# Conditional statement

In [1]:
```
if True:
    print('Hello')   # indentation is always 4 spaces
```

```
Hello
```

In [2]:
```
if True:
print('Hello')   # min 1 space indentation is required for if function
```

```
  Cell In[2], line 2
    print('Hello')
    ^
IndentationError: expected an indented block after 'if' statement on line 1
```

In [3]:
```
if True:
 print('Hello')
```

```
Hello
```

In [4]:
```
if True:
    print('Hello')

print("How are you?")
```

```
Hello
How are you?
```

In [6]:
```
if False:
    print("I'm fine")

# no print or return for False
```

In [7]:
```
if False:
    print("I'm fine")

print("How are you?")
```

```
How are you?
```

In [8]:
```
if True:
    print("Data Science")
else:
    print("I'm fine")

print("How are you?")
```

```
Data Science
How are you?
```

In [ ]:
```

```

# Python code to check a number is even or odd ?

In [9]:
```
x = 4

r = x % 2

if r == 0:
    print('Even number')
```

```
Even number
```

In [10]:
```
x = 5

r = x % 2

if r == 0:
    print('Even number')

# no output for odd numbers as no condition is given
```

In [11]:
```
x = 5

r = x % 2

if r == 0:
    print('Even number')

if r == 1:
    print('Odd number')
```

```
Odd number
```

In [ ]:
```
# no multiple ifs in a code in any organisation , we use if-else
# program execution doesnot escape for multiple if's => runs all IF's even thoug
# memory consumption increases and long time for code execution
# if-else skips extra memory allocation and faster execution
```

In [12]:
```
x = 5

r = x % 2

if r == 0:
    print('Even number')
else:
    print('Odd number')
```

```
Odd number
```

In [13]:
```
x = 6

r = x % 2

if r == 0:
    print('Even number')
print('Odd number')
```

```
Even number
Odd number
```

In [15]:
```
x = 6

r = x % 2
```

```
if r == 0:print('Even number')   # no need of print fn in new line
else:print('Odd number')         # code runs even if its in the same line
```

```
Even number
```

In [16]:
```
x = 5

r = x % 2

if r == 0:
    print('Even number')

if r != 0:
    print('Odd number')
```

```
Odd number
```

In [18]:
```
x = 15
r = x % 2

if r == 0:
    print('Even number')
else:
    print('Odd number')
```

```
Odd number
```

In [ ]:
```
# if r == 0: print('Even number')
# else: print('Odd number')

# single block or single suite
```

# Nested if

In [ ]:
```
# if-else inside if-else => Nested if
```

In [19]:
```
x = 15
r = x % 2

if r == 0:
    print('Even number')
    if x>7:
        print('Greater number')
else:
    print('Odd number')
```

```
Odd number
```

In [20]:
```
x = 16
r = x % 2

if r == 0:
    print('Even number')
    if x>7:
        print('Greater number')
else:
    print('Odd number')
```

```
Even number
Greater number
```

In [24]:
```python
x = 15
r = x % 2

if r == 0:
    print('Even number')

    if x>7:
        print('Greater number')
    else:
        print('Smaller number')
else:
    print('Odd number')
```

```
Odd number
```

In [23]:
```python
x = 6
r = x % 2

if r == 0:
    print('Even number')
    if x>7:
        print('Greater number')
    else:
        print('Smaller number')
else:
    print('Odd number')
```

```
Even number
Smaller number
```

In [25]:
```python
x = 2

if x == 1:
    print('One')
if x == 2:
    print('Two')
if x == 3:
    print('Three')
if x == 4:
    print('Four')
```

```
Two
```

In [26]:
```python
x = 3

if x == 1:
    print('One')
if x == 2:
    print('Two')
if x == 3:
    print('Three')
if x == 4:
    print('Four')
```

```
Three
```

In [27]:
```python
x = 4

if x == 1:
```

```
    print('One')
if x == 2:
    print('Two')
if x == 3:
    print('Three')
if x == 4:
    print('Four')
```

```
Four
```

In [28]:
```
x = 2

if x == 1:
    print('One')
elif x == 2:
    print('Two')
elif x == 3:
    print('Three')
elif x == 4:
    print('Four')
```

```
Two
```

In [29]:
```
x = 10

if x == 1:
    print('One')
elif x == 2:
    print('Two')
elif x == 3:
    print('Three')
elif x == 4:
    print('Four')

else:
    print('Number not found')
```

```
Number not found
```

In [ ]:
```
# code to check for +ve & -ve numbers
```

In [30]:
```
num = int(input("Enter a number:"))

if num > 0:
    print('Positive number')
elif num < 0:
    print('Negative number')
else:
    print('Zero')
```

```
Positive number
```

In [31]:
```
num = int(input("Enter a number:"))

if num > 0:
    print('Positive number')
elif num < 0:
    print('Negative number')
else:
    print('Zero')
```

```
Negative number
```

In [32]:
```
num = int(input("Enter a number:"))

if num > 0:
    print('Positive number')
elif num < 0:
    print('Negative number')
else:
    print('Zero')
```

```
Zero
```

In [ ]:
```

```