

PYTHON LAB 6

1. Write a python program to reverse a number using a while loop.

```
n=int(input("Enter the Number:")) # taking input from the user
i=n
while(i>=1): #condition
    print(i) # output
    i-=1     # Decreasing
```

<----- OUTPUT ----->

Enter the Number:10

10

9

8

7

6

5

4

3

2

1

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

```
n=int(input("Enter a Number:")) # taking input from the user
temp=n; Taking variable
rev=0;
while(n!=0): #condition
```

```

r=n%10  # finding reminder
rev=rev*10+r
n=n//10
print("Reverse of number is",rev)
if(rev==temp):  using if statement to print if true
    print("The is a Palindrome Number ")
else:  print if condition is false
    print("The is not a Palindrome Number ")

```

<----- OUTPUT ----->

Enter a Number:12321

Reverse of number is 12321

The is a Palindrome Number

Enter a Number:12345

Reverse of number is 54321

The is not a Palindrome Number

3. Write a Program to check whether the given number is Armstrong or not.

```

def is_armstrong(num):  # Defining a function
    num_str = str(num)
    num_digits = len(num_str)
    sum_of_powers = sum(int(digit) ** num_digits for digit in num_str) #
    applying logic

    if sum_of_powers == num:  condition

```

```

        return True
    else:
        return False
number = int(input("Enter a number: "))
if is_armstrong(number):    #Calling function
    print(f"{number} is an Armstrong number.")    # if condition is true
else:
    print(f"{number} is not an Armstrong number.")    #if condition is false

```

<----- OUTPUT ----->

Enter a number: 1234

1234 is not an Armstrong number.

Enter a number: 153

153 is an Armstrong number.

4. Write a Program to find the factorial of a number.

```

n=int(input("Enter the number:"))    # taking input from the user
f=1;
for i in range(1,n+1):    # loops
    f*=i
print("Factorial of", n , "numbers is :",f)    printing output

```

<----- OUTPUT ----->

'''

Enter the number:6

Factorial of 6 numbers is : 720

5.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.

```
total_sum = 0 # Initialize a variable to hold the sum of numbers
while True: # Loop to accept numbers from the user
    number = int(input("Enter a number (0 to stop): ")) # Get input from the user
    if number == 0: # If the number is 0, break the loop
        break
    total_sum += number # Add the number to the total sum
print("The sum of all the numbers entered is:", total_sum) # Display the sum of all numbers entered
```

<----- Output ----->

Enter a number (0 to stop): 5

Enter a number (0 to stop): 4

Enter a number (0 to stop): 3

Enter a number (0 to stop): 2

Enter a number (0 to stop): 1

Enter a number (0 to stop): 0

The sum of all the numbers entered is: 15