Lecture – 16
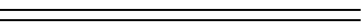
Object Class, and toString()
Method

Object Class

- Every class in Java is descended from the `java.lang.Object` class.
- If no inheritance is specified when a class is defined, the superclass of the class is `Object` by default.
- This means that all classes in Java are subclasses of Object, and inherit certain default behavior and methods from Object, such as the `"equals()"`, `"toString()"`, and `"hashCode()"` methods

```
Public class ClassName{
 …
}
```

Equivalent

```
Public class ClassName extends Object{
 …
}
```

toString() Method

- `toString()` method is instance method of `Object` **Class**
- **Signature of** `toString()`: `public String toString()`
- **Invoking** `toString()` **on an object returns a string that describes the object**

```
Loan loan = new Loan();
System.out.println(loan.toString());
```

`Loan@15037e5`

- This output is not informative or helpful.
- Usually we override the toString() method
  - It returns a descriptive string representation of the object.

Example

```java
public class Shape {
    private String color;
    private boolean filled;

    public Shape() {
        color = "red";
        filled = true;
    }

    public Shape(String color, boolean filled) {
        this.color = color;
        this.filled = filled;
    }
...
    @Override
    public String toString() {
        return "Shape[color=" + color + ", filled=" + filled + "]";
    }
}
```

```java
public class Demo{
    public static void main(String[] args){
        Shape s1 = new Shape("red", false);
        System.out.println(s1.toString());
        System.out.println(s1 );
    }
}
```

```
Shape[color=red, filled=false]
Shape[color=red, filled=false]
```