

# Pointer

- Pointer is address variable
- It can store the address of data
- Pointer are used for accessing heap memory
- 5 Arithmetic operations are allowed pointer
  - $p++$  - move pointer to next element
  - $p--$  - move pointer to previous element
  - $p+k$  gives address of kth element from pointer location to right
  - $p-k$  gives address of kth element from pointer location to left
  - $q-p$  gives number of elements between 2 pointers p and q
- Pointers can be of many levels
- Double pointer is used for accessing 2D arrays

## Program to Demonstrate Pointer Syntax

```
#include <iostream>
using namespace std;
```

```
int main()
{
    int a=10;
    int *p=&a;

    cout<<a<<endl;
    cout<<&a<<endl;
    cout<<p<<endl;
    cout<<*p<<endl;

    return 0;
}
```