**Q: Difference between static and non-static keyword?**

**ANSWER:**

|  |  |  |  |
| --- | --- | --- | --- |
| **1** | **Access** | A static variable can be accessed by static members as well as non-static member functions. | A non-static variable cannot be accessed by static member functions. |
| **2** | **Sharing** | A static variable acts as a global variable and is shared among all the objects of the class. | A non-static variables are specific to instance object in which they are created. |
| **3** | **Memory allocation** | Static variables occupies less space and memory allocation happens once. | A non-static variable may occupy more space. Memory allocation may happen at run time. |
| **4** | **Keyword** | A static variable is declared using static keyword. | A normal variable is not required to have any special keyword. |
| **5** | **Available** | Static variable is like a global variable and is available to all methods. | Non static variable is like a local variable and they can be accessed through only instance of a class. |

**Q: Difference between Abstraction and Encapsulation?**

**ANSWER:**

|  |  |
| --- | --- |
| **Abstraction** | **Encapsulation** |
| Abstraction is the process or method of gaining the information. | While encapsulation is the process or method to contain the information. |
| In abstraction, problems are solved at the design or interface level. | While in encapsulation, problems are solved at the implementation level. |
| Abstraction is the method of hiding the unwanted information. | Whereas encapsulation is a method to hide the data in a single entity or unit along with a method to protect information from outside. |
| We can implement abstraction using abstract class and interfaces. | Whereas encapsulation can be implemented using by access modifier i.e. private, protected and public. |
| In abstraction, implementation complexities are hidden using abstract classes and interfaces. | While in encapsulation, the data is hidden using methods of getters and setters. |
| The objects that help to perform abstraction are encapsulated. | Whereas the objects that result in encapsulation need not be abstracted. |
| Abstraction provides access to specific part of data. | Encapsulation hides data and the user cannot access same directly (data hiding. |
| Abstraction focus is on “what” should be done. | Encapsulation focus is on “How” it should be done. |