

## DAILY ASSESSMENT REPORT

<b>Date:</b>	<b>11 June 2020</b>	<b>Name:</b>	<b>Gagan M K</b>
<b>Course:</b>	<b>Java Tutorial for Complete Beginners</b>	<b>USN:</b>	<b>4AL17EC032</b>
<b>Topic:</b>	<ul style="list-style-type: none"> <li>• The toString Method</li> <li>• Inheritance</li> <li>• Packages</li> <li>• Interfaces</li> <li>• Public, Private, Protected</li> <li>• Polymorphism</li> <li>• Encapsulation and the API Docs</li> <li>• Casting Numerical Values</li> <li>• Upcasting and Downcasting</li> <li>• Using Generics</li> </ul>	<b>Semester &amp; Section:</b>	<b>6<sup>th</sup> sem &amp; 'A' sec</b>
<b>GitHub Repository:</b>	<b>Alvas-education-foundation/Gagan-Git</b>		

### FORENOON SESSION DETAILS

#### Image of session

**Course content**

- ☐ 22. Constructors 10min [Resources](#)
- ☐ 23. Static (and Final) 20min [Resources](#)
- ☐ 24. String Builder and String Formatting 20min [Resources](#)
- ☐ 25. The toString Method 11min [Resources](#)
- ☐ 26. Inheritance 14min [Resources](#)
- ☐ 27. Packages 14min [Resources](#)
- ☐ 28. Interfaces 19min [Resources](#)
- ☐ 29. Public, Private, Protected 20min [Resources](#)
- ☐ 30. Polymorphism 10min [Resources](#)
- ☐ 31. Encapsulation and the API Docs 11min [Resources](#)

**About this course**

Learn to program using the Java programming language

Report – Report can be typed or hand written for up to two pages.

### Java Programming:

- If you want to represent any object as a string, toString() method comes into existence
- The toString() method returns the string representation of the object.
- Inheritance is a mechanism in which one object acquires all the properties and behaviors of a parent object. It is an important part of OOPs.
- Encapsulation in Java is a mechanism of wrapping the data (variables) and code acting on the data (methods) together as a single unit.
- A generic method's body is declared like that of any other method. Note that type parameters can represent only reference types, not primitive types (like int, double and char).
- Type casting is when you assign a value of one primitive data type to another type.
- Upcasting (Generalization or Widening) is casting to a parent type in simple words casting individual type to one common type is called upcasting while downcasting (specialization or narrowing) is casting to a child type or casting common type to individual type.
- Java Generic methods and generic classes enable programmers to specify, with a single method declaration, a set of related methods, or with a single class declaration, a set of related types, respectively.

```
public class App {  
  
    public static void main(String[] args) {  
        Frog frog1 = new Frog(7, "Freddy");  
        Frog frog2 = new Frog(5, "Roger");  
  
        System.out.println(frog1);  
        System.out.println(frog2);  
    }  
}
```

- Inheritance Example:

```
public class Car extends Machine {  
  
    @Override  
    public void start() {  
        System.out.println("Car started");  
    }  
  
    public void wipeWindShield() {  
        System.out.println("Wiping windshield");  
    }  
  
    public void showInfo() {  
        System.out.println("Car name: " + name);  
    }  
}
```

- Polymorphism example:

```
public class App {  
  
    public static void main(String[] args) {  
        Plant plant1 = new Plant();  
        Tree tree = new Tree();  
  
        Plant plant2 = tree;  
  
        plant2.grow();  
        tree.shedLeaves();  
        //plant2.shedLeaves();  
        doGrow(tree);  
    }  
  
    public static void doGrow(Plant plant) {  
        plant.grow();  
    }  
}
```

**Note:**

- Today's "PCB Design" Session was completed yesterday and has been updated in Yesterday's report i.e. on 10 June 2020