

Object Oriented Programming

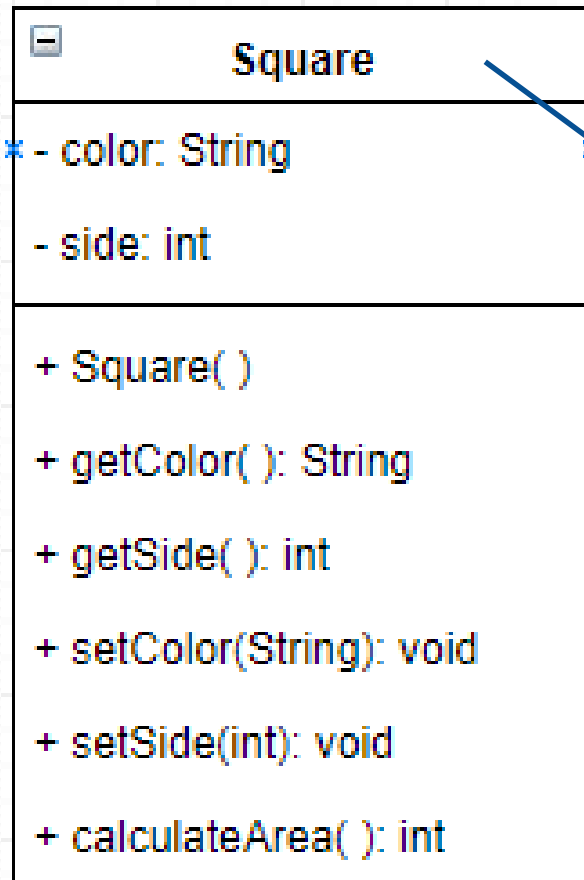
From Class Diagrams to Java

From Class Diagrams to Java

- The next example corresponds to a class that models squares.
- The relevant data of the square entities (according to the context of the application) is color and side.
- The only operation (besides getters&setters) is calculate area.



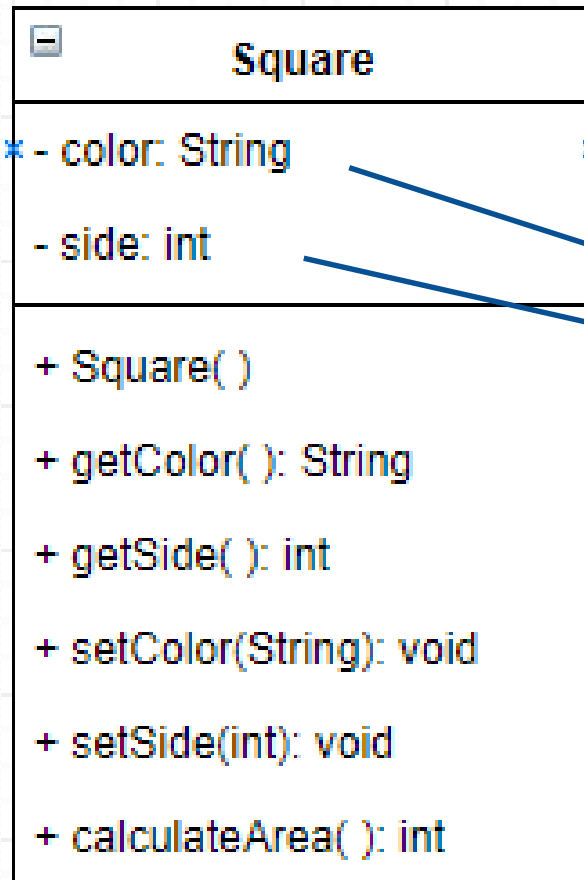
From Class Diagrams to Java



Class definition:

```
public class Square {  
}
```

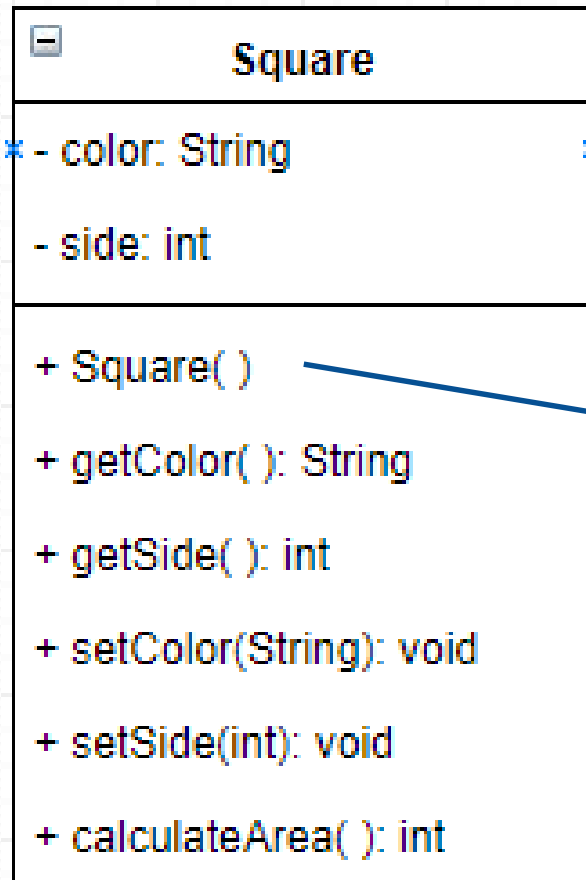
From Class Diagrams to Java



Instance variables definition:

```
private String color;  
private int side;
```

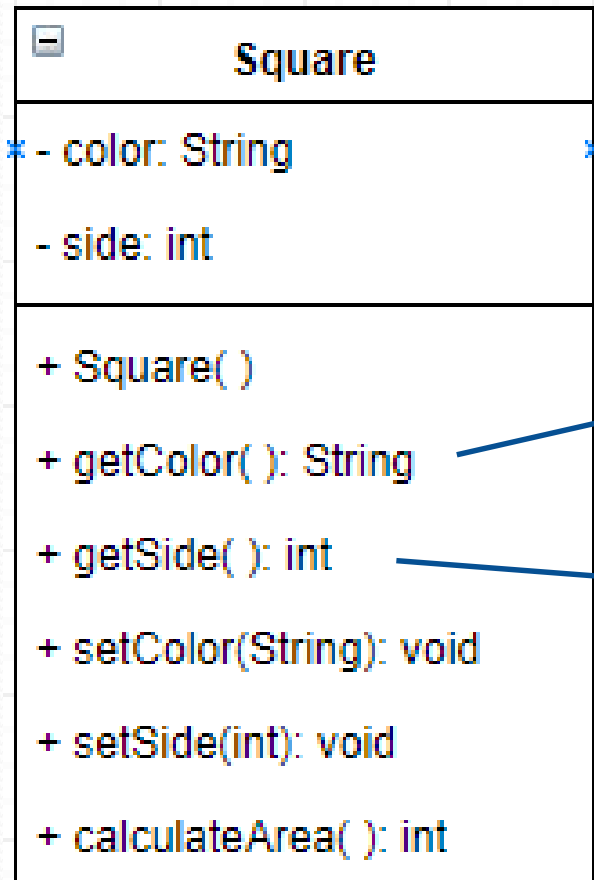
From Class Diagrams to Java



Constructor definition:

```
public Square(){
    side = 0;
    color = "blue";
}
```

From Class Diagrams to Java

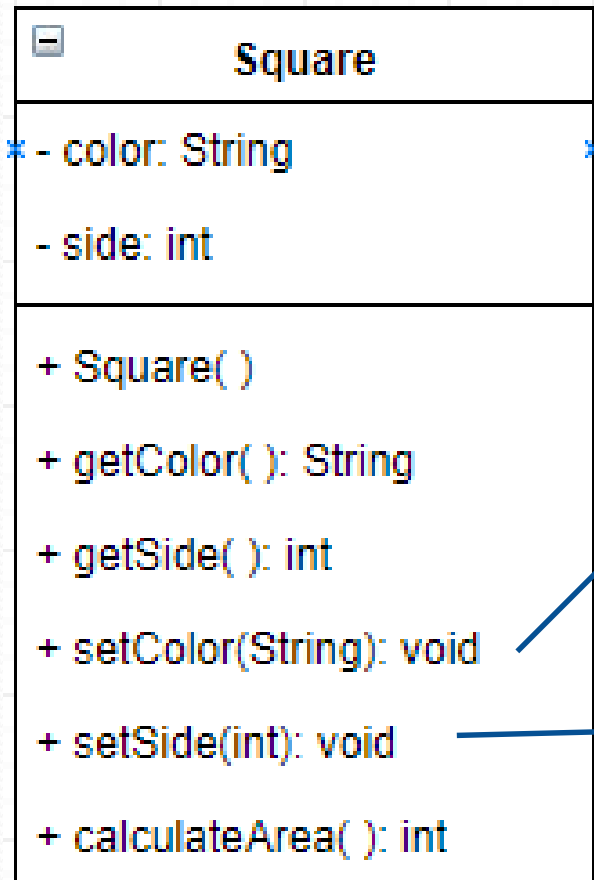


Getters:

```
public String getColor() {  
    return color;  
}
```

```
public int getSide() {  
    return side;  
}
```

From Class Diagrams to Java

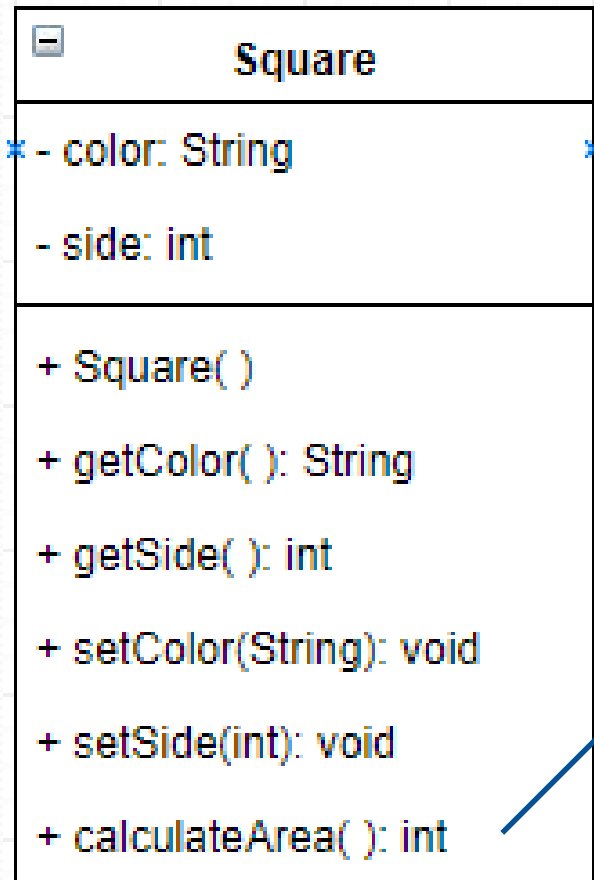


Setters:

```
public void setColor(String sColor) {  
    color = sColor;  
}
```

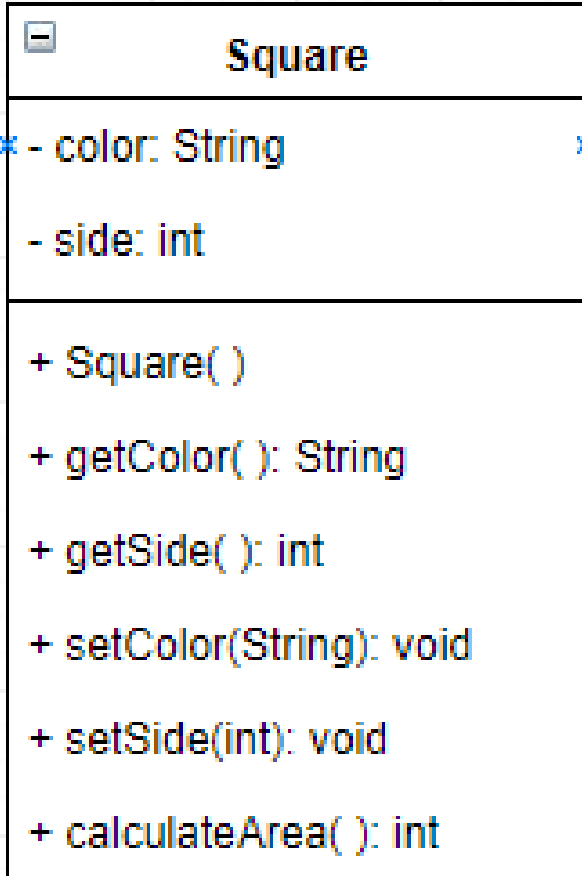
```
public void setSide(int sSide) {  
    side = sSide;  
}
```

From Class Diagrams to Java



```
public int calculateArea() {  
    return side * side;  
}
```


All Together



```
public class Square {
    private String color;
    private int side;

    public Square(){
        side = 0;
        color = "blue";
    }

    public String getColor( ) {
        return color;
    }

    public int getSide( ) {
        return side;
    }

    public void setColor(String sColor) {
        color = sColor;
    }

    public void setSide(int sSide) {
        side = sSide;
    }

    public int calculateArea() {
        return side * side;
    }
}
```