

TASK 2: Implement Conditional, Control and looping statements

Aim: To implement Conditional, Control and looping statements using Python

- a) 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-elif else statement do.

- * If the marks ≥ 90 Print grade 'A'.
- * If the marks between 80 and 89 is 'B'.
- * If the mark is between 70 and 79 Print grade 'C'.
- * If the mark is between 60 and 69 Print grade 'D'.

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")
```

* If the mark is below 60, Print grade "F".
H-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")
```

b) You are developing an educational program to help young students learn about natural numbers.

Algorithm:

1. Start
2. Display "The first ~~10~~ natural numbers are"
3. use a for loop for generating the number.
4. Print the output.
5. stop.

Output: The first 10 natural numbers
are

1

2

3

4

5

6

7

8

9

10

c) 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

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)
```

c) you are working on a feature for a financial application that involves validating user input.

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 digit.
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 is",
      digit, "is:", count)
```

Result:-

Thus, the python program to implement conditional control and loop statements was done successfully.

VEL	
EX No.	2
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	20
SIGN WITH DATE	

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