ECC003 Software Engineering
Project
Spring semester 2022/2023

Requirements for submitting:

By studying the user requirement document (see below) you have to:
1. Categorize the requirements as:
    1.1. functional requirements;
    1.2. non - functional requirements;
2. In system design:
    2.1. Represent the use case diagrams.
    2.2. Represent the class diagrams (minimum 3 classes should be included).
    2.3. Represent interaction diagrams for every system operation.
3. Write algorithmic code for all operations of the classes.

You have to:
- Submit report with description of all items above. Upload the report as pdf file to UZEBIM.
- Last day for submission is 23 May 2023. The late submission is not accepted.

Requirements document

Parking Car Monitor System

1. The program is to monitor the number of vacant car spaces in two car park areas (for passenger cars and lorry cars).
2. The program must be written in C++, Java or C# Programming Languages on the computer IBM PC.
3. The number of vacant car spaces should be displayed for request of an operator.
4. A general aim in the design of the program is to minimize the amount of main memory used.
5. The program should park the cars in random places according to the request of an operator. The number of cars to park should be given by operator (a validation should be done for the number of cars parked).
6. The program should remove the cars from park places randomly according to the request of an operator. The number of cars to remove should be given by operator (a validation should be done for the number of cars removed).
7. At the beginning an operator must provide the program with the following items of data (a validation of input data should be provided by the program):
    - Number of places for parking car in every car park.
    - Prices per hour for lorry and passenger car.
8. The program must produce for each action of an operator a report (the report should be saved in file). The report must consist of:
    - A number of the cars in park area.
    - The time of report.
    - The number of vacant car spaces in every car park areas.
    - The data for every parked car (place, arrived time)
9. The program must keep the arrived time, the park place and cost of parking for every car; these values should be reported by a request of an operator.