

Q. 6. what is method overriding? Illustrate using a Suitable example.

Ans A Java method is a Collection of Statements that are grouped together to perform an operation. For example when we call the `System.out.println()` method the system actually executes several statements in order to display a message on the console.

A method has a declaration part and a method body. The declaration part consists of an access modifier, return type, method name and list of parameters. A method body contains code that performs the action. In general, a method has the following syntax.

⇒ Syntax

[Access modifier] return type method Name ([List of parameters])
{

Statement 1;

Statement 2;

.....

Statement N;

} // body of the methods

}

1) Access modifier

The modifier which is optional, tells the compiler how to call the method. This defines the access type of method. It can be public, private and protected. If we had nothing in the place of

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public, ~~private~~ protected or private, then this is called the default, or package private. This means that only the classes in the same package can invoke the method.

2) Return Type

A method may return a value. The return type can be one of the primitive types, a class type and if the method does not return a value, its return type must be void.

3) Method Name

This is the actual name of the method. This can be any legal identifier other than those already used by other items within the current scope.

4) Parameters.

A parameter is like a placeholder when a method is invoked, we pass a value to a parameter. This value is referred to as a actual parameters.

5) Method Body

The method body contains a collection of statements that defines what the method does.

⇒ Method overriding

Declaring a method in sub-class which is already present in

parent class is known as method overriding. Overriding is done so that a child class can give its own implementation to a method which is already provided by the parent class. In this case the method in parent class is called overridden method and the method in child class is called overriding method.

⇒ Method overriding example

Let us take a simple example to understand this. We have two classes A child class Boy and a parent class Human. The Boy class extends Human class. Both the classes have a common method void eat(). Boy class is giving its own implementation to the void eat() method or in other words it is overriding the eat() method.

⇒ PROGRAM

```
class Human
```

```
{ // override method
```

```
    public void eat()
```

```
    { System.out.println("Human is eating"); }
```

```
}
```

```
class Boy extends Human
```

```
{ // overriding method
```

```
    public void eat()
```

```
    { System.out.println("Boy is eating"); }
```

```
}
```


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public class main

{

public static void main (String args[])

{

Boy obj = new Boy();

// This will call the child class version of eat()

obj.eat();

}

}

⇒ OUTPUT

Boy is eating.