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

def reverse\_number(num): #here we are using def function

reversed\_num = 0

while num > 0: #using while condition

remainder = num % 10

reversed\_num = (reversed\_num \* 10) + remainder

num = num // 10

return reversed\_num

number = int(input("Enter a number to reverse: ")) #take the input from the user

reversed\_number = reverse\_number(number)

print("Reversed number:", reversed\_number) #print the value

output: Enter a number to reverse: 52

Reversed number: 25

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

def is\_palindrome(num):

original\_num = num

reversed\_num = 0

while num > 0:

remainder = num % 10

reversed\_num = (reversed\_num \* 10) + remainder

num = num // 10

return original\_num == reversed\_num

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

if is\_palindrome(number):

print(number, "is a palindrome.")

else:

print(number, "is not a palindrome.")

output: Enter a number: 22

22 is a palindrome.

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

def factorial(n): #using def function

if n < 0: #if conditon

return "Factorial is not defined for negative numbers"

elif n == 0:

return 1

else: #else part

result = 1

while n > 0:

result \*= n

n -= 1

return result

number = int(input("Enter a number to find its factorial: ")) #take input from the user

print("Factorial of", number, "is:", factorial(number)) #print the statement

output: Enter a number to find its factorial: 4

Factorial of 4 is: 24

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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.

total = 0

while True: #while loop that is true

num = int(input("Enter a number (enter 0 to stop): ")) #take the input from the user

if num == 0:

break #here we are using break statement

total += num

print("Sum of all the numbers entered:", total) #print the result

output: Enter a number (enter 0 to stop): 4

Enter a number (enter 0 to stop): 2

Enter a number (enter 0 to stop): 0

Sum of all the numbers entered: 6

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