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Marwadi UNIVERSITY

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Subject.	OOP	Class.	2TK1
Semester	2	Roll No.	92100133020

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Subject Code: 01CT0105

Subject Name: Object Oriented Programming

B. Tech. Year – I (Semester II)

UNIT – 4

Worksheet – 4

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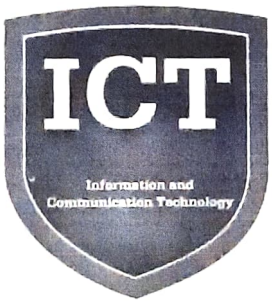

Information and Communication Technology Department,

Marwadi University

Q-1: What is the use of Interface in Java? Explain Interface with example.

Answer: We can fully abstract a class interface from its implementation. We can specify what a class must do but not how it does it. Interfaces are syntactically similar to classes, but they lack instance variables and their methods are declared without body. In practice, this means that you can define interfaces which don't make assumptions about how they are implemented. Once it is defined any number or class can implement an interface. Also one class can implement any number of interfaces. To implement an interface, a class must be create the complete set of methods defined by the interface. However, each class is free to determine the details of its own implementation.

Code :

```
interface I1
{
   void example ();
}
class A implements I1
{
  public void example ()
  {
    System.out.println ("Hello World");
  }
  public static void main (String s[])
  {
     A obj = new A ();
     obj.example ();
  }
}
```

Q-2: How can we extend one interface from another? Give Example.

Answer: To extend one interface from another we have to use keyword extends. The syntax is the same as for inherit classes, when a class implements an interface that inherit another interface, it must provide implementation for all method defined within the interface inheritance chain.

Code:

```
interface Parent
{
  void parent_Method ();
}
interface Child extends Parent
{
  void child_method ();
}
class A implements Child
{
   public void Parent ()
   { System.out.println ("method 1");
   }
   public void parent_Method ()
  {
    System.out.println ("method 2");
   }
   public static void main (String s[])
   {
      A obj = new A ();
      obj.parent_method ();
      obj.child_method ();
    }
}
```

Q-3: Differentiate.

Abstract Class	Interface
1) Abstract class not support multiple inheritance.	1) Interface supports multiple inheritance.
2) Abstract class have abstract and non-abstract method.	2) Inteface have only abstract methods.
3) Abstract class have final and non final variable and static and non static variable.	3) Interface have only static and final variable.
4) It can have objects	4) It cannot have objects.
5) Abstract class have methods like private, protected.	5) Interface have public by default.
6) abstract class Name { public abstract void name(); }	6) interface Name { void name(); }
7) Abstract class extends using "extends" keyword.	7) Interface implements using "implements" keyword.

References		
Q No	Book Name	Page No
1	Java - 2	165
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