

Task: 6.1

date: 10/9/28

Implement conditional, control and looping statements.

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

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

If the score is 90 or above, the grade is "A."

If the score is between 80 and 89, the grade is "B."

If the score is between 70 and 79, the grade is "C."

If the score is between 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 statement to:
 - : If the marks ≥ 90 , print grade "A".
 - : If the mark is between 80 and 89, print grade "B".
 - : If the mark is between 70 and 79, print
 - : If the mark is between grade "C".
 - : If the mark is between 60 and 69, print grade "D".
 - : If the mark is below 60, print grade "F".

Output:-

Enter the score = 60

The grade is D

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):
```

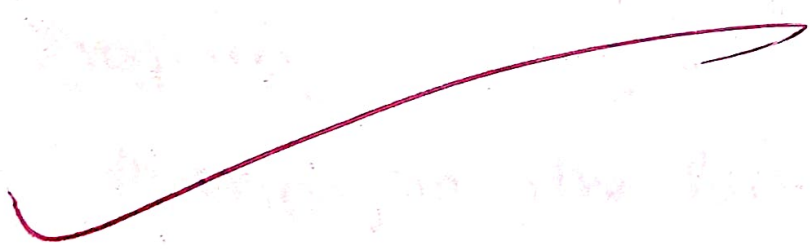
```
    print("The Grade is C")
```

```
elif (score <= 69 and score >= 60):
```

```
    print("The Grade is D")
```

```
else:
```

```
    print("The Grade is F")
```



output

The first 10 natural numbers are!

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

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 generating 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:-

Enter the number = 5

The number of digits in it is = 1

Enter the number = 55

The number of digits in it is = 2

Algorithm:-

1. Start
2. Display the first to last number
3. Are a loop for generating the number
4. Print the output

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Program

Displaying the first to last number
Java code for it is as follows
for (i = 0; i < n; i++)
{
 System.out.print(i + " ");
}

- C. 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 function 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)
```


1) Develop a simple program for the Air Force to label an aircraft as military or civilian. The program is to be given the plane's observed speed in km/h (kilometer-per-hour). The speed will have as its input - for planes traveling in excess of 1100 km/h you should display them as "It's a civilian aircraft", between 500 km/h & 1100 km/h, display them as "It's a military aircraft", and for plane travelling at more than 100 km/h speed - less than 500 km/h you should display them as an "IT'S A BIRD".

Input & output.

2
1100
IT'S civilian aircraft.
200
IT'S A BIRD!

2.2) The National Earthquake Information Centre has the following criteria to determine the earthquake's damage. See the given Richter scale criteria and their corresponding characterization. The Richter scale serves as the input data and the characterization as output information. Use the table below if help if use conditional statement

Richer number (n) characterization

1-5 = little or no damage

5-6 = 1-5 some damage

6-7 = 1-6 serious damage

7-8 = 1-7 disaster

higher catastrophe

Input & output

2

6

Serious damage

2

little or no damage

VEL TECH - CSE	
EX NO.	6
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
VIVA VOCE (3)	3
RECORD (4)	4
TOTAL (15)	15
DATE	

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Results: Thus the python program to implement

conditional control and looping statements
was done successfully.