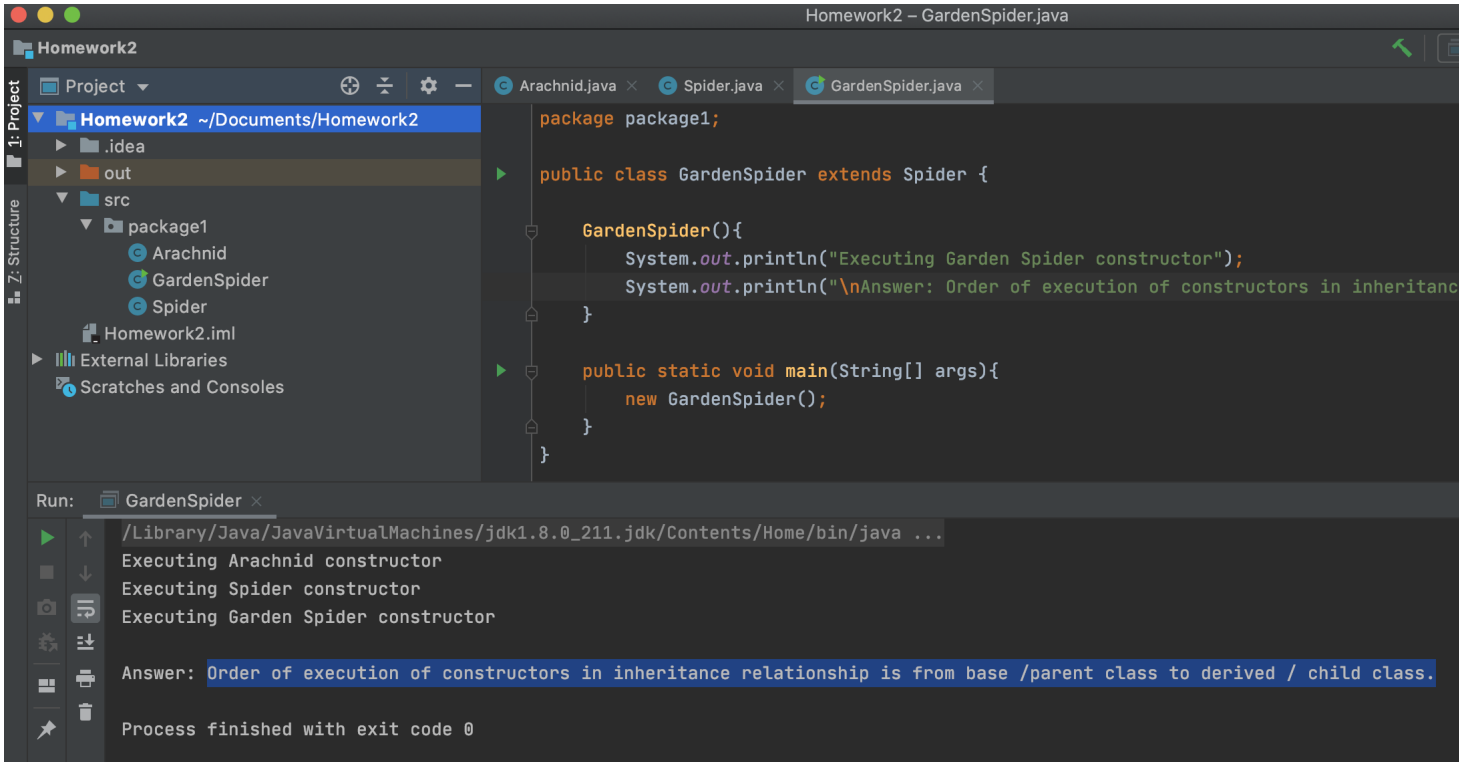
Chapter 6, #6 – a.

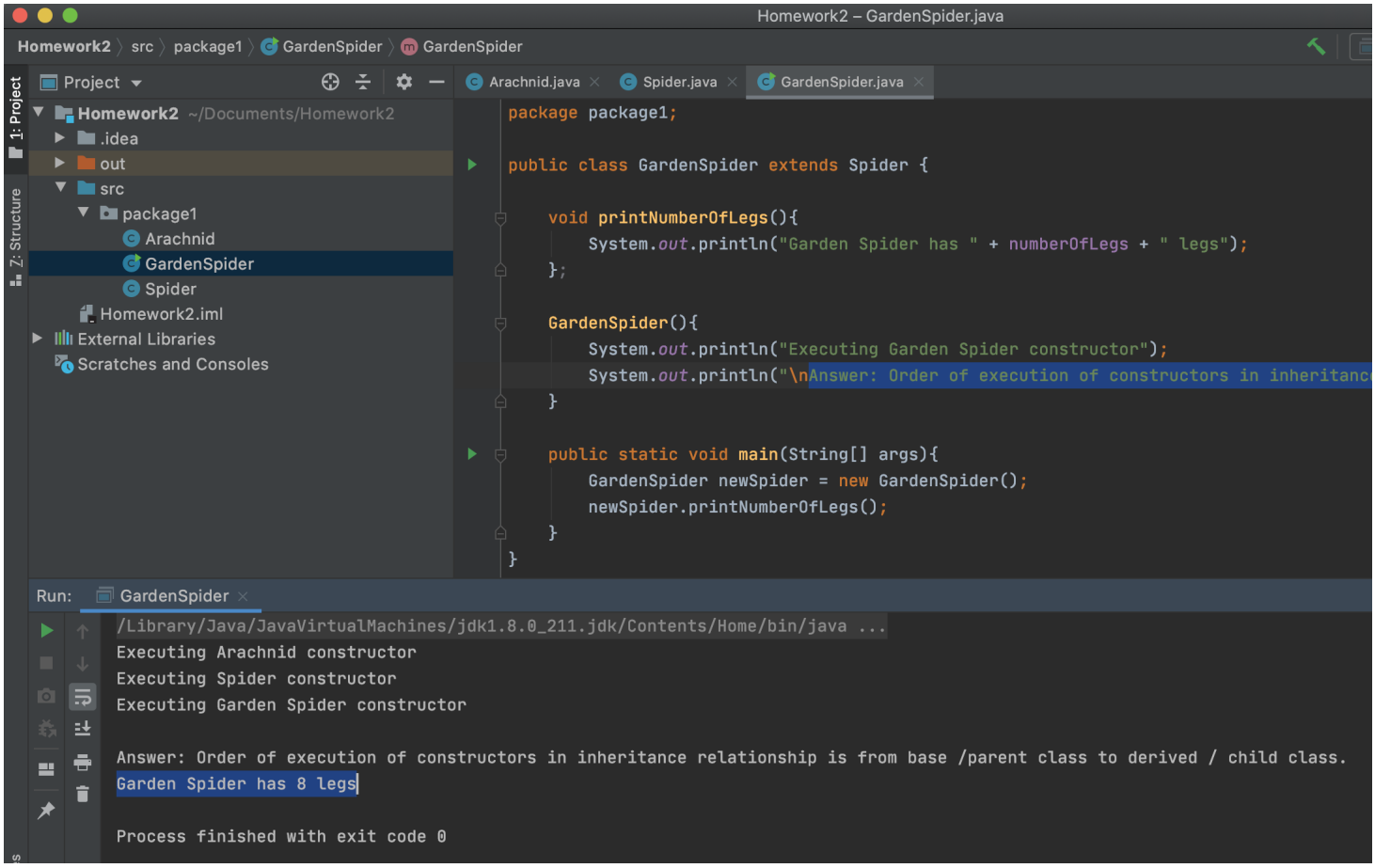
```
package package1;
public class Arachnid {
    Arachnid(){
        //constructor without parameters
        System.out.println("Arachnid has "+numberOfLegs+" legs");
    };
}
package package1;
public class Spider extends Arachnid {
    Spider(){
        System.out.println("Executing Spider constructor");
    }
}
package package1;
public class GardenSpider extends Spider {
    GardenSpider(){
        System.out.println("Executing Garden Spider constructor");
        System.out.println("\nAnswer: Order of execution of constructors in inheritance relationship is from base
/parent class to derived / child class.");
    }
    public static void main(String[] args){
        new GardenSpider();
    }
}
```



Answer:
Order of execution of constructors in inheritance relationship is from base /parent class to derived / child class.

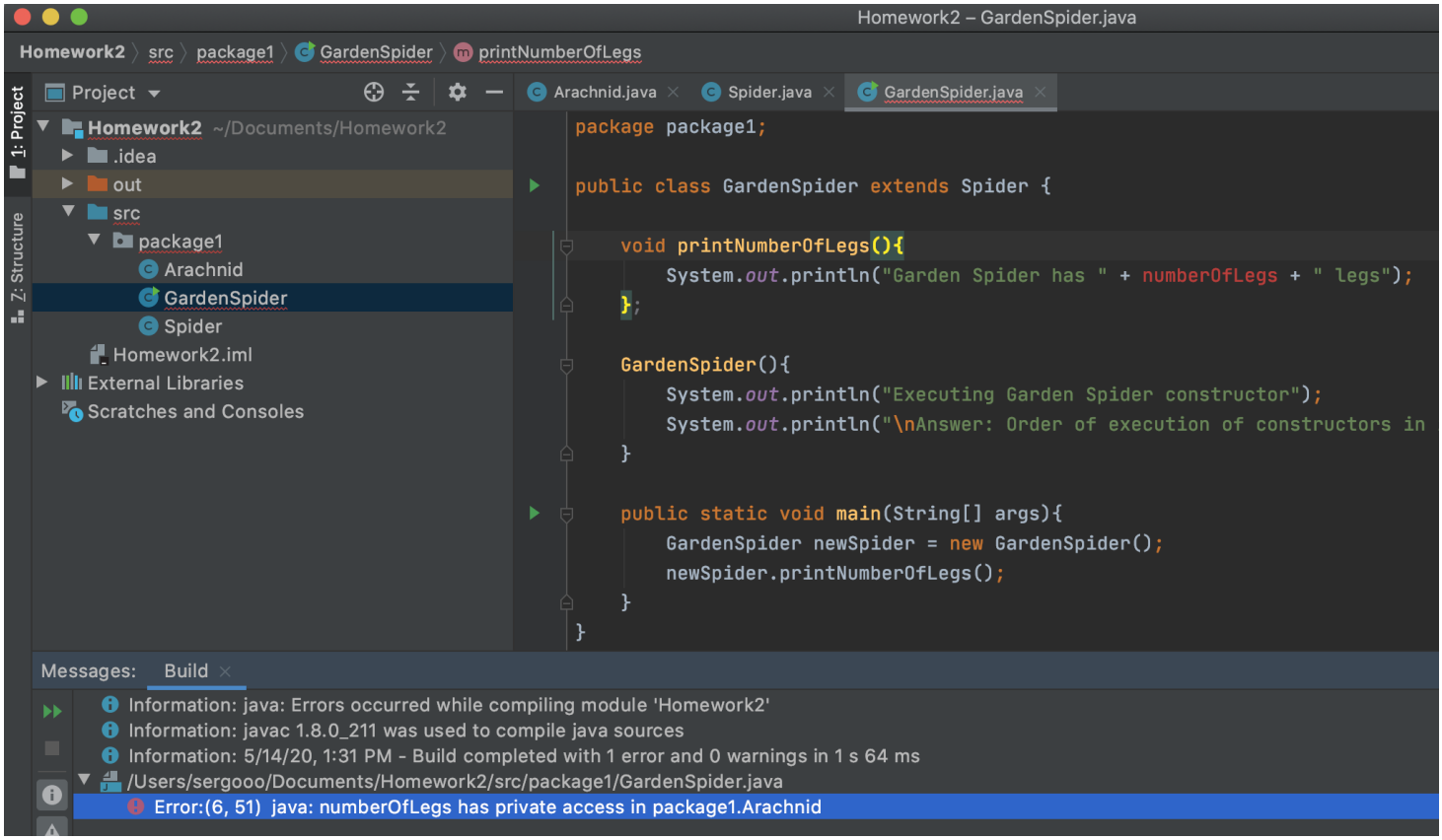
Chapter 6, #6 – b.

```
package package1;
public class Arachnid {
    protected int numberOfLegs;
    Arachnid(){
        //constructor without parameters
        numberOfLegs = 8;
        System.out.println("Executing Arachnid constructor");
    };
}
package package1;
public class GardenSpider extends Spider {
    void printNumberOfLegs(){
        System.out.println("Garden Spider has " + numberOfLegs + " legs");
    };
    GardenSpider(){
        System.out.println("Executing Garden Spider constructor");
        System.out.println("\nAnswer: Order of execution of constructors in inheritance relationship is from base
/parent class to derived / child class.");
    }
    public static void main(String[] args){
        GardenSpider newSpider = new GardenSpider();
        newSpider.printNumberOfLegs();
    }
}
```



Chapter 6, #6 – c.

– When I declared my numberOfLegs field as a private in the class Arachnid, then the field cannot be inherited by a subclass GarderSpider. Java throws the exception when execute the code:
Error:(6, 51) java: numberOfLegs has private access in package1.Arachnid



– When I declared my numberOfLegs field as a package-private in the superclass Arachnid, then the field can be inherited by a subclass GarderSpider because it is in the same package.