classmate
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→ FUNCTIONS :-

A Function is a reusable block of code that performs a specific task.
It helps to break a large program into smaller, manageable parts, making the program easy to understand.

* Write once, use many times
* code becomes cleaner
* No need to repeat the same code
* errors are easier to find and fix.

Types of Functions :-

1) Built-in Functions :-
Functions which are already provided by python.
ex :- print(), len(), input(), range(), sum(), etc...,

2) User defined functions :-
Functions created by programmer using def Keyword.
ex :- def greet():
print("Hello world!")

3) Lambda functions :-
These are nameless, single line functions created using the lambda Keyword.
→ Short functions without a name used for quick operations.
ex :- square = lambda x = x*x
print(square(5))

→ User defined functions: [def]

Syntax:

```
def function_name(p1, p2 ... pn):
    # Code Block
    return value
```

Methods to create a user defined functions:

1) Without input and without return value
* No parameters
* Does not return anything
* Only performs an action

Syntax:
```
def function_name():
    # Code Block
```

2) With input and without return value
* Takes parameters
* Does not return anything
* Used when function only needs to display the result.

Syntax:
```
def function_name(p1,p2):
    # Code Block
```

3) Without input and with return value
* No parameters
* Returns a value
* Useful when you want to use the returned value later.

(Syntax:
* No parameters
*)

Syntax:-
```
def function_name():
    # Code Block
    return value.
```

4) With input and with return value:
* Takes parameters
* Returns a value.
* Most commonly used type

Syntax:
```
def function_name(p1, p2):
    # Code Block
    return value
```