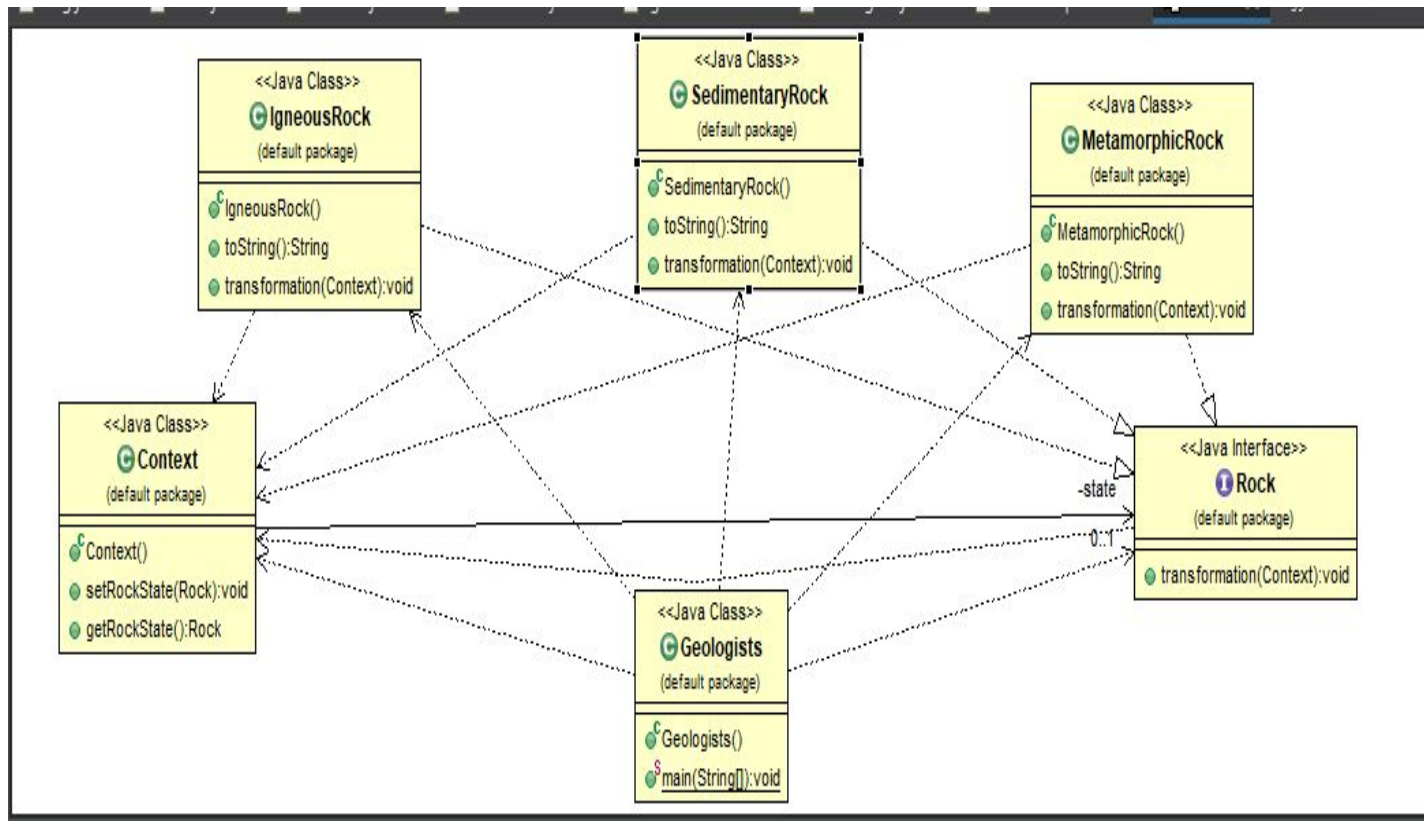


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## UML Diagram:



## Rock Interface and 3 implementation:

```
public interface Rock {  
    public void transformation(Context context);  
}
```

---

```
public class IgneousRock implements Rock {  
    public String toString(){  
        return "Igneous Rock State ending, Sedimentary Rock State beginning :";  
    }  
  
    public void transformation(Context context) {  
        System.out.println("Molten Rock has been crystallized and solidified;  
        context.setRockState(this);  
    }  
}
```

---

```
public class SedimentaryRock implements Rock {  
    public String toString(){  
        return "Sedimentary Rock State ending, Metamorphic Rock State beginning :";  
    }  
  
    public void transformation(Context context) {  
        System.out.println("Pre-existing rock loosened, transported, trapped, and finally  
        compacted. ");  
        context.setRockState(this);  
    }  
}
```

---

```
public class MetamorphicRock implements Rock {  
  
    public String toString(){  
        return "Metamorphic Rock State ending";  
    }  
}
```

```

    public void transformation(Context context) {
        System.out.println("High heat, high pressure, or hot mineral-rich fluids applied to rock");
        context.setRockState(this);
    }
}

```

---

### **Context Class:**

```

public class Context {
    private Rock state;
    public Context(){
        state = null;
    }
    public void setRockState(Rock state){
        this.state = state;
    }
    public Rock getRockState(){
        return state;
    }
}

```

---

### **Test and Compile Geologist State Pattern Class:**

```

public class Geologists {
    public static void main(String[] args) {
        Context context = new Context();

        IgneousRock igneous = new IgneousRock();
        igneous.transformation(context);
        System.out.println(context.getRockState().toString());

        SedimentaryRock sedimentary = new SedimentaryRock();
        sedimentary.transformation(context);
        System.out.println(context.getRockState().toString());

        MetamorphicRock metamorphic = new MetamorphicRock();
        metamorphic.transformation(context);
        System.out.println(context.getRockState().toString());
    }
}

```

## Working Code #1:

