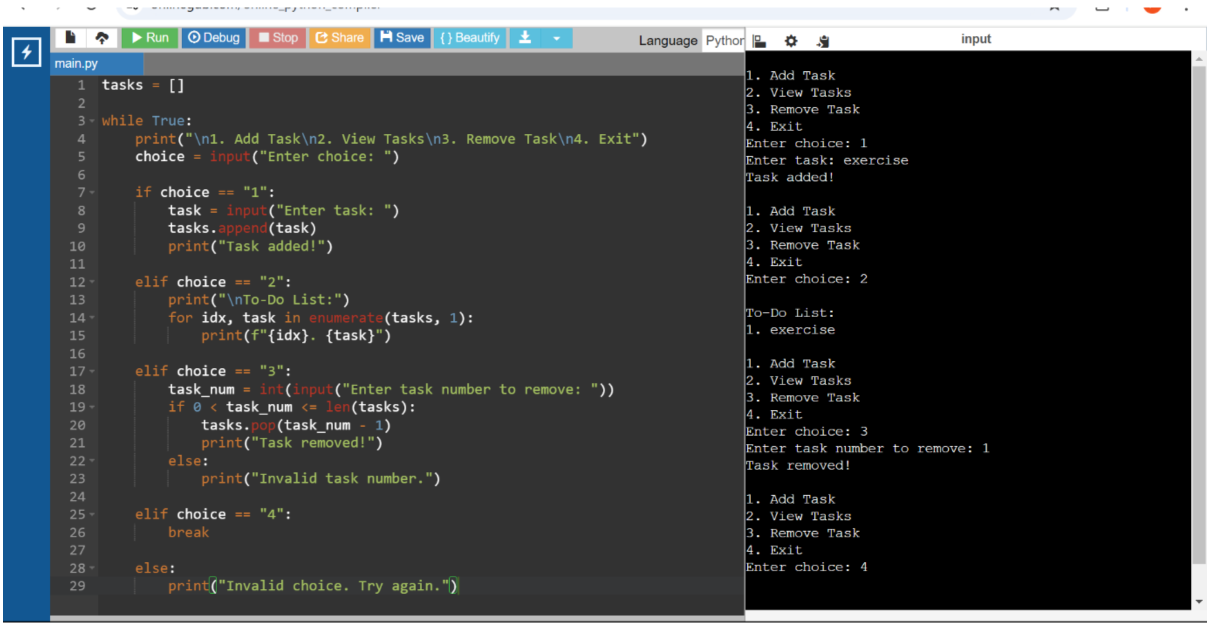
Password Generator



```python
import random
import string
def generate_password(length=12):
    characters = string.ascii_letters + string.digits +  string.punctuation
    password = ''.join(random.choice(characters) for _ in  range(length))
    return password
print("Generated Password:", generate_password(12))
```

```
Generated Password: Fq\.qu!?TfHl


...Program finished with exit code 0
Press ENTER to exit console.
```

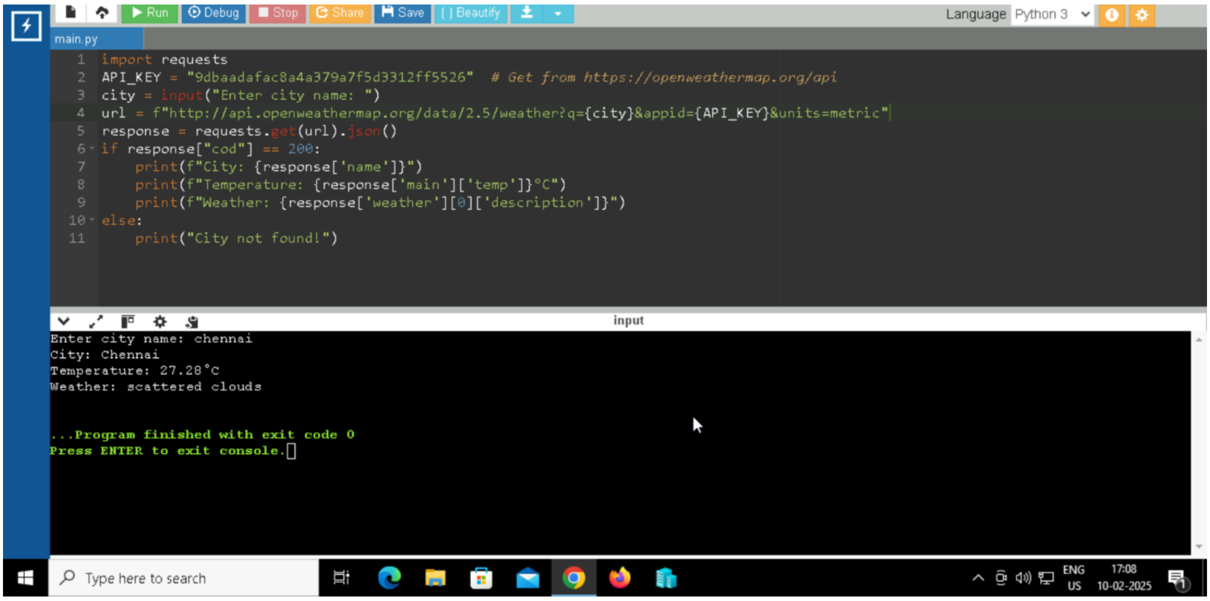
To-Do List (CLI)



```python
tasks = []

while True:
    print("\n1. Add Task\n2. View Tasks\n3. Remove Task\n4. Exit")
    choice = input("Enter choice: ")

    if choice == "1":
        task = input("Enter task: ")
        tasks.append(task)
        print("Task added!")

    elif choice == "2":
        print("\nTo-Do List:")
        for idx, task in enumerate(tasks, 1):
            print(f"{idx}. {task}")

    elif choice == "3":
        task_num = int(input("Enter task number to remove: "))
        if 0 < task_num <= len(tasks):
            tasks.pop(task_num - 1)
            print("Task removed!")
        else:
            print("Invalid task number.")

    elif choice == "4":
        break

    else:
        print("Invalid choice. Try again.")
```

```

1. Add Task
2. View Tasks
3. Remove Task
4. Exit
Enter choice: 1
Enter task: exercise
Task added!

1. Add Task
2. View Tasks
3. Remove Task
4. Exit
Enter choice: 2

To-Do List:
1. exercise

1. Add Task
2. View Tasks
3. Remove Task
4. Exit
Enter choice: 3
Enter task number to remove: 1
Task removed!

1. Add Task
2. View Tasks
3. Remove Task
4. Exit
Enter choice: 4
```

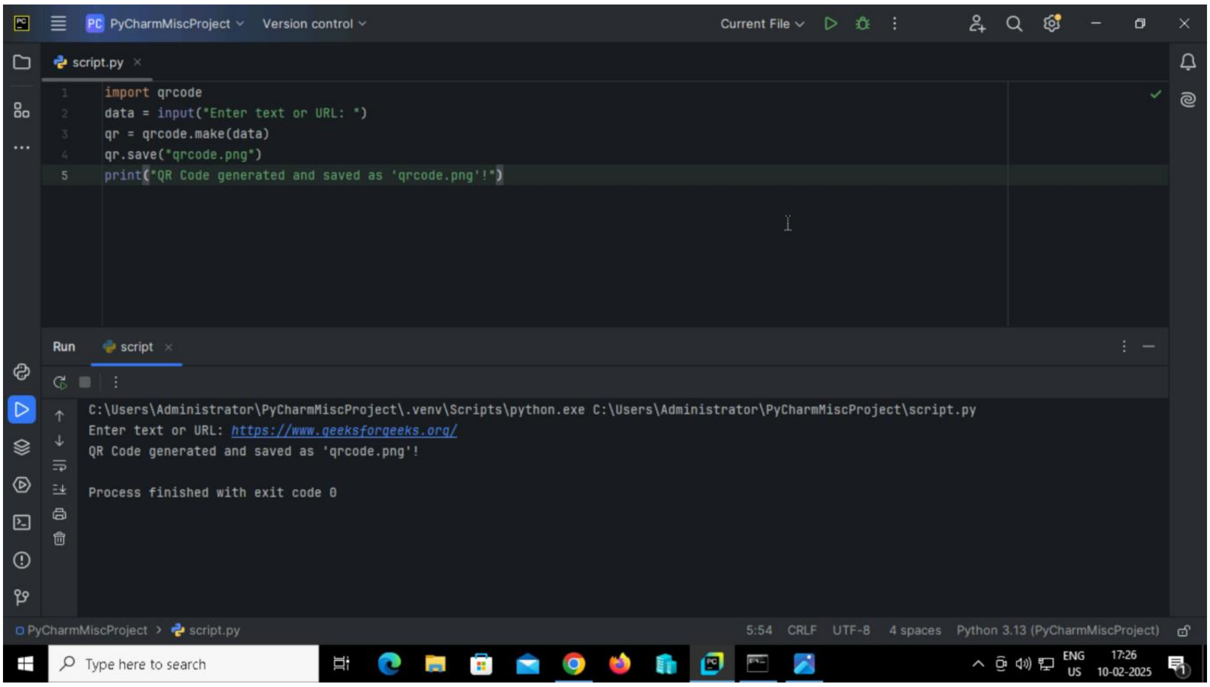
Weather App (API-based)



```python
import requests
API_KEY = "9dbaadafac8a4a379a7f5d3312ff5526"  # Get from https://openweathermap.org/api
city = input("Enter city name: ")
url = f"http://api.openweathermap.org/data/2.5/weather?q={city}&appid={API_KEY}&units=metric"
response = requests.get(url).json()
if response["cod"] == 200:
    print(f"City: {response['name']}")
    print(f"Temperature: {response['main']['temp']}°C")
    print(f"Weather: {response['weather'][0]['description']}")
else:
    print("City not found!")
```

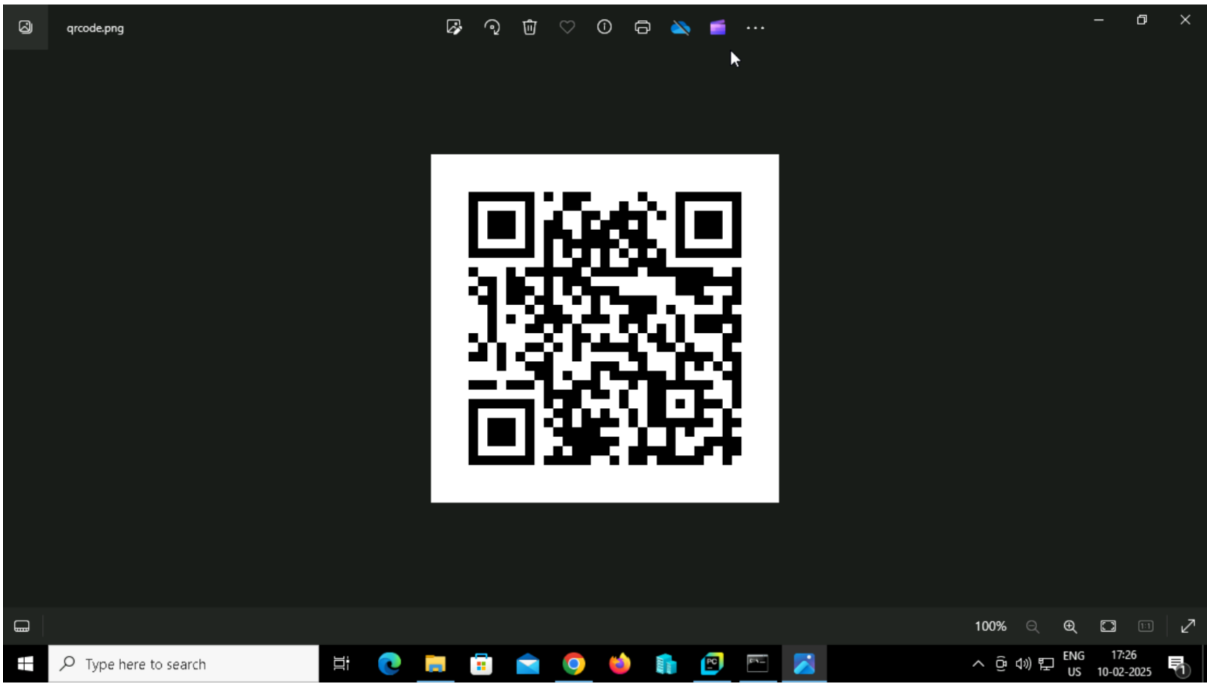
```
Enter city name: chennai
City: Chennai
Temperature: 27.28°C
Weather: scattered clouds


...Program finished with exit code 0
Press ENTER to exit console.
```

QR Code Generator

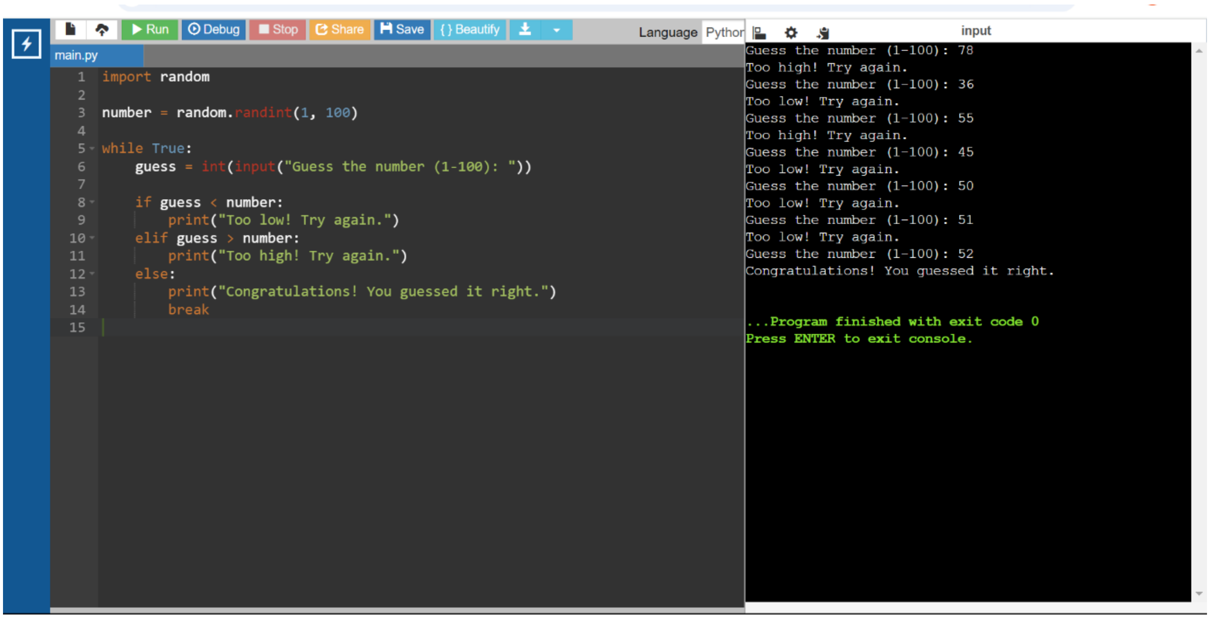


```python
import qrcode
data = input("Enter text or URL: ")
qr = qrcode.make(data)
qr.save("qrcode.png")
print("QR Code generated and saved as 'qrcode.png'!")
```

```
C:\Users\Administrator\PyCharmMiscProject\.venv\Scripts\python.exe C:\Users\Administrator\PyCharmMiscProject\script.py
Enter text or URL: https://www.geeksforgeeks.org/
QR Code generated and saved as 'qrcode.png'!

Process finished with exit code 0
```



Number Guessing Game



```python
import random

number = random.randint(1, 100)

while True:
    guess = int(input("Guess the number (1-100): "))

    if guess < number:
        print("Too low! Try again.")
    elif guess > number:
        print("Too high! Try again.")
    else:
        print("Congratulations! You guessed it right.")
        break
```

```
Guess the number (1-100): 78
Too high! Try again.
Guess the number (1-100): 36
Too low! Try again.
Guess the number (1-100): 55
Too high! Try again.
Guess the number (1-100): 45
Too low! Try again.
Guess the number (1-100): 50
Too low! Try again.
Guess the number (1-100): 51
Too low! Try again.
Guess the number (1-100): 52
Congratulations! You guessed it right.


...Program finished with exit code 0
Press ENTER to exit console.
```