

Assignment 2 - Internal Software Quality

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Abstract—Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

I. INTRODUCTION

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In listing 4 you see

II. MAIN PART

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Listing 1. checkKeyword

```
private boolean checkKeyword(String
keyword) {
    String libName = null;
    if (keyword.contains(".")) {
        String[] split = keyword.split("\\.");
        ;
        if (split.length != 2) {
            return false;
        }
        libName = split[0];
        keyword = split[1];
    }
    if (libName != null && !
        checkLibraryName(libName)) {
        return false;
    }
    String REGEX_KEYWORD = "[\\w_\\d_\\s_
    \\._ß_äöü_ÄÖÜ]{1,}";
    if (!Pattern.matches(REGEX_KEYWORD,
        keyword)) {
        return false;
    }
    return true;
}
```

Listing 2. draw

```
public void draw(DrawHandler drawHandler,
DrawingInfo drawingInfo) {
    double width = drawingInfo.
        getSymmetricWidth(getFirstLifeline()
        , getLastLifeline(), tick);
    double height = TextSplitter.
        getSplitStringHeight(textLines,
        width - ROUND_PART_WIDTH * 2,
        drawHandler) +
        VERTICAL_BORDER_PADDING * 2;
    double topY = drawingInfo.
        getVerticalStart(tick);
    topY += (drawingInfo.getTickHeight(tick
        ) - height) / 2;
    double leftX = drawingInfo.
```

```

        getHDrawingInfo(getFirstLifeline()).
        getSymmetricHorizontalStart(tick);

drawHandler.drawArc(leftX, topY,
    ROUND_PART_WIDTH * 2, height, 90,
    180, true);
9 width = width - ROUND_PART_WIDTH * 2;
drawHandler.drawArc(leftX + width, topY
    , ROUND_PART_WIDTH * 2, height, 270,
    180, true);
drawHandler.drawLine(leftX +
    ROUND_PART_WIDTH, topY, leftX +
    width + ROUND_PART_WIDTH, topY);
drawHandler.drawLine(leftX +
    ROUND_PART_WIDTH, topY + height,
    leftX + width + ROUND_PART_WIDTH,
    topY + height);
TextSplitter.drawText(drawHandler,
    textLines, leftX + ROUND_PART_WIDTH,
    topY, width, height,
14 AlignHorizontal.CENTER,
    AlignVertical.CENTER);

for (Lifeline ll : coveredLifelines) {
    drawingInfo.getDrawingInfo(ll).
        addInterruptedArea(new LineID(topY
            , topY + height));
}
19}

```

Listing 3. `getAngle`

```

1/**
 * Calculates and returns the angle of
 * the line defined by the coordinates
 */
public static double getAngle(double x1,
    double y1, double x2, double y2) {
    double res;
6 double x = x2 - x1;
double y = y2 - y1;
res = Math.atan(y / x);
if (x >= 0.0 && y >= 0.0) {
    res += 0.0;
11 }
else if (x < 0.0 && y >= 0.0) {
    res += Math.PI;
}
else if (x < 0.0 && y < 0.0) {
16 res += Math.PI;
}
else if (x >= 0.0 && y < 0.0) {
    res += 2.0 * Math.PI;
}
21 return res;
}

```

Listing 4. `getParameters`

```

/**
 * Splits up comma-seperated parameters
 * into single parameters.
3 *
 * @param parameterLine
 * @return
 * @throws TestfileException
 */
8private Object[] getParameters(String
    parameterLine) throws
    TestfileException {
    if (parameterLine.length() == 0) {
        return new Object[0];
    }
    String[] parStrArray = parameterLine.
        split(",");
13 Object[] res = new Object[parStrArray.
        length];
    for (int i = 0; i < parStrArray.length;
        i++) {
        String strPar = parStrArray[i].
            toString().trim();

        Object value = null;
18 try {
            value = interpretValue(strPar);
        } catch (KeywordException |
            AssertionError e) {
            throw TestfileExceptionHandler.
                InvalidParameter(strPar);
        }
23 res[i] = value;
    }
    return res;
}

```

Listing 5. `intersect`

```

/**
 * returns the intersection of both
 * points [eg: (2,5) intersect (1,4) =
 * (2,4)]
 * @param nanPriority if true then NaN
 * has priority over other values,
 * otherwise other values have priority
4 */
public XValues intersect(XValues other,
    boolean nanPriority) {
    Double maxLeft = left;
    Double minRight = right;
    if (nanPriority) {
9 if (other.left.equals(Double.NaN) ||
        other.left > left) {
            maxLeft = other.left;
        }
    }
}

```

```

    if (other.right.equals(Double.NaN) ||
        other.right < right) {
        minRight = other.right;
14    }
    }
    else {
        if (left.equals(Double.NaN) || other.
            left > left) {
            maxLeft = other.left;
19    }
        if (right.equals(Double.NaN) || other
            .right < right) {
            minRight = other.right;
        }
    }
24    return new XValues(maxLeft, minRight);
}

```

III. ACKNOWLEDGMENT

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IV. CONCLUSION

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