**QUESTION 7**

* **CODE :-**

**#(a)**

def count(n):

return len(str(n))

**#(b)**

def reverse(n):

return int(str(n)[::-1])

**#(c)**

def hasdigit(n):

return any(c.isdigit() for c in str(n))

**#(d)**

def show(n):

digits = [int(d) for d in str(n)]

expanded\_form = ' + '.join([f"{digits[i]} \* 10^{len(digits)-i-1}"

for i in range(len(digits))])

return expanded\_form

# Main program

try:

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

print("Number of digits:", count(num))

print("Reverse of the number:", reverse(num))

print("Has digit:", hasdigit(num))

print("Expanded form:", show(num))

except ValueError:

print("Invalid input. Please enter a valid number.")

* **OUTPUT :-**

Enter a number: 1234

Number of digits: 4

Reverse of the number: 4321

Has digit: True

Expanded form: 1 \* 10^3 + 2 \* 10^2 + 3 \* 10^1 + 4 \* 10^0