

## Comments

- \* Comments can be used to explain the code
- \* It makes the code more readable and understandable
- \* Execution of code can be prevented while testing it.

### Single line comments

Single line comments begin with the # character in python.

Anything that is written in a single line after # is considered as comment in python.

For example :

```
# This is a comment
```

### Multi line comments

There is no built-in mechanism for multi-line comments in python.

Multiple lines can be commented in python using docstrings.

For example :

```
""" This is a multiline  
comment """
```



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# Module

Module is a section of code that is added in as a whole or is designed for easy reusability

## Creating module

To create a module,  
The code is ~~save~~ saved with the file extension

`.py`

The name of python file becomes the name of module.

## Module in Python

In python,

A module can be considered as code library or a file that contains a set of functions which can be used in an application.

With the help of modules we can organise related functions, classes, or any code block in the same file.

The module contains the following components.

- \* Definitions and implementation of classes
- \* Variables
- \* Functions

## Using module

To incorporate the module into our program the

`import` keyword is used

To get only a few or specific methods or function from a module

`from` keyword is used

## Built-in Modules

- \* Python interactive shell has a number of built-in functions, which are loaded automatically when shell starts and are always available
- \* The built-in modules are written in C language and are integrated with python shell
- \* A number of pre-defined functions are available which are defined in these built-in modules
- \* `Ex@ print()` & `input()` for I/O
  - ② Number conversion functions, such as `int()`, `float()`, `complex()`
  - ③ Data type conversions such as, `list()`, `tuple()`, `set()`, etc.
- \* To display all available modules in python `help('modules')` command is used.

## Advantages

Reusability:

Working with modules makes the code reusable

Simplicity:

The module focuses on a small proportion of the problem, rather than focusing on entire problem.

Scoping:

A separate namespace is defined by a module that helps to avoid collisions between identifiers.

## User-defined Modules

- \* The user-defined modules are written by users at the time of program writing
- \* The module is first created and saved with extension `.py` and then accessed using `import` keyword
- \* Syntax for accessing the module is

`import module`

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