20-8-18(화) 인터페이스

인터페이스로 부터 상속받아서 사용하기

(1) Shape 인터페이스

```
package a20_8_18;

public interface Shape {
	int RED=1;  //변수 public static final 성격있음
	public static final int GREEN=2;
	public static final int BLUE=3;
	public void area();  //메소드 public abstract 추상메소드 성격있음
	public void show();
}
```

(2) Cirlce 클래스

```
package a20_8_18;

public class Circle implements Shape {

	private int r;
	private double res;

	public Circle() {
	}

	public Circle(int r) {
		this.r=r;
	}

	@Override
	public void area() {
		res=r*r*Math.PI;

	}

	@Override
	public void show() {
		// TODO Auto-generated method stub
		System.out.println("원넓이="+res);
	}

}
```

(3) Triangle 클래스

```
package a20_8_18;

public class Triangle implements Shape {

	int w,h;
	double res;

	public Triangle() {}
	public Triangle(int w, int h) {
		this.w=w;
		this.h=h;
	}
```

```
	public void area() {
		// TODO Auto-generated method stub
		res=(w*h)/2.0;

	}

	@Override
	public void show() {
		// TODO Auto-generated method stub
		System.out.println("삼각형의 넓이="+res);
	}

}
```

(4) Rectangle 클래스

```
package a20_8_18;

public class Rectangle implements Shape {

	int w,h;
	double res;

	public Rectangle() {}
	public Rectangle(int w, int h) {
		this.w=w;
		this.h=h;
	}

	@Override
	public void area() {
		// TODO Auto-generated method stub
		res=w*h;
	}

	@Override
	public void show() {
		// TODO Auto-generated method stub
		System.out.println("사각형의넓이="+res);
	}

}
```

(5) 메인

```
package a20_8_18;

public class InterMain {

	public static void call(Shape s, int x) {
		if(s instanceof Circle) {
			Circle c=(Circle) s;
			c.area();
			c.show();

		} else if(s instanceof Rectangle) {
			Rectangle r=(Rectangle) s;
			r.area();
			r.show();

		} else if(s instanceof Triangle) {
```

```
                        Triangle t=(Triangle) s;
                        t.area();
                        t.show();
                }
                switch(x) {
                        case Shape.RED: System.out.println("빨강");break;
                        case Shape.GREEN: System.out.println("녹색");break;
                        case Shape.BLUE: System.out.println("파랑");break;
                }


        }
        public static void main(String[] args) {
                Circle c=new Circle(5);
                call(c, Shape.RED);

                Rectangle r=new Rectangle(5,6);
                call(r, Shape.BLUE);


                Triangle t=new Triangle(5,6);
                call(t, Shape.GREEN);
        }

}
```