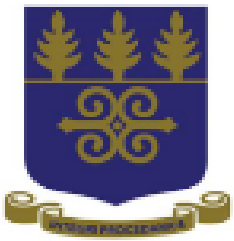

UNIVERSITY OF GHANA

SCHOOL OF ENGINEERING SCIENCES

DEPARTMENT OF COMPUTER ENGINEERING

SECOND SEMESTER *2019/2020* ACADEMIC YEAR

CPEN 312: OBJECT ORIENTED PROGRAMMING WITH JAVA

PROJECT TITLE: ELEVATOR CONTROL SYSTEM

PROJECT NUMBER: 9

GROUP NUMBER 9

MEMBERS	**ID**
Dzegblor Mawuko	10673085
Osei-Hwedieh Jeffrey Edward	10684891
Daniel Yarboi	10685982

STRUCTURE OF PROJECT

- Developing a unique control system, which controls the elevator by pressing buttons on the Graphic User Interface (GUI).
- The elevator has a set of seven buttons; one for the ground floor, the other four higher floors and a button for opening and closing of the elevator doors.
- These illuminate when pressed and cause the elevator to visit the corresponding floor. The illumination is canceled when the elevator visits the corresponding floor.
- The elevator starts from the ground floor and ascends if any of the buttons for the four higher floors are pressed and vice versa.
- When an elevator has no requests, it remains at its current floor with its doors closed.

DIVISION OF WORK

1. Mawuko Dzegblor will be working on the programming the logic of the movement of the elevator to sync with the Graphics. This involves the movement of the elevator from one floor to another in a bidirectional form and the closure and the opening of the elevator door.

2. Jeffrey Edward Osei-Hwedieh will be working on the Graphic User Interface for the elevator real time simulation. This also involves button functions, simulating the opening and closing of elevator doors.

3. Daniel Yarboi will be working on the database and linking it to the graphics and logic section.

TIMELINE

The timeline below provides an approximate schedule for a well-planned elevator system. Using the submission due date as a starting point:

WEEKS	TASK	START	END	MILESTONE	STATUS
Week 1	Development and testing of the closing and opening of the elevator door.	27/04/20	03/O5/20	Simulated the opening and closing of the elevator.	COMPLETED
Week 2	Development and testing the upward and downward motion of the elevator.	04/O5/20	10/O5/20	Simulated the upward and downward motion of elevator.	COMPLETED
Week 3	Development and testing of the graphical user interface to sync with the logic.	11/O5/20	17/O5/20	Synched the logic to the graphic user interface of the project.	COMPLETED
Week 4	Merging of the various parts and components to the database.	18/O5/20	24/O5/20	Successfully merged the logic and GUI to the database design.	COMPLETED
Week 5	Debugging, Simulation and Presentation.	25/O5/20	07/O6/20	The project will be bug free, simulated and presented.	COMPLETED

EXTERNAL LIBRARIES AND OOP STRATEGIES

The external java library used in the development of the Elevator Control System was the mysql-connector-java-8.0.20 executable jar file.

Two strategies were implemented: the function-centered strategy and the object-centered strategy. According to the function-centered strategy, the functions are prominent in the representation guiding the design activity, and objects are subordinate to functions. According to the object-centered strategy, the objects are prominent in the

representation guiding the design activity, and functions as well as procedures are subordinate to objects.

DATABASE DESIGN