What is the purpose of Data Hiding?

- Data hiding is mistaken as data security.

- By hiding data a programmer can avoid mishandling of data by the code outside the class.

- Data is accessible only within a class.

- Only the functions of a class, knows what processing should be done on that data

Encapsulation vs Abstraction

- A Class is used for Encapsulation as well as Abstraction

- **Encapsulation** means combining related data members and functions together.

- Encapsulation is achieved using a class.

- **Abstraction** means hiding data and showing required functions.

- Abstraction is achieved using encapsulation and data hiding. Private and public.

structure vs class

- C++ supports both structure and class

- **structure** in C++ can have data members and member functions.

- All members of a structure are public by default.

- **class** can contain data members and member functions

- All members of a class are private by default.

Where the class in stored?

- In C++, class is not stored in main memory

- All member functions of a class are stored in Code section at loading time.

- If an object of a class is created inside a function then memory for all data members will be created in a stack of a function.

What is "this" pointer?

- It represents current object.

- It is useful in avoiding variable name conflict.

Example for current object.

```cpp
class Test{
    private:
        int value;
    public:
        void fun(int x){
            this->value=x;
        }
};
int main(){
    Test t1,t1; // both t1 and t2 are having "value"
    t1.fun(10); // "this" inside fun means "value" of t1.
    t2.fun(20); // "this" inside fun means "value" of t2.
}
```

Example for variable name conflict.

```cpp
class Test{
    private:
```

```cpp
        int value;
    public:
        void fun(int value){
    // here parameter name and data member name is same
"value" to access data member "this" is used.
            this->value=value;
        }
};
```