Exercise 12

- Install **Findbugs** in your eclipse follow the guidance http://findbugs.cs.umd.edu/eclipse/

- Understand the program

- There exist several bugs in it

– **add the program in eclipse**

– **Expose the bugs**

– **Fix the bugs properly**

```java
public class Sample1 {
    public static void main(String[] args){
        int r = 0;
        String name = "bobby";
        name.replace('b', 'p');
        if(name.equals("pop")){
            r = 1;
        }
        System.out.println(r);
        int x = 2;
        int y = 5;
        double value =  x / y;
        System.out.println(value);
    }
}
```

Exercise 13

- Install **Findbugs** in your eclipse follow the guidance
  http://findbugs.cs.umd.edu/eclipse/

- Understand the program

- There exist several bugs in it

– **add the program in eclipse, expose and fix the bugs**

```java
import java.util.*;
public class Sample2 {
    private List actions;
    public Sample2(String startingActions) {
        StringTokenizer tokenizer = new StringTokenizer(startingActions);
        while (tokenizer.hasMoreTokens()) {
            actions.add(tokenizer.nextToken());
        }
    }
}
```

Exercise 14

- Install **Findbugs** in your eclipse follow the guidance http://findbugs.cs.umd.edu/eclipse/

- Understand the program

- There exist several bugs in it

– **add the program in eclipse, expose and fix the bugs**

```java
public class Dog {
    private String name;
    private String breed;
    @Override
    public boolean equals(Object obj) {
        Dog otherDog = (Dog) obj;
        if ((otherDog.name.equals(this.name)) && (otherDog.breed.equals(this.breed))) {
            return true;
        }
        return false;
    }
}
```