

# Code Scattering

```
graph TD; A[Code Scattering] --> B[Graph class]; A --> C[Color class]; A --> D[Weight class]; A --> E[Node class]; A --> F[Edge class];
```

```
public class Graph {
```

```
...  
Edge add(Node n, Node m) {  
    Edge e = new Edge(n, m);  
    nodes.add(n); nodes.add(m); edges.add(e);  
    if (Config.WEIGHTED) { e.weight = new Weight(); }  
    return e;  
}
```

```
Edge add(Node n, Node m, Weight w) {  
    if (!Config.WEIGHTED) { throw new RuntimeException(); }  
    Edge e = new Edge(n, m);  
    nodes.add(n); nodes.add(m); edges.add(e);  
    e.weight = w;  
    return e;  
}  
...  
}
```

```
public class Color {  
    static void setDisplayColor(Color c) { ... }  
}
```

```
public class Weight {  
    void print() { ... }  
}
```

```
class Node {
```

```
    Color color;
```

```
    Node() {  
        if (Config.COLORED) {  
            color = new Color();  
        }  
    }  
    void print() {  
        if (Config.COLORED) {  
            Color.setDisplayColor(color);  
        }  
        System.out.print(id);  
    }  
}
```

```
public class Edge {
```

```
    Weight weight;
```

```
    ...
```

```
    Edge(Node _a, Node _b) {
```

```
        a = _a; b = _b;
```

```
        if (Config.WEIGHTED) { weight = new Weight(); }  
    }
```

```
    void print() {
```

```
        a.print(); b.print();
```

```
        if (Config.WEIGHTED) { weight.print(); }  
    }
```

```
}
```