Python

Q1 >> What is python

C	Python

→ datatype
int a = 4;
int b = 5;
 	
char str[20];
str = "Hello";
 	
printf("%d", a);
 	
int n;
scanf("%d", &n);
	a = 4
	b = 5
	str = "Hello"
	
	print(a) → 4
	print(b) → 5
	print(str) → Hello
	
	n = input("Enter value")
	print(n)

Operators

1 → Arithmetic operators

+	a+b a=4 b=5 a+b = 9
−	a−b = −1
*	a*b = 20
%	a%b = 4
/	a/b = 0.8
// → floor	a//b = □
**	2**3 = 2^3 = 8

5)4 (0.8

0.4 → floor → 0 | ciel → 0.4 → 1
0.6 → floor → 0 | 0.6 → 1

2 -> Assignment operators

=	a = 4	
+=	a = a + b	a += b
-=	a = a - b	a -= b
*=	a = a * b	a *= b
/=	a = a / b	a /= b

i++ ✗ i = i + 1 ✓ i += 1 ✓

3 -> Comparision operators

!=
==
>=
<=
<
>

True / false

4 -> logical operator -> and or not

a = True
b = False

C	Python	
a && b	a and b	-> False
a || b	a or b	-> True
a ! b	not b	-> True

5 -> Bitwise operator

6 -> Membership

in, not in

7 -> identity operators

is, is not

Conditional statment → if else
→ if elif --- else
⇒ nested if

```
n=7
ex ⇒ if n>5:
        print('Hello')
     else:
        print('Hi')
```

---

loop statment
- → for loop
- → while loop

C

```
1 2 3 4 5
for(i=1; i<=5; i++)
{
printf("%d", i)
}
```

```
1 2 3 4 5
for i in range(1,6):
    print(i)
```

---

do while ✕

```
sum=0
n=123
while n!=0:
    d=n%10
    sum=sum+d
    n=n//10

print(sum)
```

while loop

```
while condition:
    statment
```

String in Python (' ') , (" ") , (""" """)

```
n = "Anup"
n1 = 'Anup'
n2 = """Anup"""
```

> ⇒ String

Basic string operation

1) `name = "Anup"`

`print(len(name))` ⇒ 4

`Print(name[0])` ⇒ A

`print(name[-1])` ⇒ e

```
-5 -4 -3 -2 -1
H  E  L  L  O
0  1  2  3  4
```

Slicing ..

Syntax → `sequence[start : stop : step]`

start ⇒ index to begin

stop ⇒ index to end

step ⇒ how many steps to move

```
tex = 'Hello World'
      0123456789 10
```

`print(text[1:5])`
`print(text[4:])`

`print(text[:8])`
`print(text[0:9:2])`

print(text[::2])

print(text[::-1]) => reverse of a whole string