**SOFTWARE REQUIRMENT SPECIFICATION FOR ONLINE CAB BOOKING**

Prepared by : **Nikhil kaushik**

Proposed to : **geethanjali anbalagan**

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**Purpose**

The online cab booking web application is intended to provide solution for the people who don’t have cars but they need for travelling.

|  |  |
| --- | --- |
| word | explanation |
| location | The computer server responsible for handling the communiation btw the coustmer and the server |
| car | Car in this context is the same as taxi , bikes |
| driver | A person who is driving the vehicle |
| operator | The person who is in between the customer and the service provider |

**General Information**

**The system comproise of three modules taxi , the communication link and the server . The database where the information of the cars and the orders are stored in a independent system.**

**Driver**  
3.1.1 The taxi shall be able to be in different states, these states are:  
Offline - the driver is logged out  
Available - the driver is logged in and available for new customers.  
Waiting for customer - the driver is logged in, has got an order and is currently waiting for the customer to arrive.  
Driving a customer - the driver is logged in, and is currently driving a customer to a destination.  
Soon available - the driver is logged in, and will be available in a certain amount of time on a certain location.

3.1.2 If a driver is not logged in to the system the operations are limited to login and start alarm.

3.1.3 The log in shall be confirmed by taxi number and driver number.

3.1.4 A driver can only log in if the car is in the state offline.

3.1.5 The system shall notify the driver whether a log in was successfully done or not.

3.1.6 When a driver is logging in, information about the position shall be sent to the central.

3.1.7 When a driver has logged in, the driver shall be in state available.

3.1.8 A driver shall be able to log out only if the driver already is logged in and is in state available.

3.1.9 The log out shall be confirmed by taxi number and driver number.

3.1.10 The system shall notify the driver whether a log out was successfully done or not.

3.1.11 When the driver knows the arrival time, the time and zone shall be sent to the system.

3.1.12 When a taxi switches states, the central shall be informed of it.

3.1.13 When a taxi switches to the state soon available, the system shall estimate how long it will take for the taxi to become available.

3.1.14 When the meter is turned on, the taxi shall be in the state driving a customer.

3.1.15 When the meter is turned off the taxi shall be in the state available.

3.1.16 When the meter is turned off the price of the fare shall be displayed and a receipt shall be printed.

**Functional:**  
 The system has several requirements not relating to a certain function of the system. The list below deals with these issues.   
Requirements

4.1.1 Driver integrity - The position of the car should not be displayed exactly to users of the system, except for when driving a customer.

4.1.2 User identity - All users of the system, drivers or operators, shall have a unique identification number.

4.1.3 Usability

- The system must be user-friendly. In the cars, special care must be taken to ensure that the interface is as non-intrusive as possible for the driver. Most functions should be possible to perform while driving and it is essential that the information is clear, the display clearly visible, and the sequences for different functions are short. In the central, it is important that the operators can easily enter new orders into the system and also view the traffic overview to be able to manually dispatch cars.

4.1.4 Robust - The different systems should not affect one another. The system has three main functional aspects: Ordering system, radio communication and positioning system. The systems must operate separately and a failure in one of the system should not affect the other systems. Typically, if the ordering system is down, it should then be possible to use the radio communication to manually dispatch and make orders.

4.1.5 Consistent - The system should work in a consistent way even if a car is out of range from the central. This typically happens when a car is driving customers outside the regular area.

4.1.6 Legal - The system must comply with all laws and regulations applicable to a taxi organization.  
 4.1.7 GPS - GPS is used as positioning system. The positioning should be handled automatically without the driver having to interfere with the system. ,

4.1.8 Uptime - The system in the taxis must have a total uptime of at least 99% of the operational time, i.e. be working 99% of the time. The equivalent requirements for the central system are an uptime of at least 99.9% of the operational time.

4.1.9 Response time - All communications over the radio link, not being a voice communication, should be negotiated in less than 5 seconds in 99% of all transfers. There must never be more than 1 second delay in the voice communication.

4.1.10 Quality - The voice communication shall use a sample frequency of 8000 Hz and 8 bits for coding each sample. (This is the equivalent specification for the voice quality in the GSM system.) This will generate traffic of 64 kBPS.

4.1.11 Capacity - All non-voice communication should be handled by the system, independent on load and number of taxis. The system should also be able to handle up to 5 parallel voice channels at a time, besides the ordinary non-voice traffic.

4.1.12 Maintenance - The number of cars, centrals and antennas in the system should be changeable. That is, the number should be easily changed if the conditions change.

