

VIDZEME UNIVERSITY OF APPLIED SCIENCES
FACULTY OF ENGINEERING

PYTHON OOP AND MODELLING
GROUP 01

PRACTICAL WORK #1

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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 upwards trend since oil price war in 2020 spring when crude oil price plummet 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 has steadily risen to 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 own 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 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 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 price in real-time could save both time and money for people who regularly are fueling up and wants to get 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 app but also give some information to others, e.g., during drive by or fueling at some station noticing prices and inputting them at the app. This information could provide real time update for other users. Users' geolocation could be used to recommend fuel station with the best price in the area.

1.3 Target audience

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

- a) uses personal car as main transportation mean;
- 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>