1.Difference between a class and an object?

* A class is a template or blueprint used to define the properties of an object.
* Object is a real-world entity that as its own states and behaviours

2.What is Overloading and its uses?

Overloading allows different methods to have the same name, but different arguments where the arguments can differ by the number of input parameters or type of input parameters or both. Overloading is related to compile-time polymorphism.

uses of overloading:

#. Cannot overload a return type in Java  
#. The arguments to a function have to be different even when we overload static or final methods.  
#.  You can also overload the main method in Java.

3.What is Overriding and its uses?

The concept of subclass inheriting the method from the superclass and changing the method definesation by keeping the same declaration is known as overriding and it is related to run time polymorphism.

Uses of overriding:

1.cannot override a final method , private method , static method and override a constructor  
 2. can only override a method that as the same or stronger access than the current method.  
3. The return type of an overridden method must be the same.

4.What is the difference between Overloading and Overriding?

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| --- | --- |
| OVERLOADING | OVERRIDING |
| overloading is used to increase the readability of program | Method overriding is used to provide the specific implementation of the method that is already provided by its super class. |
| Performed within a class | occurs in two classes that have IS-A (inheritance) relationship |
| Parameter is different | Parameter are same |
| Overloading is done for compile time polymorphism | Overriding is done for run time polymorphism |

5.What is an Abstract class?

An abstract class is created by the keyword abstract .abstract class does not define any restrictions on its members .we cannot create an object for an abstract class ,however we can access properties of abstract class through inheritance and overriding .

6.What is an Interface? When and how can we use Interface in Java?

* An interface is a pure abstract body used to achieve 100% of abstraction
* All data members in an interface are public static and final. All member functions in an interface are public and abstract ,We cannot create an object for an interface .
* However, we can access the properties of an interface through inheritance and overriding
* We can inherit from a interface to a class using the keyword implements and using interface we can do multiple inheritance.