



OOP Project Presentation

Group 86

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Technologies Used



Backend Development

- Spring Framework
- PostgreSQL
- Heroku

Frontend Development

- JavaFX
- JFoenix

Web App

- NodeJS
- ReactJS
- Webpack & Babel

Android App

- Android Studio IDE
- Android framework
- Android-gradle framework

Demo



Welcome to GoGreen

make the world a better place by being responsible
about your carbon footprint

Login

Register

Calculating CO₂ Emissions & Score

Eating A Vegetarian Meal

- Kg CO₂
- Footprint averages out
- Other Foods not as impactful

<input type="checkbox"/> Lamb	<input type="checkbox"/> Turkey	<input type="checkbox"/> Rice
<input type="checkbox"/> Beef	<input type="checkbox"/> Tuna	<input type="checkbox"/> Butter
<input type="checkbox"/> Chicken	<input type="checkbox"/> Cheese	<input type="checkbox"/> Nuts
<input type="checkbox"/> Pork	<input type="checkbox"/> Eggs	<input type="checkbox"/> Yoghurt
<input type="checkbox"/> Salmon	<input type="checkbox"/> Potatoes	<input type="checkbox"/> Broccoli
<input type="checkbox"/> Tofu	<input type="checkbox"/> Dry bean	<input type="checkbox"/> Milk
<input type="checkbox"/> Tomatoes	<input type="checkbox"/> Lentils	

Submit Meal

food_id	food_name	score
1	Lamb	-34.2
2	Beef	-22
3	Cheese	-8.5
4	Pork	-7.5
5	Turkey	-5.9
6	Chicken	-1.9
7	Tuna	-1.1
8	Eggs	0.2
9	Potatoes	2.1
10	Rice	2.3
11	Nuts	2.7
14	Vegetables	3
12	Beans	3
13	Tofu	3
15	Milk	3.1
16	Fruit	3.9
17	Lentils	4.1

(17 rows)

Calculating CO2 Emissions & Score



Buying Local Produce

- Country - Registration
- Difference in Continent
- Predetermined Score for the Difference (manually)

Buying local produce

the country of production

product name

submit

Calculating CO2 Emissions & Score

Personal Transport

Using Bike Instead Of Car

- Personal Transport Feature
- Personal Vehicles (Car, Scooter, Bike etc.)

Distance Travelled miles

Using Public Transport Instead of Car

- Public Transport Feature
- Public Vehicles (Metro, Train & Bus)

vehicle_id	name	score
10	Scooter	-60
2	Car	-50
7	Motor bike	-40
3	Bus	35
9	Hybrid car	70
5	Electric car	72
4	Tram	77
8	Metro	79.5
6	Train	82
1	Bike	110


(10 rows)


Calculating CO2 Emissions & Score



Lowering Temperature Of Your Home

- Determined by the Difference between inside Temperature & Outside Temperature
- $|\text{tempInside} - \text{tempOutside}|$

Outside temperature (°C): 

Inside temperature (°C): 

Submit

Calculating CO2 Emissions & Score



Using Solar Panels

- Most Impactful Activity
- CO2 Saved By Energy Usage based on Percentage

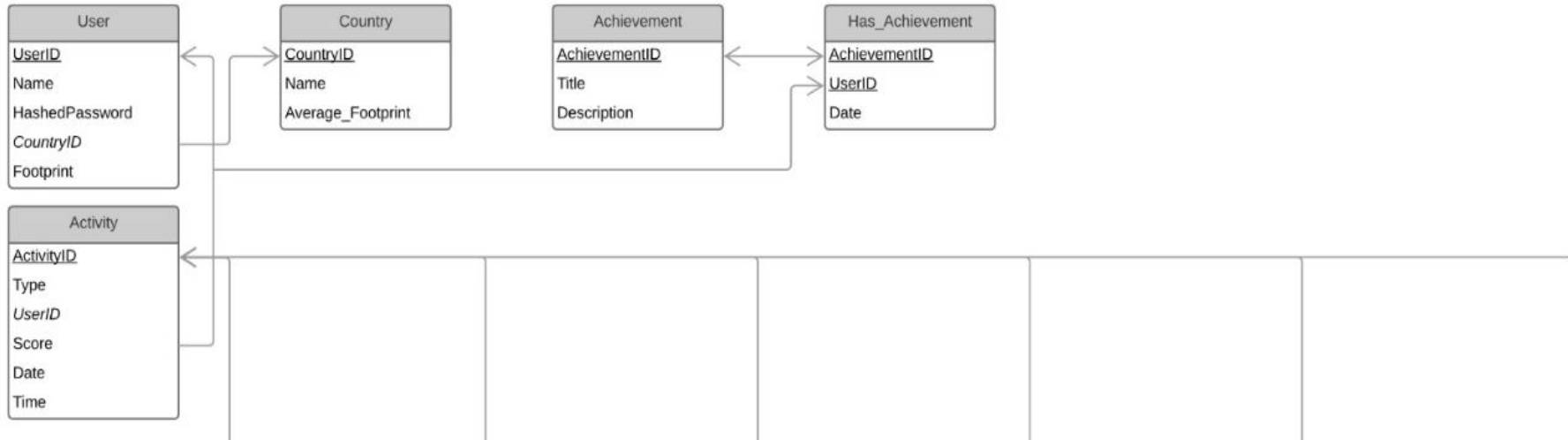
Electricity usage (kWh): 

Percentage saved: 

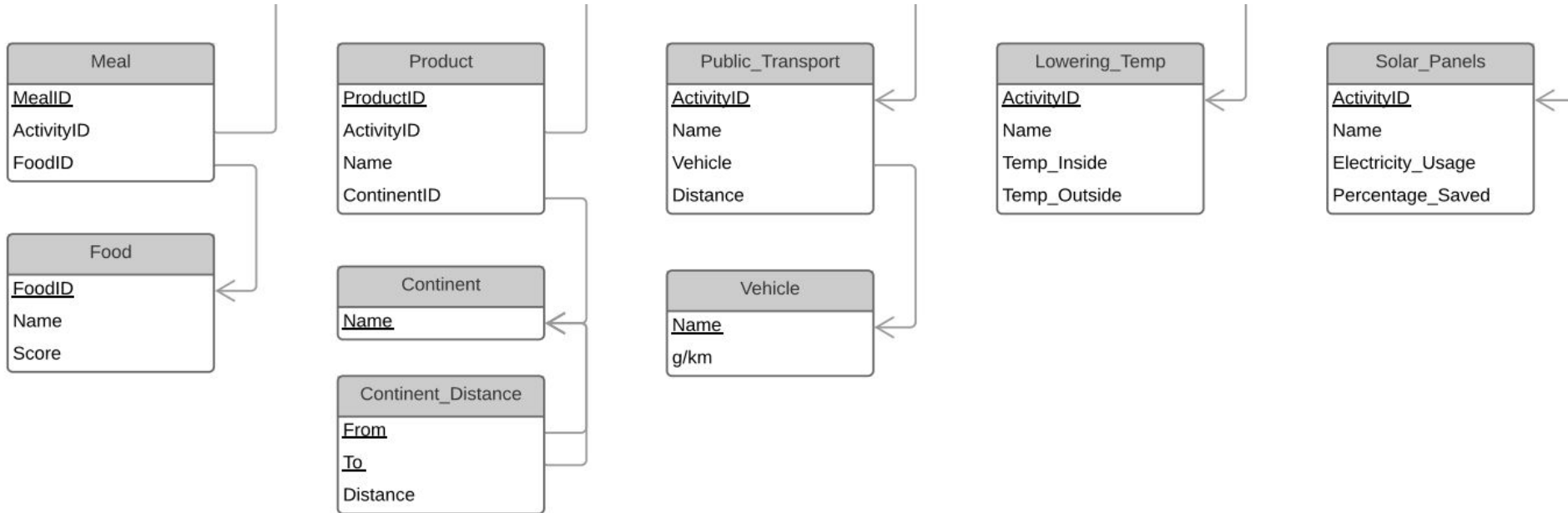
Submit

Database

- Activity Based Application



Database 2



Backend - Spring Framework



- Spring Boot
 - Restful Server
 - Restful Controllers
 - SSL Configured (HTTPS)
- Spring JPA
 - Entities
 - Data Repositories Interface
- Spring Sessions
 - Basic Authentication

Frontend JavaFX

- JavaFX
 - Scene Builder
 - FXML
- JFoenix
 - Fancy Sliders
 - Checkboxes
 - Cool Buttons



- | | |
|--|--|
| <input checked="" type="checkbox"/> Lamb | <input type="checkbox"/> Turkey |
| <input checked="" type="checkbox"/> Beef | <input type="checkbox"/> Tuna |
| <input type="checkbox"/> Chicken | <input checked="" type="checkbox"/> Cheese |

Submit Meal

Web App



- NodeJS
- ReactJS
 - Modularity
 - Extremely Fast
 - Popular
- Not all features

CO₂ Tracker

Dashboard

Add Activity ▼

Eating A Vegetarian Meal

Buying Local Produce

Using Personal Transport

Using Public Transport

Lowering House Temperature

Adding Solar Panels

Android App




- Android studio and Gradle
- Build.gradle and POM.xml
 - Multi-module projects can work
 - Android-Gradle is uncooperative
- Referencing instead of rewriting



Unsupported Modules Detected

Compilation is not supported for following modules: OOP-Project, server, client. Unfortunately you can't have non-Gradle Java modules and Android-Gradle modules in one project.



Responsible Computer Science



- User-Friendly Interface
- SSL Configuration (HTTPS)
- Sessions
- One-Way Password (Impossible to Decrypt User Passwords)



Thank You For Listening!