

Task-2 Implement Conditional, control and looping statement

Aims -

To implement conditional, control and looping statement using python

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

Algorithm:-

1. Start.

2. Get the input mark from the user.

3. With the use of an if-elif-else statement.

- if the marks ≥ 90 print grade "A".

- if the marks is blw 80 and 89 print grade "B".

- if the marks is blw 70 and 79 print grade "C".

- if the marks is ~~blw~~ ^{and 69} between 60, print grade "D".

- if the marks is below 60, print grade "F".

4. Stop.

Output : Enter the score : 60

The Grade is : D

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

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 users. Write a python program that uses a for loop to print the first 10 N.N.

Algorithm:-

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

```
# 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 numbers: 5

The number of digits in 5 is 1

Enter the number: 55

The number of digits in 55 is 2

c. You are the 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 numbers.

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)

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Result:-

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