**자료구조(박요한 교수님)**

**퀴즈**

컴퓨터공학과 유상현

**프로그램 소스코드**

**App.java**

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| class Tire{  // members  private int lifecycle;  // construct  public Tire(){  this.lifecycle = 0;  }  public Tire(int lifecycle){  this.lifecycle = lifecycle;  }  // method  public int roll(){  this.lifecycle -= 1;  return this.lifecycle;  }  public int GetLifeCycle(){  return this.lifecycle;  }  public void Print(){  System.out.println("Tire 수명: " + this.lifecycle + "회");  }  public String PrintTire(){  return "Tire";  }  }  class HankookTireTire extends Tire{  public HankookTireTire(){  super(5);  }  public String PrintTire(){  return "HankookTire";  }  public void Print() {  System.out.println("HankookTire 수명: " + GetLifeCycle() + "회");  }  }  class Car{  // members;  Tire[] tires;  // constructor  public Car(int left\_front, int right\_front, int left\_back, int right\_back){  tires = new Tire[4];  tires[0] = new Tire(left\_front);  tires[1] = new Tire(right\_front);  tires[2] = new Tire(left\_back);  tires[3] = new Tire(right\_back);  }  // method  public void run(){  System.out.println("[자동차가 달립니다.]");  for(int i = 0; i < 4; i++){  int tmp = tires[i].roll();  if(tmp == 0){  switch(i){  case 0 :  System.out.println("\*\*\* 앞왼쪽" + tires[i].PrintTire() + "펑크 \*\*\*");  System.out.println("[자동차가 멈춥니다]");  tires[i] = new HankookTireTire();  System.out.println("앞왼쪽"+ tires[i].PrintTire()+"로 교체");  break;  case 1:  System.out.println("\*\*\* 앞오른" + tires[i].PrintTire() + "펑크 \*\*\*");  System.out.println("[자동차가 멈춥니다]");  tires[i] = new HankookTireTire();  System.out.println("앞오른"+ tires[i].PrintTire()+"로 교체");  break;  case 2:  System.out.println("\*\*\* 왼쪽" + tires[i].PrintTire() + "펑크 \*\*\*");  System.out.println("[자동차가 멈춥니다]");  tires[i] = new HankookTireTire();  System.out.println("뒤왼쪽"+ tires[i].PrintTire()+"로 교체");  break;  case 3:  System.out.println("\*\*\* 뒤오른쪽" + tires[i].PrintTire() + "펑크 \*\*\*");  System.out.println("[자동차가 멈춥니다]");  tires[i] = new HankookTireTire();  System.out.println("뒤오른쪽"+ tires[i].PrintTire()+"로 교체");  break;  }  break;  }  else {  System.out.printf("앞왼쪽 ");  tires[0].Print();  System.out.printf("앞오른쪽 ");  tires[1].Print();  System.out.printf("뒤왼쪽 ");  tires[2].Print();  System.out.printf("뒤오른쪽 ");  tires[3].Print();  }  }  System.out.println("----------------------------");  }  public void display(){  }  }  public class App {  public static void main(String[] args) throws Exception {  Car newCar = new Car(6,2,3,4);  newCar.run();  newCar.run();  }  } |