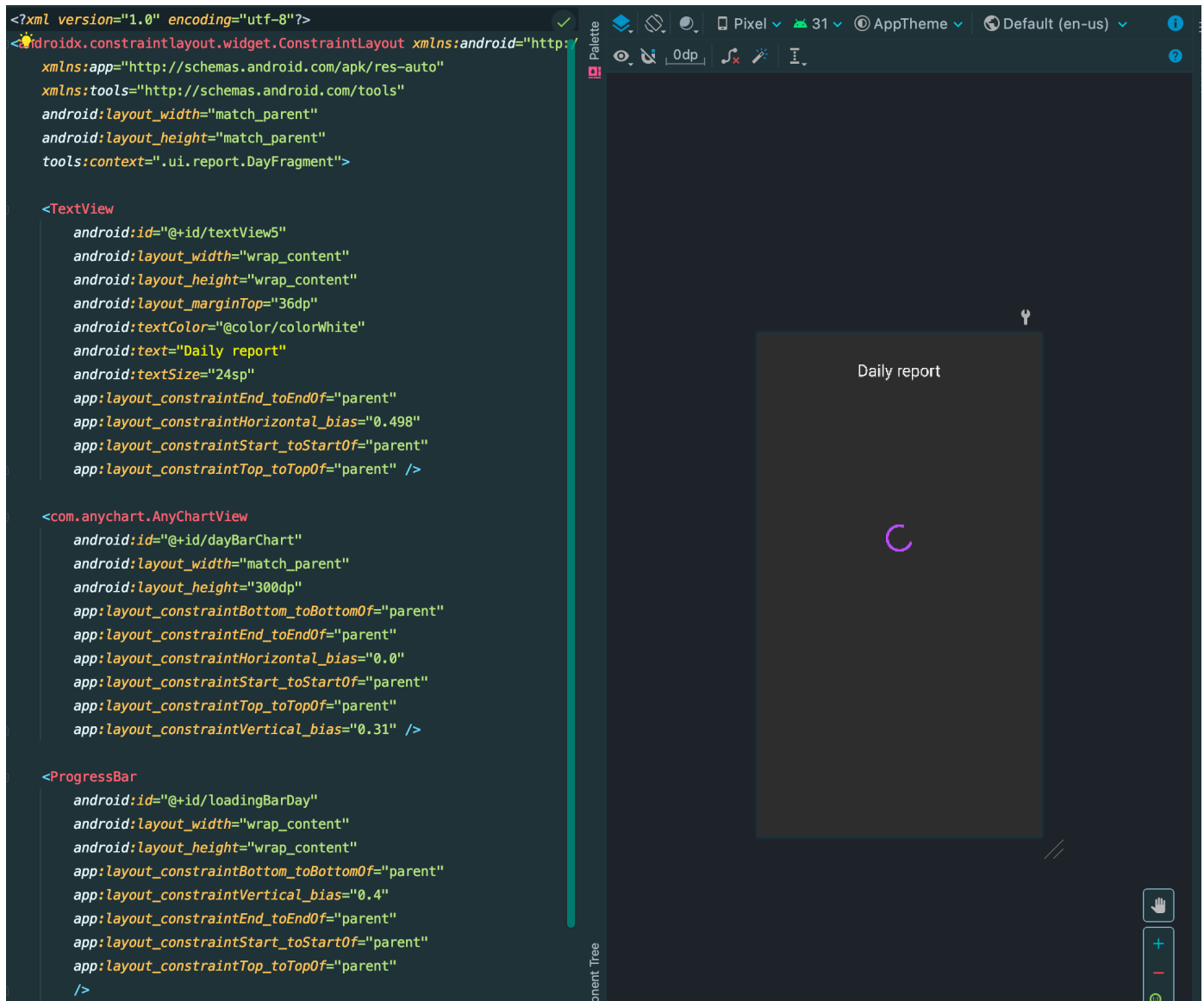


# Assignment 02 - Mobile & Wearable Computing

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GitHub repo : [https://github.com/OttavioBuonomoUSI/MWC\\_assignment\\_02.git](https://github.com/OttavioBuonomoUSI/MWC_assignment_02.git)

## Modifications of the UI



## Modifications in the code

StepAppOpenHelper.java

```

/**
 * Utility function to get the number of steps by day
 *
 * @param context: application context
 * @return map: map with key-value pairs hour->number of steps
 */
//
public static Map<String, Integer> loadStepsByDay(Context context){
    Map<String, Integer> map = new TreeMap<>();

    StepAppOpenHelper databaseHelper = new StepAppOpenHelper(context);
    SQLiteDatabase db = databaseHelper.getReadableDatabase();

    Cursor cursor = db.rawQuery( sql: "SELECT day, COUNT(*) FROM num_steps " +
        " GROUP BY day ORDER BY day ASC ", new String []{});

    cursor.moveToFirst();
    for (int index=0; index < cursor.getCount(); index++){
        String tmpKey = cursor.getString( i: 0);
        Integer tmpValue = Integer.parseInt(cursor.getString( i: 1));
        map.put(tmpKey, tmpValue);
        cursor.moveToNext();
    }
    cursor.close();
    db.close();

    return map;
}

```

## DayFragment.java

```

AnyChartView anyChartView;

Date cDate = new Date();

public Map<String, Integer> stepsByDay = null;

@Override
public View onCreateView(LayoutInflater inflater, ViewGroup container,
    Bundle savedInstanceState) {

    if (container != null) {
        container.removeAllViews();
    }

    View root = inflater.inflate(R.layout.fragment_day, container, attachToRoot: false);

    anyChartView = root.findViewById(R.id.dayBarChart);
    anyChartView.setProgressBar(root.findViewById(R.id.loadingBarDay));

    Cartesian cartesian = createColumnChart();
    anyChartView.setBackgroundColor("#00000000");
    anyChartView.setChart(cartesian);

    return root;
}

```

```

public Cartesian createColumnChart(){
    /**** Read data from SQLiteDatabase *****/
    stepsByDay = StepAppOpenHelper.loadStepsByDay(getContext());

    /**** Create column chart using AnyChart library *****/
    Cartesian cartesian = AnyChart.column();
    List<DataEntry> data = new ArrayList<>();

    for (Map.Entry<String,Integer> entry : stepsByDay.entrySet())
        data.add(new ValueDataEntry(entry.getKey(), entry.getValue()));
    Column column = cartesian.column(data);

    /**** Modify the UI of the chart *****/
    column.fill("#1EB980");
    column.stroke("#1EB980");

    column.tooltip()
        .titleFormat("At day: {X}")
        .format("{Value}{groupsSeparator: } Steps")
        .anchor(Anchor.RIGHT_TOP);

    column.tooltip().position(Position.RIGHT_TOP).offsetX(0d).offsetY(5);

    cartesian.tooltip().positionMode(TooltipPositionMode.POINT);
    cartesian.interactivity().hoverMode(HoverMode.BY_X);
    cartesian.yScale().minimum(0);
    cartesian.background().fill("#00000000");
    cartesian.xAxis( index: 0).title("Number of steps");
    cartesian.yAxis( index: 0).title("Days");
    cartesian.animation(true);

    return cartesian;
}

```