Python

Password Generator

```python
import random
import string

def generate_password(length=12):
    # Define character pool
    characters = string.ascii_letters + string.digits + string.punctuation
    # Randomly select characters from the pool
    password = ''.join(random.choice(characters) for _ in range(length))
    return password

# Generate and display the password
print("Generated Password:", generate_password(12))
```

input

```
Generated Password: d~:[I$zT1#.&
```

To-Do List (CLI)

```python
tasks = []

while True:
    # Display the menu
    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!")

    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: Morning Exercise
Task added!

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

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

To-Do List:
1. Morning Exercise
2. sleep Early

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

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

To-Do List:
1. Morning Exercise

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

Weather App (API-based)

```python
import requests

# Use your provided API key
API_KEY = "8f2d6822fb2e4524adf20f8132e6f463"
city = input("Enter city name: ")

# Construct the API URL
url = f"http://api.openweathermap.org/data/2.5/weather?q={city}&appid={API_KEY}&units=metric"

# Fetch the weather data
response = requests.get(url).json()

# Check if the response is valid
if response["cod"] == 200:
    print(f"\nCity: {response['name']}")
    print(f"Temperature: {response['main']['temp']}°C")
    print(f"Weather: {response['weather'][0]['description']}")
else:
    print("\nCity not found!")
```

input

```
Enter city name: London

City: London
Temperature: 3.94°C
Weather: overcast clouds
```

Number Guessing Game

```python
import random

# Generate a random number between 1-100
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): 12
Too low! Try again.
Guess the number (1-100): 68
Too high! Try again.
Guess the number (1-100): 50
Too low! Try again.
Guess the number (1-100): 60
Too high! Try again.
Guess the number (1-100): 55
Too high! Try again.
Guess the number (1-100): 52
Congratulations! You guessed it right.
```

QR Code Generator