

Conditional Statement and Its Variations

```
In [ ]: Conditional Statements.
        Conditional Statement is totally based on conditions it will execute that block of code which
        gives us True result. It gives you the order of execution and in what order the statements
        will execute

        Example:
        If (Tomorrow is Sunday):if (weather is good ):Then i will go to play cricket
        elif(Tomorrow is Saturday): Then i will go to watch movie
        elif(tomorrow is Monday): I will do my homework
        elif(Tomorrow is Tuesday): Then i will go to temple
        else: Sleep
```

Example

```
In [13]: x=10
        if x==20:
            print("value of x is 10")
        else:
            print("Value is not 10")
```

About if elif and Else Keywords

```
In [ ]: In python programming conditional statement are totally based on if ,elif and else keyword.
```

What is Indentations:

```
In [ ]: In python whenever we want to write a block of code then we need to use : and after this
        to represent a block of code we need to give tab spaces. These spaces are known as
        Indentation.
```

```
Example:

if x==5:
    print("Hello")

The space that is left before the print statement is known as Indentation and that space is used
to represent a block of code.
```

Variations of Conditional Statement

```
In [ ]: 1.If --> if we have a single condition use only if statement
        2.if else --> if we have two conditions then we will use if and else
        3.if elif condition --> if we have multiple condition and based on the true condition we want
           to execute a block.
        4.Nested if else --> If we are having condition inside condition the such type of conditions are
           handled but Nested If Else.
```

if statement

```
In [ ]: #1.If statement
        Syntax:
        if condition:
            statement1
            statement2
            statement3
            statement4
```

Example of if Statement

```
In [12]: #Example:
        student_name=input("Enter your name")
        student_rollno=int(input("Enter your roll no"))
        if student_name=="pratyush" and student_rollno==100:
            print("Hello"+ student_name+"Welcome to Edyoda")
            print("Helloworld")
        print("Hello world")

Enter your namepratyush
Enter your roll no100
HellopratyushWelcome to Edyoda
Helloworld
Hello world
```

if else statement

```
In [ ]: #if else statement
        Syntax:
        if condition:
            statement1
            statement2
            statement3
            statement4
        else:
            Statement5
            Statement6
```

Example of if-else Statement

```
In [11]: student_name=input("Enter your name")
        student_rollno=int(input("Enter your roll no"))
        if student_name=="anil" or student_rollno==100:
            print("Hello Anil You are the topper of this class")
        else:
            print("Sorry you are not a Topper student")
        print("Hello world")

Enter your namePratyush
Enter your roll no200
Sorry you are not a Topper student
Hello world
```

if-elif Statement

```
In [ ]: #if elif statement
        Syntax:
        if condition:
            statement1
            statement2
            statement3
            statement4
        elif condition:
            statement5
            statement6

        elif condition:
            statement7
            statement8
```

Example of if elif Statement

```
In [10]: x=input("Enter the Today's Day")
        if(x=="Sunday"):
            print("Then i will go to play cricket")
        elif(x=="Saturday"):
            print("Then i will go to watch movie")
        elif(x=="Monday"):
            print("I will do my homework")
        elif(x=="Tuesday"):
            print("Then i will go to temple")

Enter the Today's DaySaturday
Then i will go to watch movie
```

Note --> Else and Elif part will always be optional.

if-elif-else statement

```
In [ ]: #if-elif-else statement
        Syntax:
        if condition:
            statement1
            statement2
            statement3
            statement4
        elif condition:
            statement5
            statement6

        elif condition:
            statement7
            statement8

        else:
            statement9
```

Examples of if-elif-else statement

```
In [9]: x=input("Enter the Today's Day")
        if(x=="Sunday"):
            print("Then i will go to play cricket")
        elif(x=="Saturday"):
            print("Then i will go to watch movie")
        elif(x=="Monday"):
            print("I will do my homework")
        elif(x=="Tuesday"):
            print("Then i will go to temple")
        else:
            print("Sleep")

Enter the Today's DaySunday
Then i will go to play cricket
```

Nested if-elif-else Statement

```
In [ ]: #Nested If-else
        Syntax:
        if condition:
            if condition:
                statement
            elif condition:
                statement
            else condition
        else:
            statement
```

Example of Nested If-elif-else

```
In [8]: x=input("Enter the Today's Day")
        y="Weather is g"
        if(x=="Sunday"):
            print("Hurray Today is Sunday")
            if(y=="Weather is good"):
                print("Then i will go to play cricket")
            else:
                print("Weather is bad")
        elif(x=="Saturday"):
            print("Then i will go to watch movie")
        elif(x=="Monday"):
            print("I will do my homework")
        elif(x=="Tuesday"):
            print("Then i will go to temple")
        else:
            print("Sleep")

Enter the Today's DaySunday
Hurray Today is Sunday
Weather is bad
```

Practice Problems

Maximum of Two Numbers:

```
In [7]: x=int(input("Enter First Number"))
        y=int(input("Enter Second Number"))
        if x>y:
            print("x is greater")
        elif x==y:
            print("x is equal to y")
        else:
            print("y is greater")

Enter First Number23
Enter Second Number24
y is greater
```

Python program to check weather Given Number is Divisible by 3 and 5.

```
In [6]: x=int(input("Enter the number"))
        if x%3==0 and x%5==0:
            print("Number is Divisible by 3 and 5 ")
        else:
            print("Number is not Divisible")

Enter the number15
Number is Divisible by 3 and 5
```

Python Program to Check weather a given Number is Odd or Even

```
In [5]: n=int(input("Enter a number"))
        if n%2==0:
            print("Number is even")
        else:
            print("Number is odd")

Enter a number10
Number is even
```

Python Program to Find the remainder of a number which is divisible by 3

```
In [4]: n=int(input("Enter a number"))
        if n%3==0:
            print("Reminder is 0")
        elif n%3==1:
            print("Remibder is 1")
        elif n%3==2:
            print("Reminder is 2")

Enter a number13
Remibder is 1
```

Python Program to Find the remainder of a number which is divisible by 4

```
In [3]: x=int(input("Enter a number"))
        if x%4==0:
            print(0)
        elif x%4==1:
            print(1)
        elif x%4==2:
            print(2)
        elif x%4==3:
            print(3)

Enter a number5
1
```

Python Program that solve the below problem

Write a program to accept the cost price of a bike and display the road tax to be paid according to the following criteria : Cost price (in Rs) Tax

100000	15 %
50000 and <= 100000	10% <= 50000
5%	

```
In [2]: cost_price=int(input("Enter the Cost Price of Bike:"))
        Cost_Vechile =int(input("Enter the Cost of Vechile"))
        if cost_price>100000:
            print("Road Tax is 15%")
            x = (15/100)*Cost_Vechile
            print("Your Road Tax is ",x)

        elif cost_price>50000 and cost_price<=100000:
            print("Road Tax is 10%")
        elif cost_price<=50000:
            print("Road Tax is 5%")

Enter the Cost Price of Bike:2000000
Enter the Cost of Vechile:150000
Road Tax is 15%
Your Road Tax is 22500.0
```

About Floor and Ceil

```
In [ ]: in case of floor division
        if both operand are integer then floor division will return answer in the form of integer
        if atleast one operand is in the form of float then floor division will return answer as float
```

```
In [1]: import math
        print(math.floor(3.98))
        print(math.ceil(3.98))

3
4
```

```
In [ ]:
```