Assignment #4
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a.) Which method(s) are missing and what is/are their purpose and provide the pseudo code for these missing method(s).

Answer:

The method `notifyObservers()` in the Subject class is missing. The purpose of the method is to update all observers. The pseudo code would be :

```
methond notifyObservers()
forall observer do
observer.update();
```

Also in the contest we miss the ObserverDemo class, which will concrete the observer object.

b.) Design Quality: Indicate CBO, DIT, NOC for the above class model.

CBO(Subject)=1   CBO(ObeserverDemo) =1   CBO(Oberver)=1   CBO(BinOberver) =1
CBO(HexOberver)=1

DIT(Subject)=0   DIT (ObeserverDemo) =0   DIT (Oberver)=0   DIT (BinOberver) =1
DIT(HexOberver)=1

NOC(Subject)=0   NOC (ObeserverDemo) =0   NOC (Oberver)=2   NOC (BinOberver) =0
NOC(HexOberver)=0

Question #2

Interface Component:
```java
public interface Component {
public abstract void printDetails();
}
```
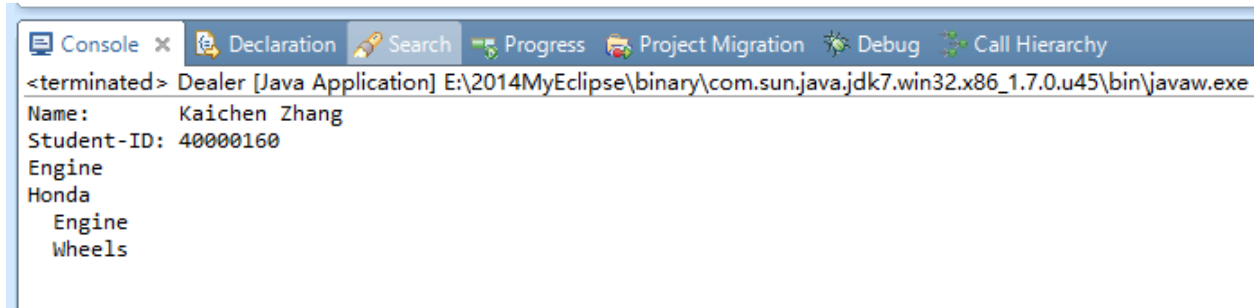
Class Part:
```java
public class Part implements Component  {
      private String string;
      public Part(String string) {
            this.string = string;
      }
      public void printDetails(){
            System.out.print(string+"\r\n");
      }
}
```

Class Car:

```java
import java.util.ArrayList;
import java.util.List;

public class Car implements Component{
    private String string;
    public List<Part> parts = new ArrayList<Part>();
    public Car(String string) {
        this.string = string;
    }
    public void printDetails(){
        System.out.println(string);
        for(Part element:parts){
            System.out.print("   ");
            element.printDetails();
        }
    }
    public void addPart(Part part){
        parts.add(part);
    }
}
```

The code is in the zip file.