# Python Lab

**Q1. Write a python program to reverse a number using a while loop.**

num = 1234

reversed_num = 0

while num != 0:

   digit = num % 10

   reversed_num = reversed_num * 10 + digit

   num //= 10

print("Reversed Number: " + str(reversed_num))

```
>>>
========== RESTART: C:\Users\narut\Desktop\New folder\Assigmnet 6.py ==========
Reversed Number: 4321
>>>
```

**2. Write a python program to check whether a number is palindrome or not?**

def is_palindrome(num):

   num_str = str(num)

   reversed_str = num_str[::-1]

   if num_str == reversed_str:

     return True

   else:

     return False

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

if is_palindrome(num):

    print(num, "is a palindrome")

else:

    print(num, "is not a palindrome")
```

```
>>>
    =========== RESTART: C:\Users\narut\Desktop\New folder\Assigmnet 6.py ==========
    Enter a number: 20
    20 is not a palindrome
>>>
```

**3. Write a python program finding the factorial of a given number using a while loop.**

```
num = 7

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)
```

```
>>>
          =========== RESTART: C:\Users\narut\Desktop\New folder\Assigmnet 6.py ==========
          The factorial of 7 is 5040
>>>
```

**4. Accept numbers using input() function until the user enters 0. If user input 0 then break the while loop and display the sum of all the numbers.**

sum_of_numbers = 0

while True:

   number = int(input("Enter a number (0 to stop): "))

   if number == 0:

     break

   sum_of_numbers += number

print("Sum of all numbers:", sum_of_numbers)

```
>>>
          =========== RESTART: C:\Users\narut\Desktop\New folder\Assigmnet 6.py ==========
          Enter a number (0 to stop): 10
          Enter a number (0 to stop): 5
          Enter a number (0 to stop): 8
          Enter a number (0 to stop): 9
          Enter a number (0 to stop): 11
          Enter a number (0 to stop): 0
          Sum of all numbers: 43
>>>
```