7주차 실습 보고서

강의명	객체지향프로그래밍및실습
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□ 1

Bus Constructor

```
3       //해당 코드 작성: 1-(가)
4       private int passengers;
5
6       public Bus(String no, int departure, int destination, int passengers){
7           super(no, departure, destination);
8           this. passengers = passengers;
9       }
```

Bus calcTollFee()

```
11      @Override
12      public int calcTollFee()
13      {
14          //해당 코드 작성: 1-(나)
15          return 2000 + (int)((super.getDestination() - super.getDeparture()) * 50 * this.passengers / 24);
16      }
```

Bus toString()

```
18  @Override
19  public String toString()
20  {
21      //해당 코드 작성: 1-(다)
22      return "Bus: No="+super.getNo()+", Departure="+super.getDeparture()+"km, Destination="+super.getDestination()+"km, "+ passengers + "명";
23  }
```

1 – (라) CarTest

JAVA > 7 > CarTest.java > CarTest > main(String[])

```
1   public class CarTest
2   {
3       public static void main(String[] args)
4       {
5           //해당 코드 작성: 1-(라)
6           Car c1 = new Car("c1111", 0, 200);
7           Bus b1 = new Bus(no:"b2222", departure:100, destination:400, passengers:40);
8
9           System.out.print(c1.toString());
10          System.out.println(", TollFee="+ c1.calcTollFee()+"원");
11          System.out.print(b1.toString());
12          System.out.println(", TollFee="+ b1.calcTollFee()+"원");
13          //실행 결과 첨부 후 1-(마)를 해결할 때에는 주석처리할 것.
14
15          //해당 코드 작성: 1-(마)
16
17          //해당 코드 작성: 4
18
19      }
20  }
21  //실행결과
```

PROBLEMS 50 OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
^[[Alwj@lwj-code:~/workspace/JAVA/7$ java CarTest
Car: No=c1111, Departure=0km, Destination=200km, TollFee=11000
Bus: No=b2222, Departure=100km, Destination=400km, 40명, TollFee=27000
```

1 – (마) CarTest

```
1   public class CarTest
3       public static void main(String[] args)
9           // System.out.print(c1.toString());
10          // System.out.println(", TollFee="+ c1.calcTollFee()+"원");
11          // System.out.print(b1.toString());
12          // System.out.println(", TollFee="+ b1.calcTollFee()+"원");
13          //실행 결과 첨부 후 1-(마)를 해결할 때에는 주석처리할 것.
14
15          //해당 코드 작성: 1-(마)
16          Car[] cars = {
17              new Car("c1111", 0, 200),
18              new Bus(no:"b2222", departure:100, destination:400, passengers:40)
19          };
20          for(Car c : cars)
21              System.out.println(c.toString() + ", " + c.calcTollFee() + "원");
22
23          //해당 코드 작성: 4
24
25      }
26  }
27  //실행결과
```

PROBLEMS 50 OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
lwj@lwj-code:~/workspace/JAVA/7$ java CarTest
Car: No=c1111, Departure=0km, Destination=200km, 11000원
Bus: No=b2222, Departure=100km, Destination=400km, 40명, 27000원
```

2

```java
public class Truck extends Car
{
    private int weight;
    //해당 코드 작성
    public Truck(String no, int departure, int destination, int weight){
        super(no, departure, destination);
        this.weight = weight;
    }

    @Override
    public int calcTollFee()
    {
        //해당 코드 작성
        return 2000 + (int)((super.getDestination() - super.getDeparture()) * 50 * this.weight / 2);
    }

    @Override
    public String toString()
    {
        //해당 코드 작성
        return "Truck: No="+super.getNo()+", Departure="+super.getDeparture()+"km, Destination="+super.getDestination()+"km, "+ weight + "ton";
    }
}
```

3

```java
public class ElectricCar extends Car
{
    //해당 코드 작성
    public ElectricCar(String no, int departure, int destination){
        super(no, departure, destination);
    }

    @Override
    public int calcTollFee()
    {
        return (int)(super.calcTollFee() / 2) ;
    }

    @Override
    public String toString()
    {
        //해당 코드 작성
        return "ElectricCar: No="+super.getNo()+", Departure="+super.getDeparture()+"km, Destination="+super.getDestination()+"km";
    }
}
```

4

```
1   public class CarTest
3       public static void main(String[] args)
15          //해당 코드 작성: 1-(마)
16          Car[] cars = {
17              new Car("c1111", 0, 200),
18              new Bus(no:"b2222", departure:100, destination:400, passengers:40),
19              new Truck(no:"t3333", departure:0, destination:100, weight:4),
20              new ElectricCar(no:"e4444", departure:0, destination:200)
21          };
22          for(Car c : cars)
23              System.out.println(c.toString() + ", " + c.calcTollFee() + "원");
24
25          //해당 코드 작성: 4
26
27      }
28  }
```

PROBLEMS 58 OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
lwj@lwj-code:~/workspace/JAVA/7$ java CarTest
Car: No=c1111, Departure=0km, Destination=200km, 11000원
Bus: No=b2222, Departure=100km, Destination=400km, 40명, 27000원
Truck: No=t3333, Departure=0km, Destination=100km, 4ton, 12000원
ElectricCar: No=e4444, Departure=0km, Destination=200km, 5500원
```

□ 코드 전문

CarTest.java

```
public class CarTest
{
    public static void main(String[] args)
    {
        //해당 코드 작성: 1-(라)
        // Car c1 = new Car("c1111", 0, 200);
        // Bus b1 = new Bus("b2222", 100, 400, 40);

        // System.out.print(c1.toString());
        // System.out.println(", TollFee="+ c1.calcTollFee()+"원");
        // System.out.print(b1.toString());
        // System.out.println(", TollFee="+ b1.calcTollFee()+"원");
        //실행 결과 첨부 후 1-(마)를 해결할 때에는 주석처리할 것.

        //해당 코드 작성: 1-(마)
        Car[] cars = {
            new Car("c1111", 0, 200),
            new Bus("b2222", 100, 400, 40),
            new Truck("t3333", 0, 100, 4),
            new ElectricCar("e4444", 0, 200)
        };
        for(Car c : cars)
            System.out.println(c.toString() + ", " + c.calcTollFee() + "원");

        //해당 코드 작성: 4

    }
}
//실행결과
```

Bus.java

```
public class Bus extends Car
{
    //해당 코드 작성: 1-(가)
    private int passengers;

    public Bus(String no, int departure, int destination, int passengers){
        super(no, departure, destination);
        this.passengers = passengers;
    }
```

```
    @Override
    public int calcTollFee()
    {
        //해당 코드 작성: 1-(나)
        return 2000 + (int)((super.getDestination() - super.getDeparture()) *
50 * this.passengers / 24);
    }

    @Override
    public String toString()
    {
        //해당 코드 작성: 1-(다)
        return "Bus: No="+super.getNo()+",
Departure="+super.getDeparture()+"km,
Destination="+super.getDestination()+"km, "+ passengers + "명";
    }
}
```

Truck.java

```
public class Truck extends Car
{
    private int weight;
    //해당 코드 작성
    public Truck(String no, int departure, int destination, int weight){
        super(no, departure, destination);
        this.weight = weight;
    }

    @Override
    public int calcTollFee()
    {
        //해당 코드 작성
        return 2000 + (int)((super.getDestination() - super.getDeparture()) *
50 * this.weight / 2);
    }

    @Override
    public String toString()
    {
        //해당 코드 작성
```

```
        return "Truck: No="+super.getNo()+",
Departure="+super.getDeparture()+"km,
Destination="+super.getDestination()+"km, "+ weight + "ton";
    }
}
```

ElectricCar.java

```
public class ElectricCar extends Car
{
    //해당 코드 작성
    public ElectricCar(String no, int departure, int destination){
        super(no, departure, destination);
    }

    @Override
    public int calcTollFee()
    {
        return (int)(super.calcTollFee() / 2);
    }

    @Override
    public String toString()
    {
        //해당 코드 작성
        return "ElectricCar: No="+super.getNo()+",
Departure="+super.getDeparture()+"km,
Destination="+super.getDestination()+"km";
    }
}
```