Object Oriented Programming with Java

Lab Practice:5

1. Consider the following code:
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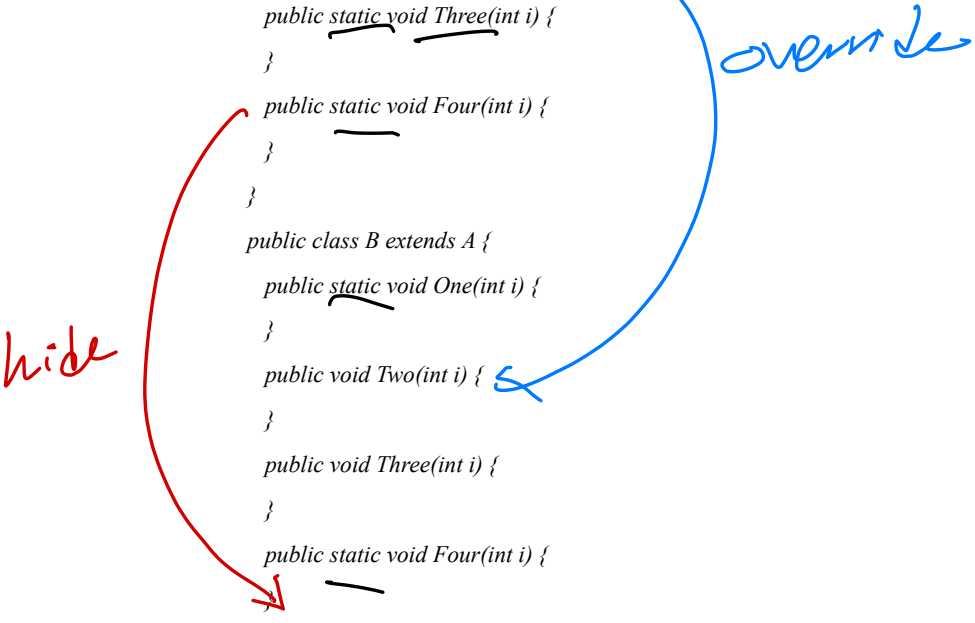
```
public class A {
  public void One(int i) {
  }
  public void Two(int i) {
  }
  public static void Three(int i) {
  }
  public static void Four(int i) {
  }
}
public class B extends A {
  public static void One(int i) {
  }
  public void Two(int i) {
  }
  public void Three(int i) {
  }
  public static void Four(int i) {
  }
}
```



Answer the followings:

a. Which method overrides a method in the superclass?
b. Which method hides a method in the superclass?
c. What do the other methods do?

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2. Create a class name 'Person'. The class contains two fields; String calle firstName and lastName and the following methods.
   a. default and alternate constructors in the class.
   b. two accessors (getter) to return the first and the last name.
   c. A method called setName to set the fields to the parameters passed.
   d. A method called print (should print first and last)
   e. A method name toString()
   f. a method name equals (pass an object of the Object class)
   g. two methods name copy and getCopy to make a copy of the Person object into another Person object.

   Note: the Person class is the super class for a class called employee. And this employee class should contain three fields (payRate, workHours, and deptName)

   Consider the following structure of code.

```
//Class Employee: subclass of Person

public class Employee extends Person {

  private double payRate;

  private double workHours;

  private String deptName;


  public final int HOURS = 35;

  public final double OVERTIME = 1.2;


   //default constructor

   public Employee() {

...

   }
```

```
    //add an alternate constructor with parameters


    public String toString() {
        //should return a String like this:
        //The wages for xxxx from the xxxx department are: $xxxxx.xx"
    ...
    }
    public void print() {
      //Should print output like this (same line):
      //The employee xxxx from the xxxx department worked xx hours
      //with a pay rate of $xxx.xx. The wages for this employee are
$xxxxx.xx

      ...
    }
    public double calculatePay() {
      //Method to calculate and return the wages
      //handle both regular and overtime pay
      ...
    }
    public void setAll(String first, String last, double rate, double
hours, String dep){
      ...
    }
    public double getPayRate() {
      ...
   }
     public double getHoursWorked() {
          ...
    }
      public String getDepartment() {
```

```
        ...
}
    public boolean equals(Object o) {
        ...
}
    public Employee getCopy() {
     ...
    }
    public void copy(Employee e) {
     ...
    }
    }}
```

override 와 overload. 중요 매우

why Inheritance? : The main advantage of inheritance is Code reusability and also method overriding (runtime polymorphism)

Polymorphism 중요
Down Casting