

Lösung 1

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1. Klassendiagramm ist unter `solution/one/classDiagramm.png`.
2. Antwort auf die Frage: `compareTo()` ist eine `default` implementierung innerhalb eines Interface. Das ist seit Java8 möglich. Das `default` Schlüsselwort signalisiert das.

Renderable.java

```
@Override
public default int compareTo(Renderable other) {
    if (this.getZindex() < other.getZindex()) {
        return -1;
    } else if (this.getZindex() > other.getZindex()) {
        return 1;
    }
    return 0;
}
```

Input.java

```
@Override
public void keyPressed(KeyEvent event) {

    switch (event.getKeyCode()) {
        case KeyEvent.VK_UP:
            buttonsPressed[Button.UP.ordinal()] = true;
            break;

        case KeyEvent.VK_DOWN:
            buttonsPressed[Button.DOWN.ordinal()] = true;
            break;

        case KeyEvent.VK_LEFT:
            buttonsPressed[Button.LEFT.ordinal()] = true;
            break;

        case KeyEvent.VK_RIGHT:
            buttonsPressed[Button.RIGHT.ordinal()] = true;
            break;

        case KeyEvent.VK_SPACE:
            buttonsPressed[Button.SPACE.ordinal()] = true;
    }
}
```

```

        break;

    default:
        break;
}
}

@Override
public void keyReleased(KeyEvent event) {

    switch (event.getKeyCode()) {
        case KeyEvent.VK_UP:
            buttonsPressed[Button.UP.ordinal()] = false;
            break;

        case KeyEvent.VK_DOWN:
            buttonsPressed[Button.DOWN.ordinal()] = false;
            break;

        case KeyEvent.VK_LEFT:
            buttonsPressed[Button.LEFT.ordinal()] = false;
            break;

        case KeyEvent.VK_RIGHT:
            buttonsPressed[Button.RIGHT.ordinal()] = false;
            break;

        case KeyEvent.VK_SPACE:
            buttonsPressed[Button.SPACE.ordinal()] = false;
            break;

        default:
            break;
    }
}

```

Button.java

```

public enum Button {
    UP, DOWN, LEFT, RIGHT, SPACE
}

```

GameLogic.java

```

if (input.buttonsPressed[Button.SPACE.ordinal()]) {
    projectileSpawner.spawn(playerPosition);
}

```