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Lesson 1
Introduction

Q1 What is Python ?
= Python is a high-level, interpreted programming language.
It's used to tell the computer what to do - in an easy, human-like way.

Q2 Why is Python so popular ?
= Here's why everyone - from beginners to big tech companies - love Python :

1. Easy to learn & read = code looks like plain English.
2. Versatile = used in web development, data science, AI, automation etc
3. Beginner-friendly - you don't need any prior coding experience.
4. Cross-platform = work on windows, mac, linux and even Android (like my own Phone)
5. Huge community = millions of People use it so you'll always find help.

Q3 Where is Python used ?

Area	Example
web development	Insta, youtube (use Python frameworks like Django flask.)
Artificial Intelligence (AI)	chatGPT, Alexa, self-driving cars.
data science	Analyzing data, making graph reports.
Automation	Auto email sending, file renaming, daily tasks
Game development	Basic 2D/3D gaming using libraries like Pygame.

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- Python is Interpreted, not Compiled
  unlike some other languages like C or Java,
  Python does not need to be Compiled before running
  you just write → run → see output instantly

// code 01 //
print("Hello, vidhi")

/ Output
Hello, vidhi

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Q1 Print any kid Poem

Ans Print(''' Poem . . .
. . . .
. . . . .
. . . . . ''')

output
Poem . . .
. . . . .
. . . . .

#comment maine ''' triple codes use kiya taki sab Print ho Jaa a ukak line nahi

{ # Singl line comment
''' / """ multi line comment }

Q2 make take by using ~~Rstudio~~ REPL

Ans R - Read
E - Eval
P - Print
L - Loop

"Comment ye Python ka "Interactive mode" hota ha. line-by-line code likh kar output data"

Code (go to terminal type Python then type code)

PS C:\vsus\iitia> Python
. . . . .
. . .

```
>>> 5*1
5
>>> 5*2
10
. . . . .
```

output
5
10
15
20
25
30
35
40

Q5 Install an External module and use it to perform an function of your interest.

A # go to termila Install Pyttsx3

Code

```
import Pyttsx3
engine = pyttsx3.init()
engine.say("I will speak this text")
engine.runAndWait()
```

Q4 Write a Python ~~Report~~ Print the contents of a directory using the OS module, ~~now you, use~~ Search online for the function which does that

A # Main Chat gpt use Kiya hai

```
import os

# Specify the directory you want to list
directory_path = 'New folder' → # Jo folder chahiye yaha
# List all files and directories in the specified path
contents = os.listdir(directory_path)

# Print each file directory name
for item in contents:
    print(item)
```

/ Print(contents)

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Ch-2

Variables & datatype

Variable is a container (a box)

```
a = 1
b = 2
Print (a + b)
```

```
name = "harry"    # String " "
print (name)
```

datatype is the the Type of data which we store in variable.

```
a = 1      # a is an integer                    int
b = 5.22   # b is a floating point number       float
c = "Vidh" # c is a string                      Str
d = True   # d is a boolean variable
e = None   # e is a none type of variable
```

[rules of variables]

✓ Can contain alphabets, digits, and Underscores.
✓ Can start with alphabets and underscores.
✗ Can not start with digits
No space is allowed in variable name.

Operators in Python

1. Arithmetic operators : +, −, *, / etc
2. Assignment " : =, +=, −= etc
3. Comparison " : ==, >, >=, <, != etc
4. logical " : and, or, not

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operator

7 + 4 = 11

operands Result

Arithmetic operators

```
a = 7
b = 4
c = a + b
Print (c)
```

output
11

Assignment