FACULTY OF ENGINEERING & TECHNOLOGY

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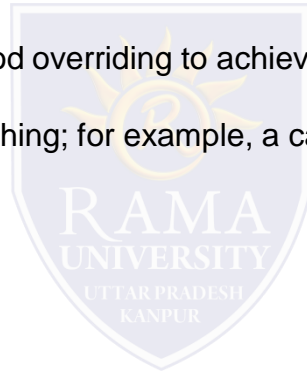
Polymorphism
Virtual Methods
Abstraction

Polymorphism

- If *one task is performed in different ways*, it is known as polymorphism.

    – For example: to convince the customer differently, to draw something, for example, shape, triangle, rectangle, etc.

- In Java, we use method overloading and method overriding to achieve polymorphism.

    – For example can be to speak something; for example, a cat speaks meow, dog barks woof,

Virtual Methods

- An overridden method is essentially hidden in the parent class, and is not invoked unless the child class uses the super keyword within the overriding method.

```java
/* File name : VirtualDemo.java */
public class VirtualDemo {

   public static void main(String [] args) {
      Salary s = new Salary("Mohd Mohtashim", "Ambehta, UP", 3, 3600.00);
      Employee e = new Salary("John Adams", "Boston, MA", 2, 2400.00);
      System.out.println("Call mailCheck using Salary reference --");
      s.mailCheck();
      System.out.println("\n Call mailCheck using Employee reference--");
      e.mailCheck();
   }
}
```

Abstraction

- *Hiding internal details and showing functionality* is known as abstraction.

    - For example phone call, we don't know the internal processing.

- In Java, we use abstract class and interface to achieve abstraction.