North South University
Department of Electrical and Computer Engineering
CSE 215L: Programming Language II Lab

Lab – 8: Composition, Inheritance

Objective:
- To understand inheritance and its usage
- To to utilize inheritance to ensure reusability of existing code

Inheritance has two purposes - reuse existing code, reduce code duplication.
When common traits are found among two classes, define one as general/base/parent class and the other as specific/child class. Child class inherits the properties of parent class and adds its own properties.

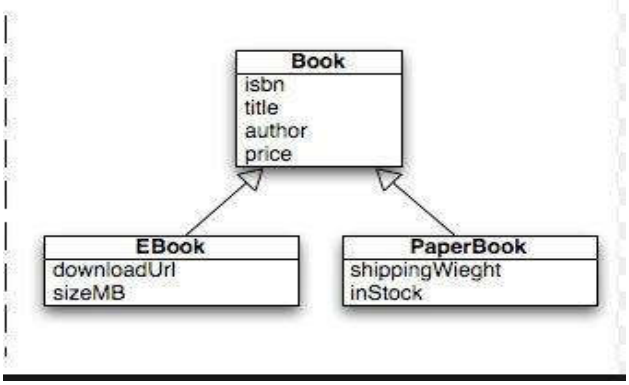
```
class A{
    private String name;
    public A(String name){....}
    public String getName(){....}
}
```

```
class B extends A{
    private int value;
    public B(String name, int value){
      super(name);
      this.value = value;
    }
    public int getValue(){....}
}
```

```
class Main{
    public static void main (String [] args){
      B b = new B("Thomas", 100);
      System.out.print(b.getName());
    }
}
```

super( ) is used to call parent constructor to pass the attributes of parent class.
super keyword itself indicates parent object.
Java doesn't support multiple inheritance.It supports multi level inheritance.
When child redefines a method from parent class, it's called method overriding. Ex: toString( )

Task:
1. Implement the following classes and test toString() for each child object.



2. Implement the following classes. Then create a Square object and print its area and perimeter.