

→ Application of Python :-

* Web Development :-

→ Used to build websites.

→ ex:- Instagram backend build using python.

* Data Science & Analytics :-

→ Used to analyze data, find patterns, and make decisions.

→ ex:- Companies uses python to understand sales trends.

* Machine learning & AI :-

→ Used to train models that predict, classify or generate things.

→ ex:- chatgpt, face detection, recommendation system.

* Automation / Scripting :-

→ Helps to automate boring Tasks.

→ ex:- Automatically sending emails, organizing files, renaming photos.

* Game development :-

→ Used to create simple games.

→ ex:- Snake game, racing gaming prototypes using python.

* Mobile App development:-

- Build mobile apps using frameworks like kivy.
- ex:- simple calculator

* Desktop Application development:-

- Used to make applications for windows / Mac.
- ex:- notepad-type apps, calculator

* Cyber Security & Ethical Hacking:-

- Security tools and scanners are built using python
- ex:- Password Testing, network scanning tools.

* Internet of Things (IoT):-

- Used to control sensors and devices.
- ex:- Smart home automation, robot, movements.

* Backend for Apps:-

- Python handles user data, login, payments etc..
- ex:- Backend of apps like dropbox.

→ COMMENTS in python:-

- * Comments are lines that python does not execute
- * They are used to explain the code to humans
- * Helpful for readability.

Type of comments:-

-line

① Single-line Comment

* Starts with

* Anything after # is ignored by python

ex :- `print("Hello") # This line prints Hello`
 ↳ Comment

② Multi-line Comment :-

- * Written using triple quotes """ " " "
- * Used to write longer notes.

ex :- `print("""kkhome""")`

This is a multi-line comment,
 used to explain larger parts of code
 """ "

→ KEYWORDS in python :-

- * Keywords are special reserved words in python.
- * You cannot use them as variable names.
- * They have a fixed meaning in python.

examples of python Keywords :-

- ① if - Condition
- ② else - otherwise
- ③ for - Loop over items
- ④ while - loop until condition become false.
- ⑤ def - To create a function
- ⑥ class - To create a class
- ⑦ return - send value from function
- ⑧ True/False - Boolean Values
- ⑨ None - No Value
- ⑩ and, or, not - logical operators
- ⑪ import - import Modules

ex:-

```
if True:  
    print("Condition is True")
```

```
def greet():  
    return "Hello"
```

```
print(greet())
```

Here, if - Keyword

def - Keyword

return, true also Keyword

- * They define rules and structure of python.
- * Without them python code donot work.
- * Grammar for python.