**User Manual**

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**Covenant University Shuttle Management System**

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**Date:** 6/24/2022

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# AUTHORIZED USE OF SYSTEM OF CUSMS HARDWARE

The software is to be used by people assigned by the admin and is on telegram while the RFID system is to be used by only authorized users. The users must have authorized access by having an RFID card which must be of a High frequency (13.56MHz) RFID card and must also be registered on the MySQLite software database.

# POINTS OF CONTACTS

Point of contact are people that, or a single point, is an individual or a department that handles communication with a customer. They serve as coordinators of information in terms of an activity or a project and act as an organization’s representatives[1].

**Administrators**: These are the people or the person who will be communicating with the shuttle driver and the applications which are at the backend.

**Shuttle drivers**: These are the people that would be monitoring the app and ensuring customers’ needs are met.

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# ACRONYMS & ABBRIVIATIONS

CUSMS – Covenant University Shuttle Management System.

RFID – Radio Frequency Identification

IDE – Integrated Development Environment

UID – User Identity

LED – Light Emitting Diode.

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# SYSTEM PREFACE

The system enables a customer to use a both a chatbot and an RFID to access shuttle services. This system enables a customer to either book or call a shuttle using the chatbot. The RFID would enable a customer and registered user to be able to pay for a shuttle ride using an RFID card. The RFID card should be of required standard (HF) and should be registered on the system’s database.

# GENERAL INFORMATION OF SYSTEMSYSTEM PREFACE

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# GENERAL INFORMATION OF SYSTEM

The System is split into two. The chatbot and RFID. The Chatbot allows a customer to book or call a ride using telegram application. The RFID system that allows payment of shuttle by customers with RFID cards. The RFID must be registered in order for customers to access the system. It consists of a server, a micro controller which is an Arduino Uno, an RFID reader, a buzzer, a LED, two switches, a resistor, jumper cables and the external and interior structure.

# SYSTEM OVERVIEWGENERAL INFORMATION OF SYSTEM

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# SYSTEM OVERVIEW

The software is used to by telegram user or a shuttle driver. The shuttle payment system is helpful in paying for shuttle services because it enables quick payment at times where there is a queue in the system. This payment system is connected to a network and speaks directly with the application, it then returns a response from the application back to the micro controller which is the Arduino Uno.

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**STEPS FOR SYSTEM FUNCTIONS**

1. An admin obtains the UID of the RFID using Arduino Uno IDE and stores the UID on MySQLite software. The MySQLite table is gotten in the flash in “project\integrity-master\database.sqlite.” and should be opened with MySQLite. Note that the first person to open the bot is the owner of the bot and would be granted admin privilege. Next, the UID should be obtained using Arduino IDE and using the sketch on the flash in “project\RFID\arduino\_esp-01\_new.ino”. In the database from the MySQLite, the table “orders” and column “notes” should be the column to place the obtained UIDs. Note that one needs to launch the app first using “project\integrity-master\core” before opening the databse.slqlite file. And one needs a token from bot father and need to input it into the config file for token before using telegram which can be gotten from the “Obtain\_Telegram\_token.txt” before one clicks on the integrity-master folder in the flash. Next, the launching of the the server application using python programming language using Pycharm IDE. The code for the server can be gotten from “project\integrity-master\def\application.py”. Note that the server and the RFID system should be on the same network, and the IP address assigned to the RFID payment system by the server should be “192.168.137.1”.
2. The admin switches on the application server program and observes the LOG files. That is how the server responds to inputted RFID cards.
3. The stored UID would be used to authenticate a user’s card whether valid or invalid. If the user brings a registered card close to the system, the LED comes up for the RFID switch but if it is an unregistered card, a buzz sound is heard.
4. A user with an account on telegram should search for the bot “CUSMS”.
5. The bot would be used to call a ride. A customer would be brought to a customer interface for ordering rides. The shuttle riders would also have an interface in the chatbot. The shuttle riders can credit a user’s account debit from the interface.
6. The user authenticates using an RFID

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# SYSTEM REFERENCES

[1] “What is a Point Of Contact: Definition, examples, importance, and tips | Snov.io.” https://snov.io/glossary/point-of-contact/ (accessed Jul. 14, 2022).

# ACRONYMS & ABBRIVIATIONSSYSTEM REFERENCES

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