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DAY-4 # Rock, paper, Scissor

Today concepts → 1. Randomisation
2. Python lists.

→ Randomisation → So, what you mean by word random, it's such like unpredictable, unexpected and alot more.

ex - If you want select number b/w 1 to 10 by computer so, output will be 1 or 2 or 5 or 6.

It mean any number will be print in output, so it basically know as Randomisation.

- In python we use Random module, which help us to generate Random number or many.

→ First step is to →> Import Random

↓

It basically we import Random modules for which we take help from this module.

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→ Function are helpful to generate random number →

① ~~rand~~ random.randint(1, 10)

↳ This function help to random number b/w a to b # a and b should be int.

Example →

```
Import Random
range_random = random.randint(a:1, b:10)
print(range_random)
```

output → 2 or 4 or 8 or 10

basically any number b/w range of 1 to 10

Bonus → It also included 10 also.

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2. random.random() → This program function help to generate random number b/w 0 to 1, basically it generate float number.

Example -

```
Import Random

float_random = random.random()

print (float_random)
```

Output → 0.5 or 0.1245 or 0.789.

Bonus → random.random() not include 0 but it's include 1.

- If do this random.random()*10 the output would be 1.25 or 4.45 or 5.67, basically it convert the range of 0 to 1 float number into 0 to 10 float number.

- It can be change as per our design

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3. Random.Uniform(a,b) - It's generate float number between a to b.

example →

```
Import random
float2_random = random.uniform(20,30)
print(float2_random)
```

output → 28.745 or 25.456 or 27.4589

Important ⇒ Modules ? → It simply say that in python sometimes it so boring to write some code, something complicate code again and again.

To resolve the problem we use modules that split the particular code in form of modules

It basically split code in form of module.

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→ List → It simply collection of ~~variable~~ data in a single variable

Ex → L = ["A", "B", "C"]
↓
List

Doubts → 1. Why list is important
2. Is we add any new data in list
3. Is we can modify any data in list
4. What was the indexing in list.

Ans 1 → As we know store multiple relevant data into a variable its time taking and make a head blust.

a = "x"
b = "z" ⟹ not a good way
c = "y"

Instead, a = ["x", "y", "z"]

Ans 2 → Yes, we can add new data in list by using append.

Ex → a = ["x", "y", "z"]

a.append("A")

output a = ['x', 'y', 'z', 'A']

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It simple add the item at the last.

Ans 3 → Yes, we can easily modify the existing data.

ex → L = ['x', 'y', 'z']

L[0] = 'A'

output → L = ['A', 'y', 'z']

Ans 4 → Indexing in list.

L = ['x', 'y', 'z']

0 1 2 → positive indexing

-3 -2 -1 → Negative indexing

by using indexing we can easily access any data.

pc = L[0]

output → X

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Bonus → random.choice() help to generate any seq which we want to do.

ex. random.choice(0, -1, 1)

output → 0 or -1 or 1

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