JAVA Chapter 6

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INTERFACES

Q: What is an interface? Explain.

An interface is similar to class. It is a collection of abstract method. Methods of interface do not have bodies.

- Interface provide a set of declared public methods that do not have method bodies. A class that implements an interface must provide concrete implementation of all methods defined by the interface, or it must be declared abstract.
- An interface is declared using keyword 'interface', followed by the name of the interface and a set of method declarations.
- It is not possible to directly instantiate an interface and create a member of the interface type.
- Instead a class must implement the interface to provide the necessary method bodies.
- Interface is used to achieve complete abstraction in java.
- Interface names should be adjectives. They should end with "able" or "ible" whenever the interface provides a capability, otherwise they should be nouns. Interface names follow the same capitalization.

Convention or class names:

public interface Serializable;

public interface SystemPanel;

Example:

```
public void eat( ) {System.out.println(“Mammal eats”);
public void travel ( ) {
System.out.println(“Mammal travels”);
}
public Int noOfLegs( ) {
return 0;
}
Public static void main(String args[ ] ) {
mamalInt m=newMammalInt( );
m.eat( );
m.travel;
    }
}
```

Q: Define implementation of an interface?

When a class implements an interface, you can think of the class as signing a contract, agreeing to perform the specific behaviours of the interface, the class must declare itself as abstract.

A class uses the keyword ‘implement’ to implement an interface.

Q: What is the difference between Abstract class and Interface?

Abstract Class	Interface
1. Abstract class is a class which contains one or more abstract methods, which has to be implemented by its sub classes.	Interface is a java object containing method declaration but no implementation. The classes which implement the interface must provide the method definition for all the methods.
2. Abstract class is a class prefix with an abstract keyword followed by class definition.	Interface is a pure abstract class which starts with the keyword "Interface".
3. Abstract class can contain concrete methods.	Interface contains all abstract methods and final variable declarations.
4. Abstract classes are useful in a situation that some general methods should be implemented and specialization behavior should be implemented by child classes.	Interfaces are useful in a situation that all properties should be implemented.

CHAPTER END

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