

VIDZEME UNIVERSITY OF APPLIED SCIENCES
FACULTY OF ENGINEERING

PYTHON OOP AND MODELLING
GROUP 01

PRACTICAL WORK #1

VALMIERA, 2021

Table of contents

1	Idea introduction	4
1.1	Context	4
1.2	Proposed solution	4
1.3	Target audience	5
2	Used resources	6

Document versions			
Version	Status / Changes	Date	Author
1.0	Initial document version	02.12.2021	A.Jenerts
1.1	Grammar and styling edits	02.12.2021	A.Jenerts

Contacts and responsible (-s)			
Name Surname	Department	Position	Contact information (e-mail)
Signe Grosberga	Group 01	Member	signe.grosberga@va.lv
Edmunds Sprūdžs	Group 01	Member	edmunds.sprudz@va.lv
Andris Jenerts	Group 01	Member	andris.jenerts@va.lv

1 Idea introduction

1.1 Context

Analyzing past automotive fuel prices, it is easy to identify an upwards trend since the oil price war in 2020 spring when crude oil prices plummeted to record low prices pooling petroleum product prices as low as 0.9055 Eur/l for diesel and 0.97433 Eur/l for E-95 petrol according to European Commission weekly data reports. Prices since 2020 have steadily risen to a new all-time high level, diesel price has risen by 51.2% to 1.3698 Eur/l and E-95 petrol price by 56.9% to 1.5292 Eur/l. [1] Not only price is rising but also highly varying by each fuel station chain (e.g., Circle-K, Neste, Virši). Each fuel chain has its base price, loyalty discounts and other regular and non-regular discounts.

Considering that people are more travelling by personal transport to reduce public contact due to COVID-19 risk, demand for fuel is rising and people want to find the best deal to save money. Sometimes this can be done by identifying location trends e.g., fuel in Riga costs more than in Sigulda or knowing that fuel is less expensive at some fueling station, but sometimes these observations or guesses are wrong, and a person spends more money than could have.

1.2 Proposed solution

Our team has identified that simple to use mobile application that collects and displays fuel prices in real-time could save both time and money for people who regularly are fueling up and wants to get the best deal.

Such application could collect data in multiple ways:

- a) known public databases for prices at fuel stations;
- b) web scraping data for discount deals;
- c) user input.

Users not only could consume information from the app but also give some information to others, e.g., during a drive-by or fueling at some station noticing prices and inputting them at the app. This information could provide real-time updates for other users. Users' geolocation could be used to recommend a fuel station with the best price in the area.

1.3 Target audience

The mobile app mainly will target daily drivers who refuel and pay for the fuel themselves. The main characteristics of the users are:

- a) uses a personal car as main transportation means;
- b) feels comfortable using mobile technologies;
- c) controls monetary expenditures.

It is worth mentioning that if this application attracts sufficient user count, gathered data could be useful for research purposes. Research about regional tendencies and activity could be carried out.

2 Used resources

1. European Commission Weekly Oil Bulletins, <https://ec.europa.eu/energy/observatory/reports/List-of-WOB.pdf>