

C++ in depth

## Structure in C++

Part-2



Saurabh Shukla (MySirG)

# Agenda

- ① Recall Structure in C language
- ② Use structure of C in C++ program
- ③ New rules in C++ Structure.

# What is new in C++ Structure?

- ① use of struct keyword is optional on every use of non primitive type
- ② structure can have functions too as members
- ③ use of access specifiers for the members of structure.

# Encapsulation

An act of combining properties and methods related to the same entity is known as Encapsulation

property = fields = Data member = attribute = Variable  
methods = functions = procedure = service = function

# Data Hiding

## Data Security

```
int a;  
float b;
```

```
f1() { ... }
```

```
f2() { ... }
```

```
f3() { ... }
```

```
f4() { ... }
```

```
f5() { ... }
```

## Access Specifiers

→ private

→ protected

→ public



Can be applied only  
on members

# Abstraction

Hiding implementation details.

By defining methods in structure and making them public, is allowing users of the structure to call them but they can't see the implementation details of the function, this is abstraction.

```
cout << "Hello";
```

Book  
↑  
Structure

b1  
↖ object

state of an object should only be changed via methods of that object

b1

| bookid               | title                | price                |
|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> |

b2

| bookid               | title                | price                |
|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> |

Set of property values in an object is called its state.