**Prototype Design Pattern**

**Define Prototype Design Pattern:**

As per the GoF Definition, “Prototype Design Pattern specifies the kind of objects to create using a prototypical instance, and create new objects by copying this prototype”.

To simplify the above definition, we can say that, the Prototype Design Pattern gives us a way to create new objects from the existing instance of the object. That means it clone the existing object with its data into a new object. If we do any changes to the cloned object (i.e. new object) then it does not affect the original object.

**\*\*\*** The Prototype Design Pattern is unique among the other creational design patterns as it doesn’t require a class instead it requires an end object.

**Understanding Object Cloning:**

When we talk about object cloning it means it is all about the call by value. So, if we do any changes to one object then it will not affect the other object. Let us see how to clone the object to another object. To do so, C# provides one method i.e. MemberwiseClone which will create a new complete copy of the object.

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* The MemberwiseClone method is part of the System.Object class and creates a shallow copy of the given object.
* MemberwiseClone Method only copies the non-static fields of the object to the new object
* In the process of copying, if a field is a value type, a bit by bit copy of the field is performed. If a field is a reference type, the reference is copied but the referenced object is not.