«Programming»

Lecture 3

* Pow function: function used to find the power and it needs a library Called <math.h>.

- Example: write a program to solve this equation: $y = x^5 + x + 20$

→ input: value of x
processing: $y = x^5 + x + 20$
output: value of y

- program:

```
#include <iostream.h>
#include <math.h>
main()
{
  int x,y;
  Cout << "please Enter value of x" << "\n";
  Cin >> x;
  y = pow(x,5) + x + 20;
  Cout << "result =" << y;
}
```

* Note: if we write int main() not main(), we must end the program with return 0;

* Setw function: function used to reserve places in the memory and start writing from the right and it needs a library Called <iomanip>

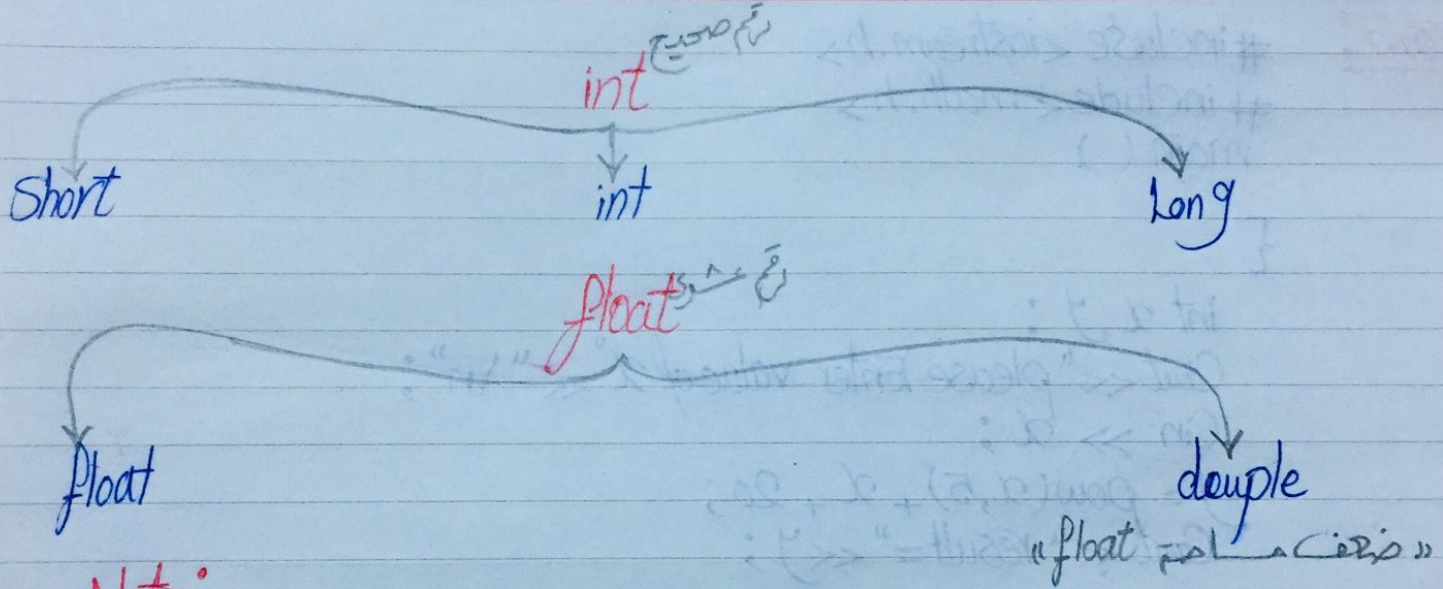
- Example: Setw(10) → means reserve 10 places.

- Example:

```
#include <iostream.h>
#include <iomanip.h>
main()
{
  Cout<<Setw(10)<<"Cairo"<<Setw(5)<<"AA";
}
```

					C	a	i	r	o				A	A

→ Look at Ex.7 in Sheet 1.



* Note:

- int Sum → يعرف متغير
- int Sum() → يعرف دالة

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* Reminder * باقي القسمة

→ 5/2 = 2
5%2 = 1

→ 9/2 = 4
9%2 = 1

→ 9/3 = 3
9%3 = 0

→ 1/3 = 0
1%3 = 1

* Note :-

→ Small number / Large number = 0
Small number % Large number = Small number

* Priority of Solving Equations *

1- Power, brackets
2- X, /, %
3- +, -

- Example:

→ 3 * 7 % 4 = 21 % 4 = 1
→ 3 + 4 % 5 = 3 + 4 = 7

* Ex16, Sheet1 :

```
int n;
float x = 3.8;
n = int (x)
Cout << "n =" << n;
```

- What is the output?

→ n = 3

* Note :-

→ $\sqrt{x}$ written as → sqrt(x)