

מחלקות החבילה Elements

1. מבנה הממשק LightSource

```
public abstract Color getIntensity(Point3D point);
public abstract Vector getL(Point3D point); // light to point vector
```

2. מבנה המחלקה Light (מופשט):

```
protected Color _color;

// ***** Constructors ***** //
public Light();
public Light (Color color);

// ***** Getters/Setters ***** //
public Color getIntensity();
```

3. מבנה המחלקה AmbientLight:

```
private final double _Ka = 0.1;

// ***** Constructors ***** //
public AmbientLight();
public AmbientLight(AmbientLight aLight);
public AmbientLight(int r, int g, int b);
public AmbientLight(Map<String, String> attributes);

// ***** Getters/Setters ***** //
public Color getColor();
public void setColor(Color color);
public double getKa();
public Color getIntensity();
```

4. מבנה המחלקה DirectionalLight

```

private Vector _direction;

// ***** Constructors ***** //
public DirectionalLight(Color color, Vector direction);

// ***** Getters/Setters ***** //
public Color getIntensity(Point3D point);
public Vector getDirection();
public void setDirection(Vector _direction);
public Vector getL(Point3D point);

```

5. מבנה המחלקה PointLight

```

Point3D _position;
double _Kc, _Kl, _Kq;

// ***** Constructors ***** //
public PointLight(Color color, Point3D position,
                  double kc, double kl, double kq);

// ***** Getters/Setters ***** //
public Color getIntensity(Point3D point);
public Vector getL(Point3D point);

```

6. מבנה המחלקה SpotLight:

```

private Vector _direction;

// ***** Constructor ***** //
public SpotLight(Color color, Point3D position, Vector direction,
                  double kc, double kl, double kq);

// ***** Getters/Setters ***** //
public Color getIntensity(Point3D point);

```


היחסים בין המחלקות

