

# Constructors - FAQ

## What is a default constructor?

- A constructor which doesn't take any parameters is called as default constructor.
- There are 2 Types of default constructors
  1. Compiler provided
  2. User-defined

## Compiler provided default constructor

- If we don't write any constructor, compiler will provide a default constructor.
- It will create the object, but doesn't initialise data members.
- If we define our own constructor, then compiler will not provide default constructor.

## Why we write constructor?

- We can initialise the data members of an object.
- If data members are initialised then we can use the object.

## Type of Constructors

There are 3 type of constructors.

1. Non-parametrised (also called as default)
2. Parameterised
3. Copy constructor

## **Do we have to write all constructors ?**

- It is better to write all constructors.
- I am not writing it in every lecture because I have to focus on actual topic.

## **Why copy constructor should take reference?**

- If parameter is call by value then it will create new object for parameter.
- Constructor will call constructor again to create the object of parameter.
- It will be become a recursive call to constructor.

## **Can we initialise the variables directly?**

- Yes you can initialise. But values will always be same.
- Constructor will allow us to initialise with desired values.

## **Can we read values inside the constructor using cin?**

- If main() is creating object then, it is better to read values inside main and pass values to constructor.
- Using cin means, interacting with user. If user interaction is done in main() then it is a good design.

## **Copy constructor vs Assignment operator**

their working is same but usage is different.

```
Rectangle r1(10,5);
```

```
Rectangle r2(r1); // copy constructor is called
```

Rectangle r3=r1; // assignment operator is called