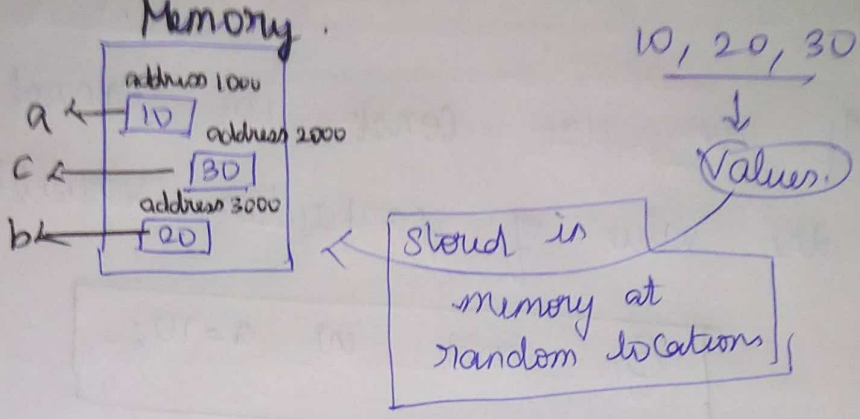
C_08 ⇒ Variables in C

Variable :-

* To store some values, in Computer memory we need a variable name.



* We cannot touch the memory locations or address in Computer to access the variable; instead we can give a name to those memory locations where values are stored.
* Those names are called Variable name.
* Variable is a named memory location to store the value of data.

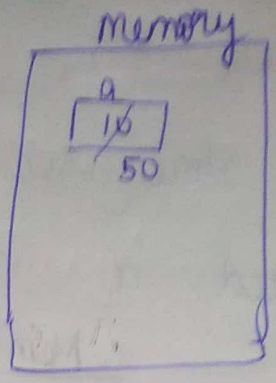
Eg:- c = a+b

30 = 10+20

Better to use 'sum'; meaningful name

* We can change the variable value.

```
Eg:  int a = 10;
     a = 50
```



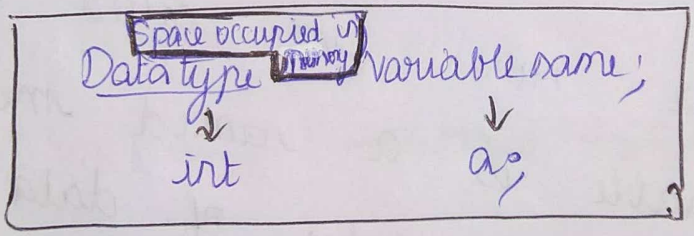
* If we use Const; we cannot change the value of particular variable.

```
Eg:  Const int a = 10;
```

Declaring a variable:

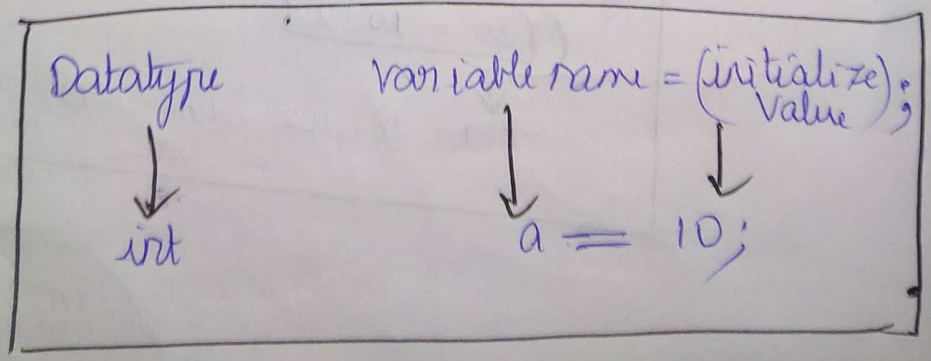
* Declaration depends on 2 things; type of data and variable name.

Eg:



Declaring and (Defining or Initializing) variable:

Eg:



* Data type tells type of data the variable is going to hold.

* Datatype may be intiger, float, character...

Inline Declaration and Initialization :

Eg:

```
int a=1, b=2, c=3;
```

Rules to Construct a Variable :

* Variable names should have only letters, numbers or underscore ; no special symbols.

Eg:

abc ✓	Sum $12 ✗
average ✓	12sum ✗
Sum12 ✓	Sum,12 ✗
Sum_12 ✓	
_Sum ✓	

num
Num
NUM

all different names of variable.

* We cannot use keywords as the variable names.

include
if
else
while

→ keywords can't be variable name.

...

Check the Variable names :-

Simple Interest ✓	SUM ✓
age ✓	_Jenny ✓
int_type	Jenny's_Lecture ✗
num12 ✓	float ✗
_b ✓	1ab ✗
	%a ✗