23.12.21

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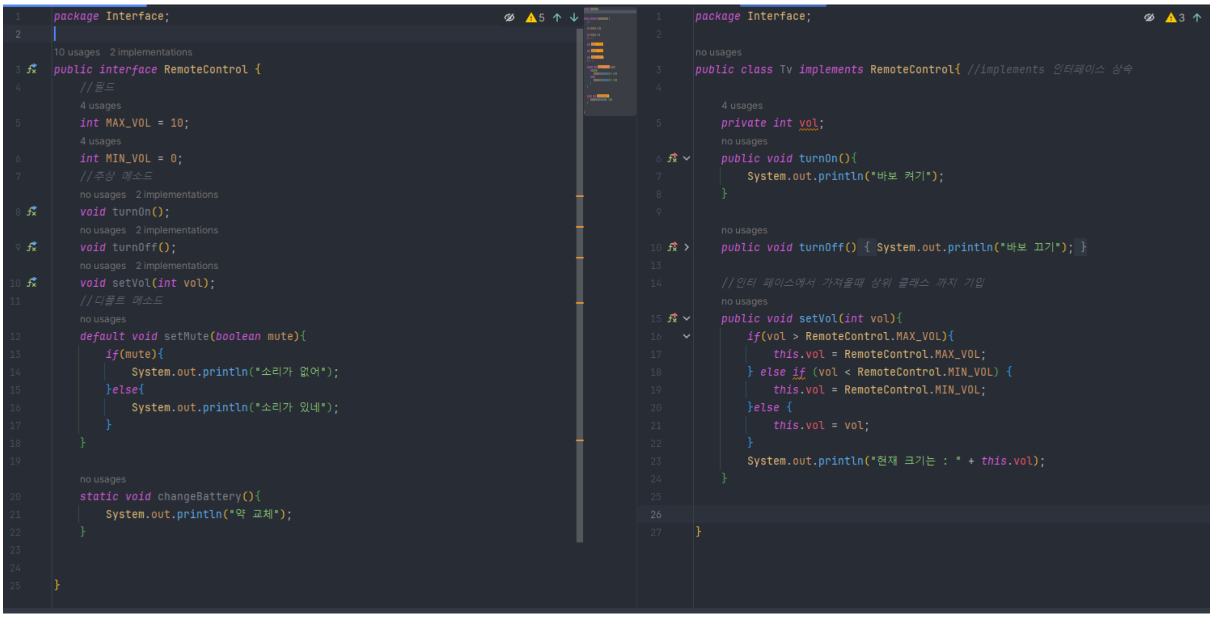
태그	

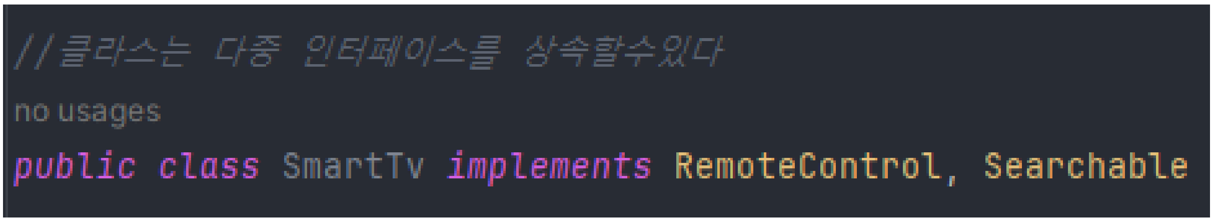
인터페이스[기본적으로 public으로 적용]



```java
package Interface;

10 usages   2 implementations
public interface RemoteControl {
    //필드
    4 usages
    int MAX_VOL = 10;
    4 usages
    int MIN_VOL = 0;
    //추상 메소드
    no usages   2 implementations
    void turnOn();
    no usages   2 implementations
    void turnOff();
    no usages   2 implementations
    void setVol(int vol);
    //디폴트 메소드
    no usages
    default void setMute(boolean mute){
        if(mute){
            System.out.println("소리가 없어");
        }else{
            System.out.println("소리가 있네");
        }
    }

    no usages
    static void changeBattery(){
        System.out.println("약 교체");
    }


}
```

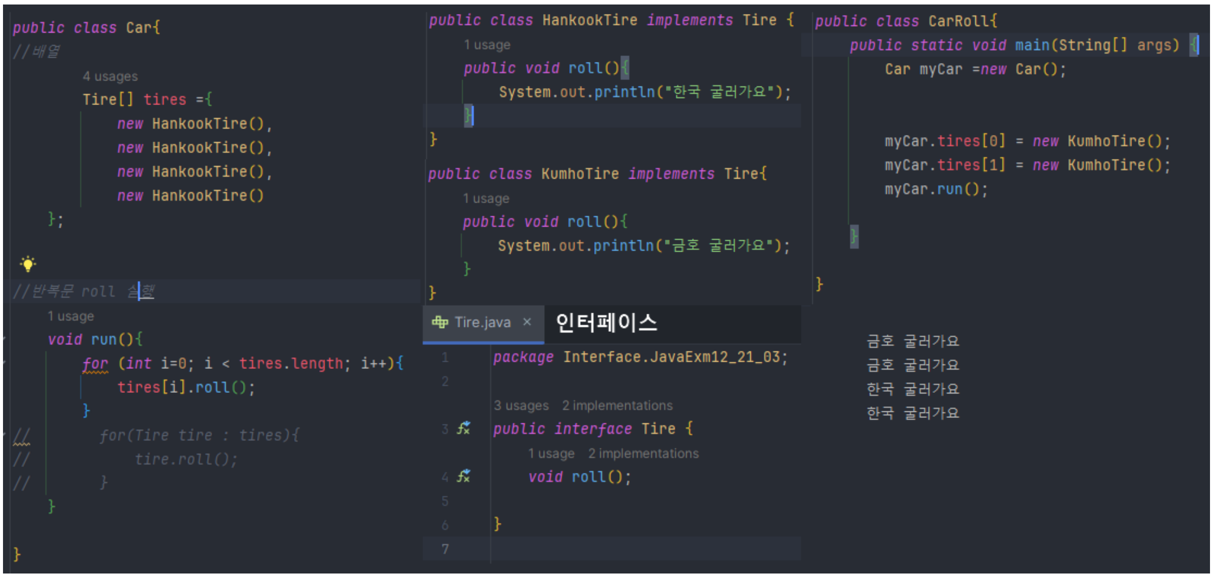
```java
package Interface;

no usages
public class Tv implements RemoteControl{ //implements 인터페이스 상속

    4 usages
    private int vol;
    no usages
    public void turnOn(){
        System.out.println("바보 켜기");
    }

    no usages
    public void turnOff() { System.out.println("바보 끄기"); }

    //인터 페이스에서 가져올때 상위 클래스 까지 기입
    no usages
    public void setVol(int vol){
        if(vol > RemoteControl.MAX_VOL){
            this.vol = RemoteControl.MAX_VOL;
        } else if (vol < RemoteControl.MIN_VOL) {
            this.vol = RemoteControl.MIN_VOL;
        }else {
            this.vol = vol;
        }
        System.out.println("현재 크기는 : " + this.vol);
    }


}
```

다중 인터페이스



```java
//클라스는 다중 인터페이스를 상속할수있다
no usages
public class SmartTv implements RemoteControl, Searchable
```

인터페이스 활용



```java
public class Car{
//배열
        Tire[] tires ={
            new HankookTire(),
            new HankookTire(),
            new HankookTire(),
            new HankookTire()
    };

//반복문 roll 실행
    void run(){
        for (int i=0; i < tires.length; i++){
            tires[i].roll();
        }
//        for(Tire tire : tires){
//            tire.roll();
//        }
    }

}
```

```java
public class HankookTire implements Tire {
    public void roll(){
        System.out.println("한국 굴러가요");
    }
}

public class KumhoTire implements Tire{
    public void roll(){
        System.out.println("금호 굴러가요");
    }
}
```

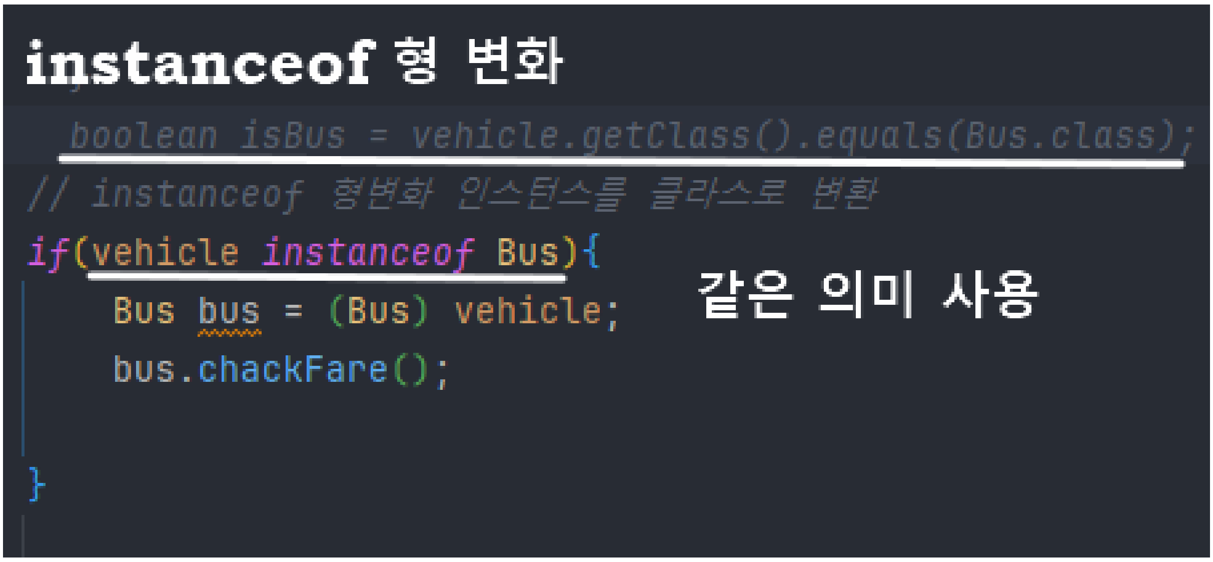
Tire.java × 인터페이스

```java
package Interface.JavaExm12_21_03;

public interface Tire {
    void roll();

}
```

```java
public class CarRoll{
    public static void main(String[] args) {
        Car myCar =new Car();


        myCar.tires[0] = new KumhoTire();
        myCar.tires[1] = new KumhoTire();
        myCar.run();

    }

}
```

```
금호 굴러가요
금호 굴러가요
한국 굴러가요
한국 굴러가요
```

instansof(형 변화)

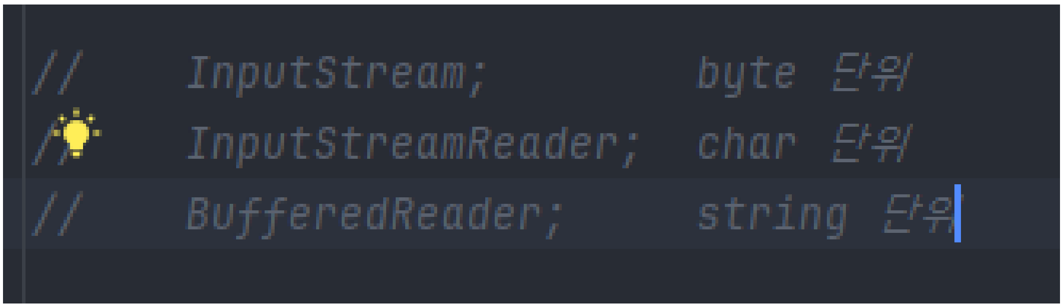


instanceof 형 변화

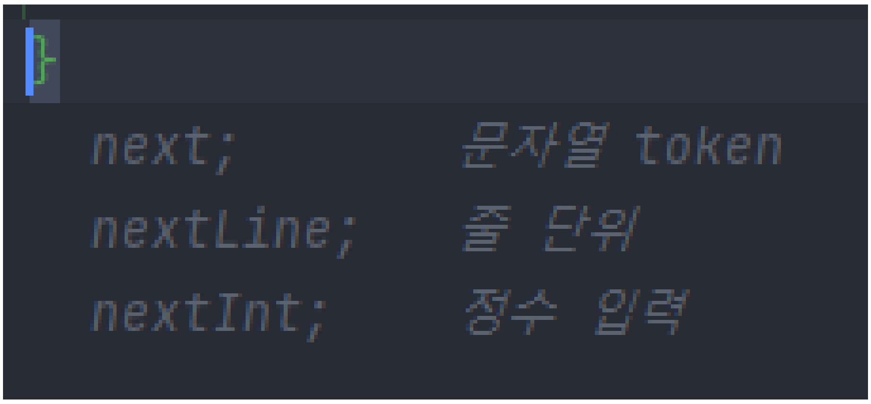
```java
  boolean isBus = vehicle.getClass().equals(Bus.class);
// instanceof 형변화 인스턴스를 클라스로 변환
if(vehicle instanceof Bus){
    Bus bus = (Bus) vehicle;
    bus.chackFare();

}
```

같은 의미 사용

명령어 별 단위

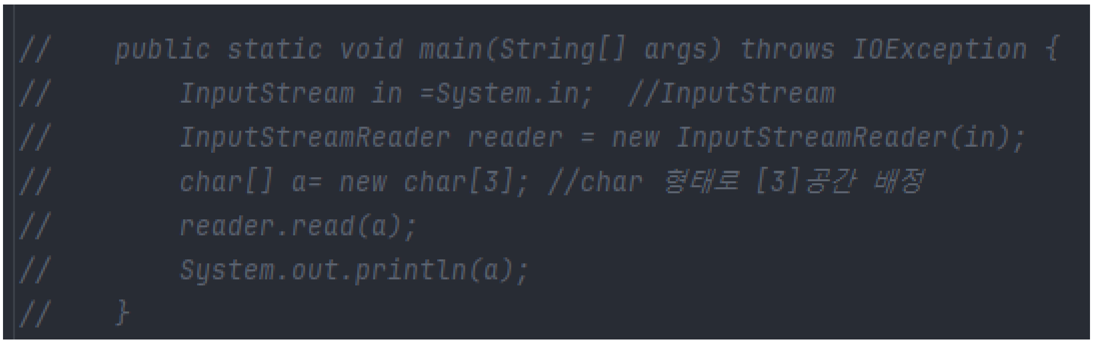


```java
//    InputStream;          byte 단위
//    InputStreamReader;    char 단위
//    BufferedReader;       string 단위
```



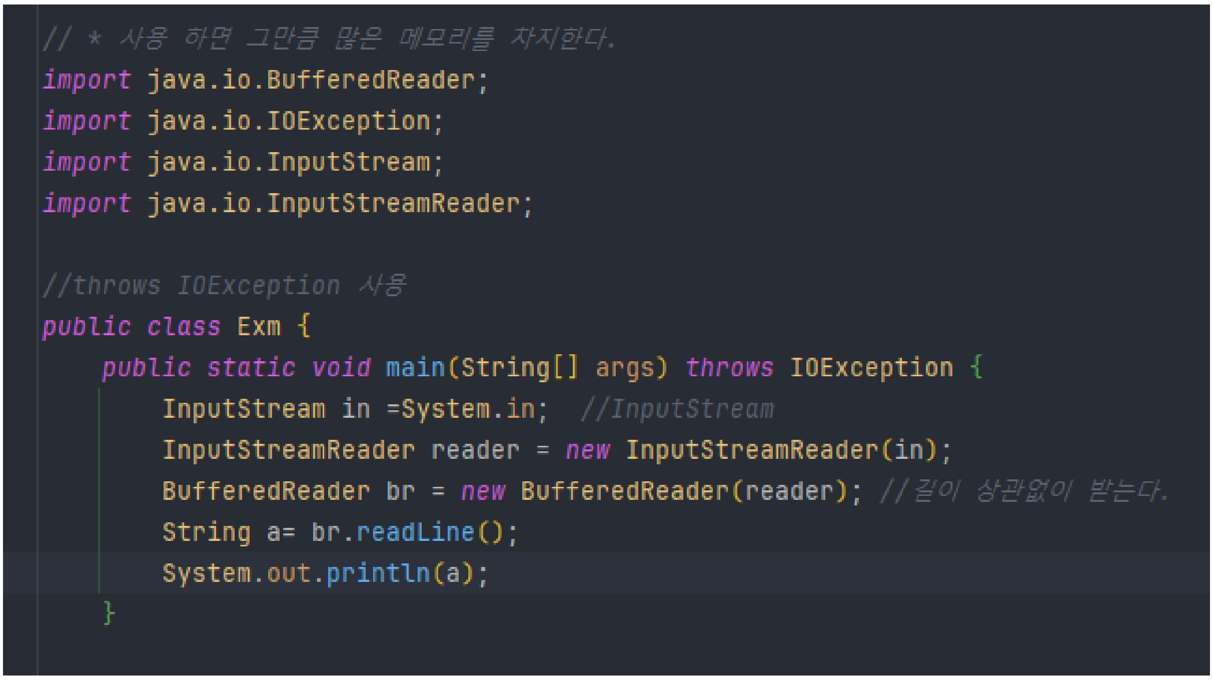
```
}
    next;         문자열 token
    nextLine;     줄 단위
    nextInt;      정수 입력
```

InputStream/InputStreamReader(char 문자)



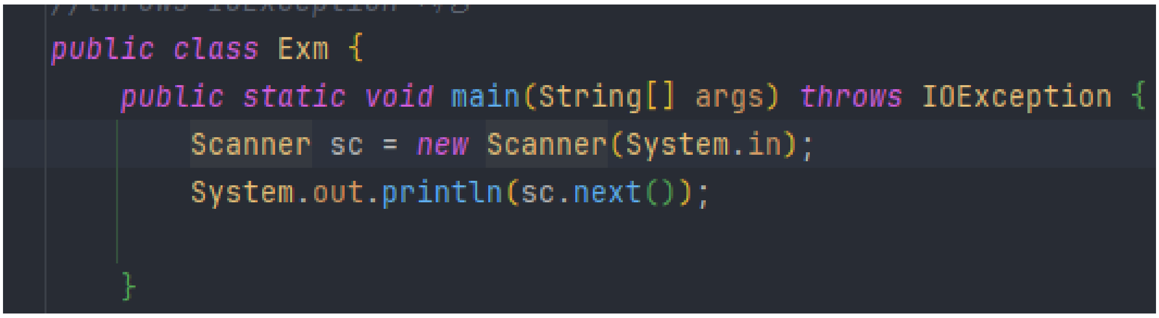
```
//    public static void main(String[] args) throws IOException {
//        InputStream in =System.in;  //InputStream
//        InputStreamReader reader = new InputStreamReader(in);
//        char[] a= new char[3]; //char 형태로 [3]공간 배정
//        reader.read(a);
//        System.out.println(a);
//    }
```

InputStream/InputStreamReader(BufferedReader :길이 상관 X)



```
// * 사용 하면 그만큼 많은 메모리를 차지한다.
import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStream;
import java.io.InputStreamReader;

//throws IOException 사용
public class Exm {
    public static void main(String[] args) throws IOException {
        InputStream in =System.in;  //InputStream
        InputStreamReader reader = new InputStreamReader(in);
        BufferedReader br = new BufferedReader(reader); //길이 상관없이 받는다.
        String a= br.readLine();
        System.out.println(a);
    }
```

Scanner



```
//throws IOException */
public class Exm {
    public static void main(String[] args) throws IOException {
        Scanner sc = new Scanner(System.in);
        System.out.println(sc.next());

    }
```