Oops concepts

1.abstraction

A mechanism to provide the details about the essential features without describing the full details

Eg: when you enter into the website all you need to login and use , so you can put user id and password only and you don’t know about the backend process and functionality. So all is abstracted from you

2. Encapsulation

A mechanism of binding the object (field) and behaviour (method) together into single unit. The encapsulation is mainly achieved by the creating classes

Class is nothing but like a container / capsules , which encapsulate ( binding) the set of fields and methods

3.Inheritance

It is a mechanism of acquiring the features and behaviours of a class by a another class. The class whose members are inherited is called the base class ( parent class), and the class that inherits those members are called the derived class (child class)

4.Polymorphism

It is ability of an object to behave in multiple ways. Eg: smart phone is a single object but it can do multiple tasks like making phone call, sending emails, playing music so on. This is called polymorphism

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Example using class and object in c#

Create student details and show.

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace classandobject

{

//fields

class student

{

public string name;

public int id ;

public string address;

public void ShowDetails()

{

Console.WriteLine("Student Details");

Console.WriteLine("name: {0}, id : {1}, address: {2}", name,id, address);

}

}

//methods

class Program

{

static void Main(string[] args)

{

student st = new student();

st.name = "vjprathap";

st.id = '1';

st.address = "pondicherry";

st.ShowDetails();

Console.ReadKey();

}

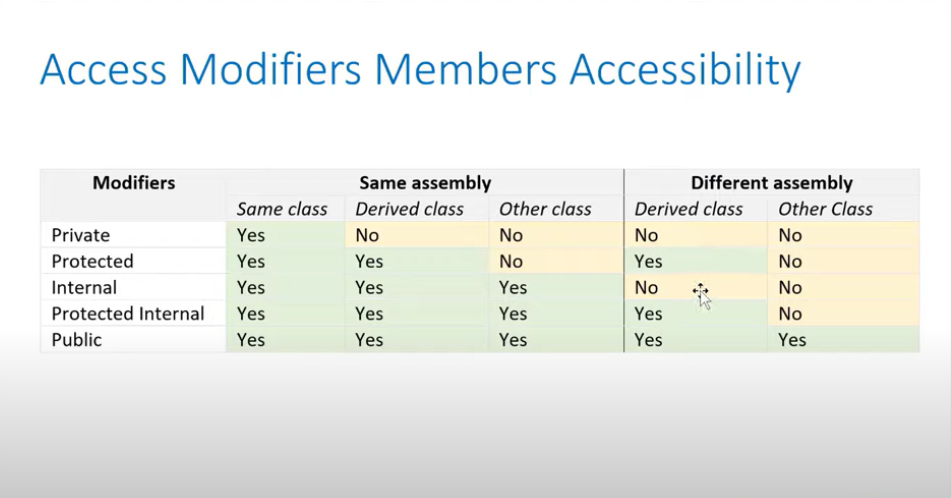
}

}

Access modifiers

Access modifiers as called as access specifiers which is different types like

Public ( we can access the method or field from anywhere eventhough the another class also) , private ( which is like accessing inside the class only so we cannot access from another class) , protected , internal , protected internal



Constructors

Constructor is a special type of a function / method which as a same name and its class.

It cannot have return type and also not have void type

It is responsible for data members and storage variable .

It has different types of constructor

1.default 🡪 it is normally taken when no constructor is set which is called default constructor. The default constructor has a differently saves for different datatype eg: for int it will saving a 0, for string it is saving a empty

Inheritance

Method

Property

Structure

Enum

Attributes