

TASK - 2

IMPLEMENT CONDITIONAL , CONTROL AND LOOPING STATEMENTS :

Aim : To implement conditional , control and looping statements using python.

Q. You are developing a simple grade management system for school . The system needs to determine the grade of the student based on their score in the test . The grading system will follow these rules:

```
If the score is 90 or above , the grade is "A"  
If the score is b/w 80 and 89 , the grade is "B"  
If the score is b/w 70 and 79 , the grade is "C"  
If the score is b/w 60 and 69 . The grade is "D"  
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 - else if - else statement do.
 - If the marks >=90 . The grade is "A".
 - If the marks is b/w 80 and 89 print grade is "B"
 - If the marks is b/w 70 and 79 print grade is "C"
 - If the marks is b/w 60 and 69 print grade is "D".
 - If the marks is b/w 60 print grade is "F".
4. Stop

Program:

```
Score = int(input("Enter the score :"))
if Score >= 90 :
    print ("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

Score less than 60 is fail.

Score between 60 & 69 is poor.

Score between 70 & 79 is fair.

Score between 80 & 89 is good.

Score between 90 & 99 is very good.

Score 100 is excellent.

Score less than 0 is fail.

Score between 0 & 59 is poor.

Score between 60 & 69 is fair.

Score between 70 & 79 is good.

Score between 80 & 89 is very good.

Score 100 is excellent.

Score less than 0 is fail.

Score between 0 & 59 is poor.

Score between 60 & 69 is fair.

Score between 70 & 79 is good.

Score between 80 & 89 is very good.

Score 100 is excellent.

Score less than 0 is fail.

Score between 0 & 59 is poor.

Score between 60 & 69 is fair.

b. you are developing an educational program to help young students 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 to print the first 10 natural numbers.

Algorithm

1. Start
2. Display "The first 10 natural numbers are:"
3. Use a for loop for generalising the numbers.
4. Print the output
5. Stop

Program :

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

Output: The first 10 natural numbers are:

accepts
enters
number
as input
and
outputs
the
number
in
reverse
order.

Output:

Enter the number : 5

The number of digits in 5 is : 1

and
prints
the
number
in
reverse
order.

Enter the number : 55

The number of digits in 55 is : 2

and
prints
the
number
in
reverse
order.

Enter the number : 1234567890

The number of digits in 1234567890 is : 10

C. You are working on a feature of 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. Use len function to find numbers of digits.
4. Convert the integer to string using str()
5. Print the output.

Program :

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

VELTECH	
EX No.	
PERFORMANCE (5)	
RESULT AND ANALYSIS (1)	
VIVA VOCE (1)	
RECORD (4)	
TOTAL (15)	
SIGN WITH DATE	

Result : Thus the Python program to implement conditional, control and looping statements was done successfully.