

Ch 2 : Variables and datatypes

A variable is a container to store some value in a program.

var = "string data" → <class 'str'> → string

var2 = 2.5 → <class 'int'> → Integer

var3 = 71.42 → <class 'float'> → float

var4 = True → <class 'bool'> → boolean

var5 = False → <class 'bool'> → boolean

var6 = None → <class 'NoneType'> → None

Python is smart enough to identify the datatype. You need not have to tell the datatype to python.

□ Rules for creating a variable :

- A variable name can contain alphabets, digits & underscore.
- The name must start with alphabet or underscore.
- It can't start with a digit.
- White space is not allowed in the name.
- It should not be a reserved keyword.


```
sn1 = "48"  
sn2 = "32"  
print(sn1+sn2)
```

Expectation: 80
Reality: 4832

Typecasting is helpful in such time.

Typecasting:

This is a way to change the type of a variable.

```
new = int(sn1) → "48" is now 48 which is <class 'int'>  
print(new * 2) → 96
```

```
new2 = str(32) → 32 is now "32"  
print(new2 * 2) → 3232
```

* All datatypes can be converted into string

```
a = 3  
b = 5  
print(a) → 3  
print(b) → 5
```

```
a, b = b, a → a and b will be interchanged !!!  
print(a) → 5  
print(b) → 3
```


Sometimes we want to take input from the user, we can use `input()` function

`user = input()` → input will be taken from user.

This function takes input as string.

`intUser = int(input())` → it will directly convert the string to integer

`input-with-prompt = input("Enter your name: ")`

This prompt will be displayed before giving input.

Q- Write a program to print the product of three numbers entered by the user.