Problem Statement:
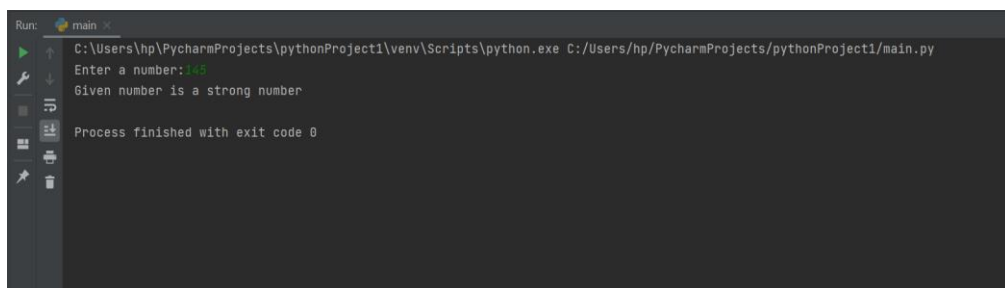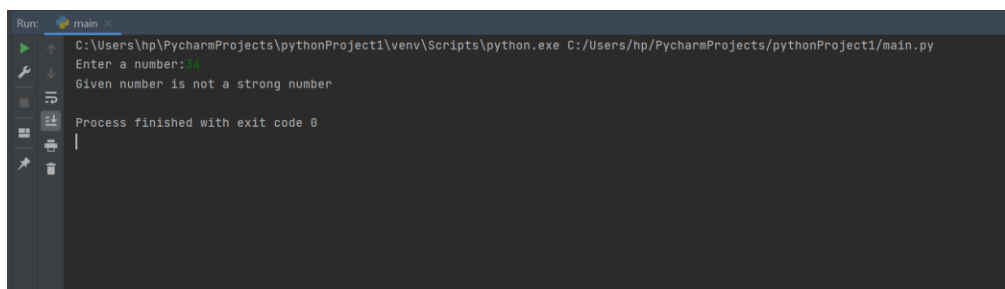
1) **Write a Python Program to check if a Number is a Strong Number.**

   sum = 0

   num = int(input("Enter a number:"))

   temp = num

   # Using while loop

   while (num):

      # intialize with 1

      i = 1

      # fact variable with 1

      fact = 1

      rem = num % 10

      while (i <= rem):

        fact = fact * i # Find factorial of each number

        i = i + 1

      sum = sum + fact

      num = num // 10

   if (sum == temp):

      print("Given number is a strong number")

   else:

      print("Given number is not a strong number")

Practice Assignments:

1) **Python Program to Check Whether a Number is Positive or Negative**

```python
num = float(input("Enter a number: "))
if num > 0:
    print("Positive number")
elif num == 0:
    print("Zero")
else:
    print("Negative number")
```

```
Run:    main ×
    C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
    Enter a number: 5
    Positive number

    Process finished with exit code 0
```
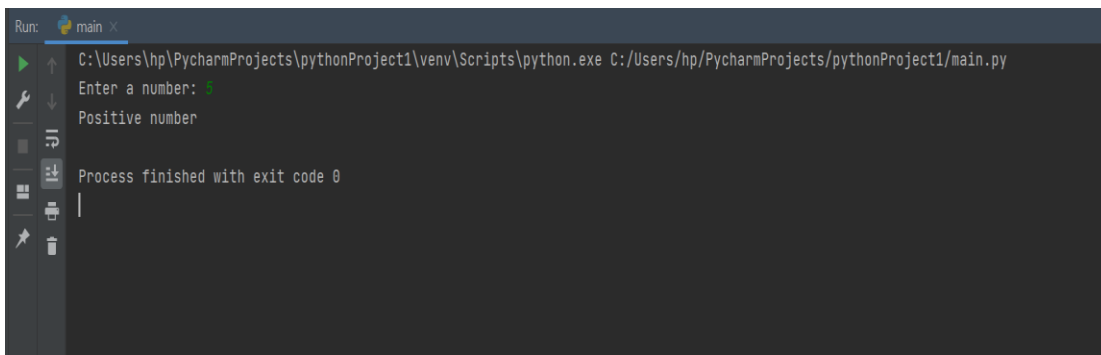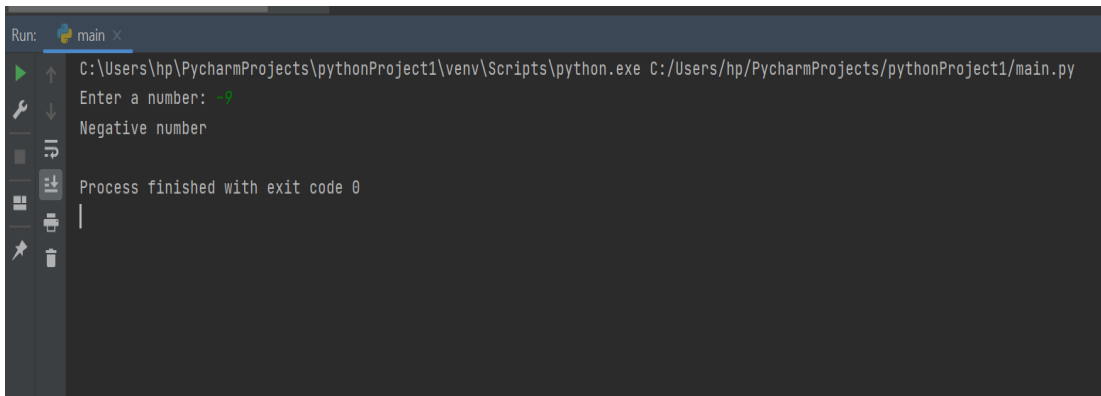
```
Run:    main ×
    C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
    Enter a number: -9
    Negative number

    Process finished with exit code 0
```

```
Run:    main ×
    C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
    Enter a number: 0
    Zero

    Process finished with exit code 0
```

2) Python Program to Check if a Number is a Palindrome

```python
num=int(input("Enter a number:"))
temp=num
rev=0
while(num>0):
    dig=num%10
    rev=rev*10+dig
    num=num//10
if(temp==rev):
    print("The number is palindrome!")
else:
    print("Not a palindrome!")
```
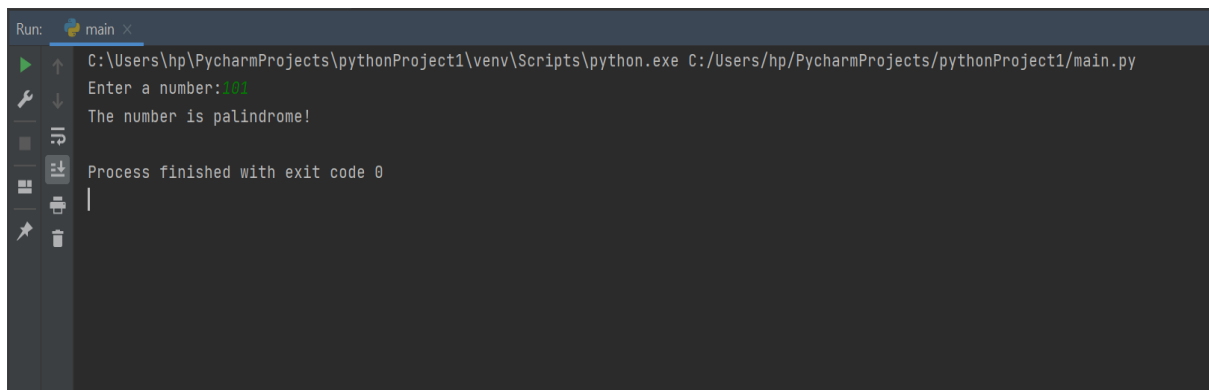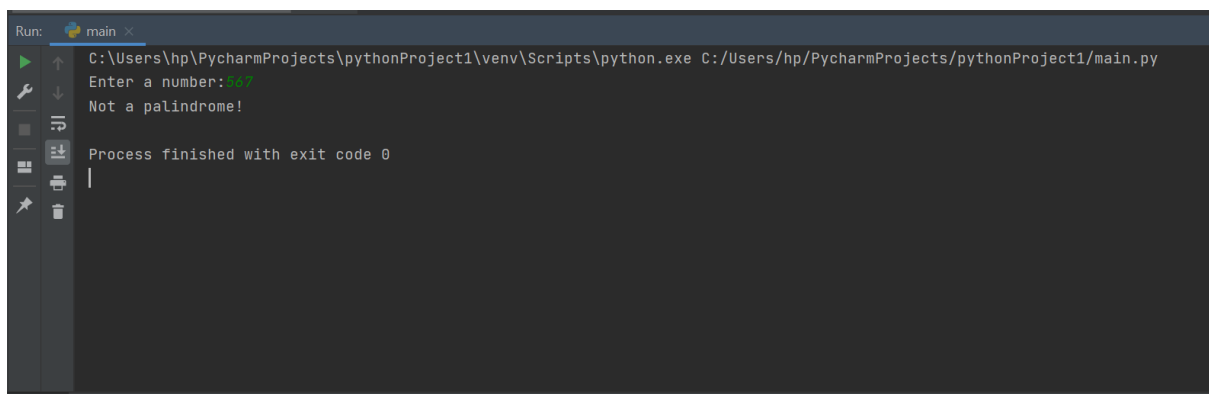
```
Run:    main
    C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
    Enter a number:101
    The number is palindrome!

    Process finished with exit code 0
```

```
Run:    main
    C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
    Enter a number:567
    Not a palindrome!

    Process finished with exit code 0
```
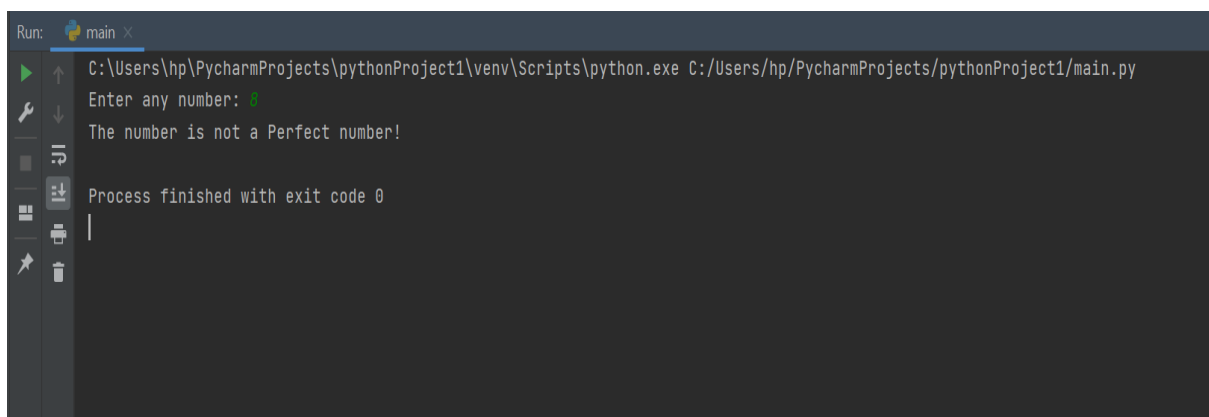
3) Python Program to Check if a Number is a Perfect Number

```python
n =int(input("Enter any number: "))
sum=0
for i in range(1, n):
    if(n % i == 0):
        sum = sum + i
if (sum == n):
    print("The number is a Perfect number!")
else:
    print("The number is not a Perfect number!")
```

```
Run:    main ×
    C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
    Enter any number: 6
    The number is a Perfect number!

    Process finished with exit code 0
```

```
Run:    main ×
    C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
    Enter any number: 8
    The number is not a Perfect number!

    Process finished with exit code 0
```
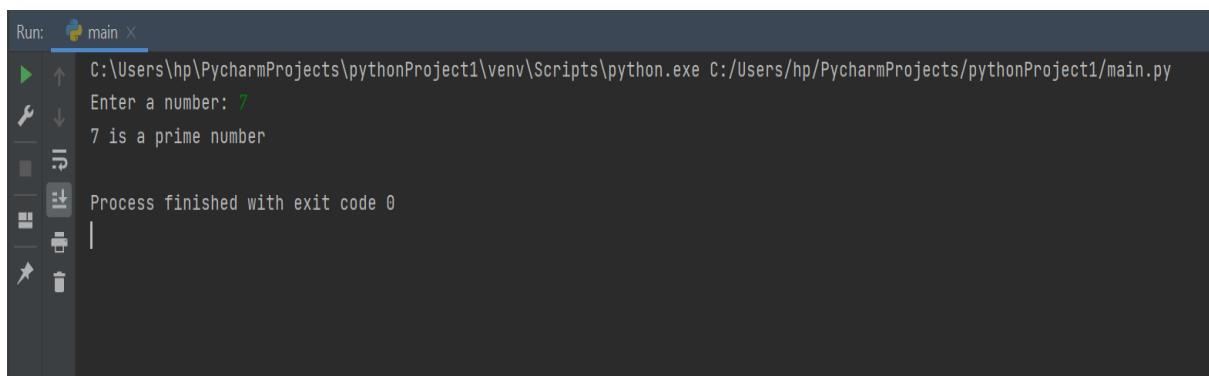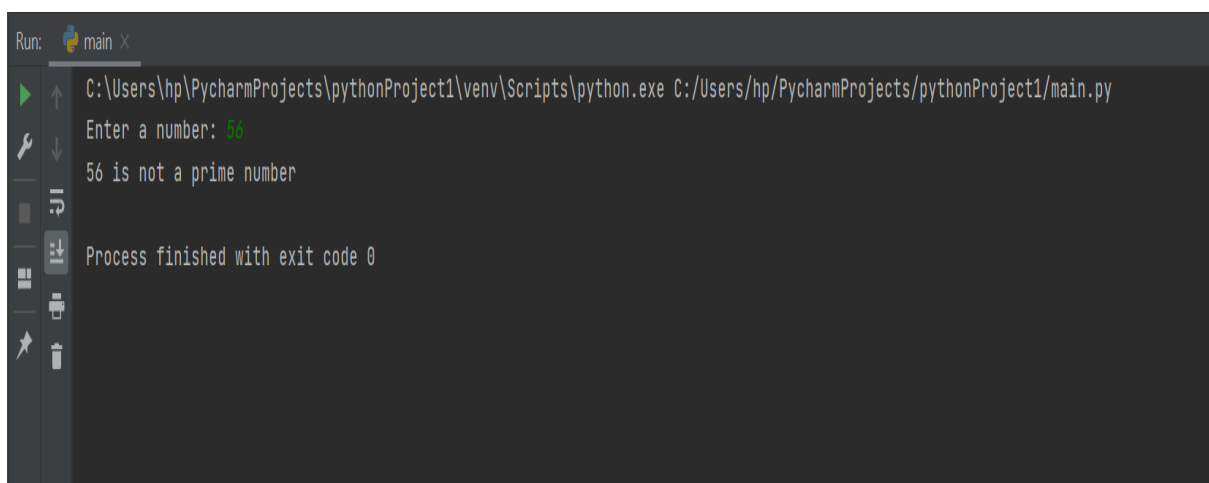
4) Python Program to Check if a Number is a Prime Number

```python
num = int(input("Enter a number: "))
if num > 1:
    for i in range(2, num):
        if (num % i) == 0:
            print(num, "is not a prime number")
            break
    else:
        print(num, "is a prime number")

else:
    print(num, "is not a prime number")
```

Run: main ×

C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
Enter a number: 7
7 is a prime number

Process finished with exit code 0

Run: main ×

C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
Enter a number: 56
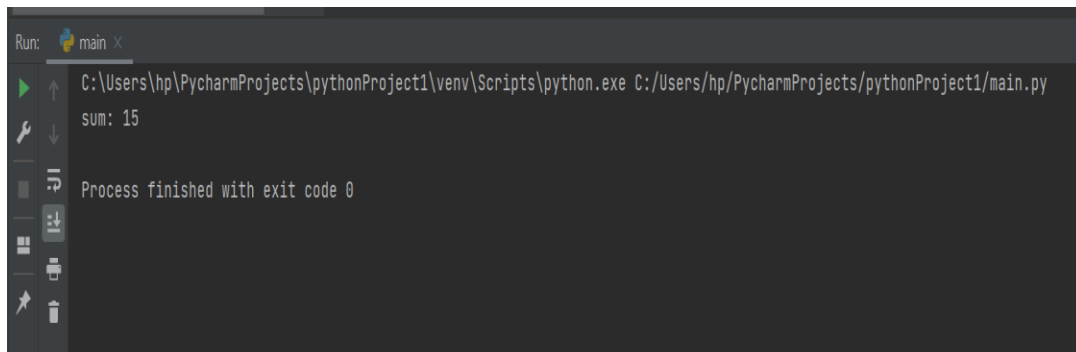56 is not a prime number

Process finished with exit code 0

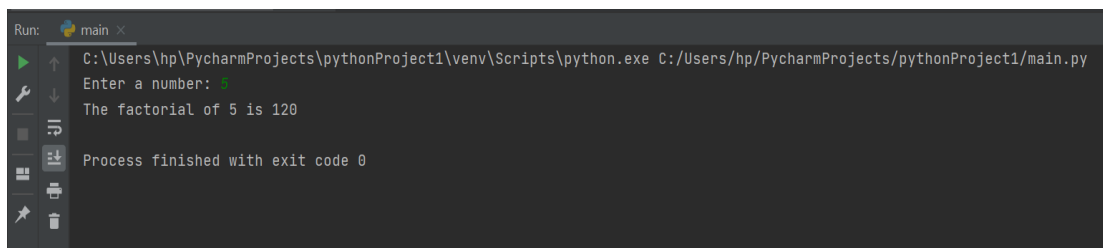**5) Python Program to Find the Sum of the Digits of the Number.**

```python
def getSum(n):
    sum = 0
    for digit in str(n):
        sum += int(digit)
    return sum
n = 12345
print("sum:",getSum(n))
```

```
Run:   main ×
    C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
    sum: 15

    Process finished with exit code 0
```

6) Python Program to Find the Factorial of the Number

```python
num = int(input("Enter a number: "))
factorial = 1
if num < 0:
    print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
    print("The factorial of 0 is 1")
else:
    for i in range(1, num + 1):
        factorial = factorial * i
    print("The factorial of", num, "is", factorial)  5
```

```
Run:   main ×
    C:\Users\hp\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/hp/PycharmProjects/pythonProject1/main.py
    Enter a number: 5
    The factorial of 5 is 120

    Process finished with exit code 0
```