Project 2 Description
COS70006 Object Oriented Programming

25% of your final mark

Due by 23:59pm Sunday 20 October 2024

NOTE: Extensions must be applied for before the due date by emailing the unit convener. A request for extension after the due time or without a valid medical certificate will NOT be responded. So, make sure you attempt your assignment early and do not leave the submission to the last minute. Computer failure, network issue, transport problem, travel, house moving and other personal events are not valid reasons for extension.

GUI Parking Spot System (A GUI System for Project 1)

You are required to develop a GUI (Graphical User Interface) for Project 1. That is, you should change the console interface of your project 1 to GUI. You should do some research for designing the GUI, e.g. how to represent parking slots, how to represent a parking slot occupied by a car, what kind of GUI components for the user to input/select, how to display all necessary messages on GUI, etc.

You are required to list the GUI components used for the interface and even handling functions.

Skills you are required to demonstrate

- Use of appropriate ActionListeners to capture events and respond properly
- Ability of creating a GUI that is easy to use
- Use of Layout Managers and any other required GUI components
- Strictly you must NOT use a GUI development IDE/framework tools to generate the GUI

Requirements

- Achievement GUI for Project 1 - GUI fulfils and meets the requirements of Parking Spot System (Project 1): establish GUI for staff & visitor parking slots by letting the user provide the number of staff parking slots and the number of visitor parking slots, and GUI for Project 1's 8 operations (refer to Project 1's 8 menu items).
- It is easy for the user to understand how to use the GUI.
- Proper use different colours, e.g. different colours for staff parking slots, visitor parking slots, car occupied parking slot, etc.
- Input and output should use Java GUI components such as Text Field/Text Area/Dialog Box. Should not use console interface for input/output.
- The look of your design must be unique (Not shared with anyone else)

HELP
- Nil provided
- You must design and write code for this project yourself

Submission

- The solution must be a BlueJ Project including the source code**. If it is not BlueJ project, 20 marks will be deducted, or it will be given 0 mark.**
- A text file (e.g..docx) that lists the GUI components used for the interface, and description of event handling functions developed in the project. No description for each GUI component and event handling function, you will lose marks.
- A ReadMe file (e.g. .docx) that gives a brief introduction on using your GUI system.
- A zipped all of files must be submitted to Canvas before the due date.

Demonstration

Demonstration may be needed if the marker has some problems on your code and/or running your program.

Plagiarism

THIS IS AN INDIVDUAL PROJECT.

- The submitted work must be your own work.
- You may NOT view the code of other students.
- You may discuss the work with teaching staff.
- You may discuss the big design picture with peers but final design should be yours.
- You must name and code attributes and operations on your own.
- There will be absolutely no tolerance of plagiarism.
- Any person that presents any work that is not their own or is not properly referenced will be awarded 0 marks for the project.

Marking Scheme (next page)

If it is not BlueJ project, 20 marks will be deducted, or it will be given 0 mark.

No		Components	Max Marks	Marks Awarded
Classes and objects	1	• Following OO design principles to design classes and objects.	2	
Code readability	2	• Javadoc for all class headers and methods headers • Proper comments for variables and blocks • Proper indentations and use of blank lines • Use of proper Java naming conventions • Logic of code is easy to follow	2	
GUI components	3	Interfaces for Parking slots and user inputs and/or selections. • Use of proper GUI components. • Should not use console interface for input/output. • Use of Layout Managers • The GUI is easy to use and informative	8	
		• Proper use different colours, e.g. different colours for staff parking slots, visitor parking slots, car occupied parking slot.	6	
User interactions	4	• Establish GUI for staff & visitor parking slots by letting the user provide the number of staff parking slots and the number of visitor parking slots	*4*	
		• 8 operations in Project 1 by using: Event handling, and functions completed as required. e.g. Use of appropriate ActionListeners to capture events and respond.	*26*	
		• Advanced interaction on parking slots: e.g. click on a parking slot to add/remove a car interactively; click on a parking slot to remove this slot.	*10*	
		• Advanced features: add current time & shown up the time when a car is parked (2 marks); list the parking time length for occupied cars for listing slots and finding a car (5 marks); the parking fee should also be shown up (5 marks)	*12*	
		Total	70	