Task 3: Implement Conditional, control and looping statements

AIM:

To implement Conditial, control and looping statements using rythen.

Q. you are developing a simple grade mana-gement system for a school. the system needs to determine the grade of a student based on their socre in a test the grad--ing system follows these rules.

If the score is 90 or above, the grade is "A"
If the scare is between 80 and 89 the grade is "B"
If the score is between 60 and 69 the grade is "C"
If the score is below 60 the grade is "F"

ALGORITHM:

1. Start
2. Get the input mark from the user
3. with the use of an if an if-elif-else statement do
   - If the marks >= 90 prints grade "A"
   - If the mark is between 80 and 89 print grade "B"
   - If the mark is between 70 and 79 print grade "C"
   - If the mark is blw 60 and 69 print grade "D"
   - If the mark is below 60, print 'grade "F".
4. Stop

PROGRAM

```
Score = int(input("Enter the score :"))
If score >= 90:
  Printf ("The Grade is A")
elif (score <= 89 and score >= 80):
   Print ("The Grade is B")
elif(score <=79 and score >= 70):
  Print("The grade is C")
  elif(score <=69 and score >= 60):
  Print("The Grade is D")
  else
  Print("The Grade is F")
```

Output:

```
Enter the score : 60
The grade is D
```

b. you are developing an educational program to help young student learn about natural numbers. one of the features of the program is to display the first 10 natural numbers to the user. write a python program that uses a for loop for to print the first 10 natural numbers.

ALGORITHM:

1. Start
2. Display "The first 10 natural numbers are"
3. Use a for loop for generating the numbers
4. print the output
5. stop

PROGRAM

```
#Displaying the first 10 natural numbers
Print("The first 10 natural number are;")
For i in range(1,11): # loop from 1 to 10
 print(i)
```

Output:

The first 10 natural numbers are

1
2
3
4
5
6
7
8
9
10

2. You are working on a feature for a financial application that involves validating user input. One of the requirements is to count the total number of digits in a given number.

ALGORITHM:

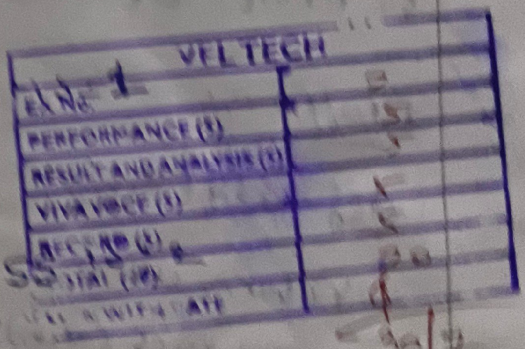
1. Start
2. Get the input from the user
3. Convert the integer to string using str()
4. use len() to find number of digits
5. print the output

PROGRAM:

```
digit = int(input("Enter the number:"))
string = str(digit)  # Since integer doesn't have len()
count = len(string)
print("The number of digits in ", digit, " is:", count)
```

OUTPUT:

Enter the number : 5
The number of digits in 5 is : 1
enter the number: 55
The number of digits in 55 is : 2



RESULT:

Thus the python program to implement conditional, control and looping statement was done successfully.