# Smart Cab Barcode

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*Abstract*— **Cab reservation service is an important transport service offered in the city by the different transport operators. For your daily transport, the majority of people use the cab service. There are more and more taxi companies looking for integrated taxi reservation systems as the customer and the company can live much easier. Most of the online cab reservation systems are using the centralized cab reservation approach. The centralized approaches are very likely to fail. During this study, we design and implement the smart cab system based on agents for the supply of local data to passengers. A Java distributed multi agent system framework - the Java Development Framework - is used to implement and analyze the proposed approach (JADE). The results of the simulation show that our approach can address the weaknesses of the centralized approach.**

*Keywords*— Smart Cab, JADE, reservation service, vehicle type, barcode.

## I. INTRODUCTION

Smart Cab Barcode is a system which provides both cab drivers and passengers better service. You can travel and pay using your travel card with the use of the smart cab barcode and all payments are made using this card. Here, we have an admin who can add details and pictures to the system to register drivers on this system. Manager will also register users on the system using his details and image to be provided with a unique code and traveller card that he may pay for in the future. Admin also has rights so that balance can be added to the user account and the user and driver can view all details. Here, the driver's function is only to scan the user card and enter the amount and location and that amount is deducted from the user's account. Even for a specified day, drivers could view its transaction history. Upon payment online, users can add balance to their account and also view their journey history details.

Smart cab barcode, the ideal solution for cab management, is specially designed for cab-operators who operate a fleet of vehicles for hire. Smart cab enables you to book the cab in the easiest way irrespective location of vehicles. It automates your entire front-office operations like accepting customer bookings, allocation of vehicles & drivers prepare customer invoices. Admin module handles the entire master forms such as company information, employee information user allocation, change password, vehicle type, vehicle tariff etc [1].

Smart Cab has been specifically designed keeping in mind the requirements of a cab operator. A cab operator operates in a service industry, which requires high standards of efficiency to be successful. A cab operator provides vehicles on hire to customers and bills them according to the tariff card. The key success factors in this

business are quality of service, condition of the vehicle, competitive pricing, customer-interface etc. A cab operator has to keep tight control over these factors to be competitive and remain profitable.

1. User
   - User can view all the transactions history.
   - User can add balance into his account using debit/credit cards.
   - You can create a new account
   - If you forgot your registered password then you can recover it by your nick name and your school's name that you give at the time of registration.

2. Cab Booking
   - User have to give destination and source
   - User want to give time
   - User have to select a package.

## II. OVERVIEW OF CAB BOOKING SYSTEM

Taxi market in India is an emerging and booming sector of the transport industry [1]. This is evident from the fact that in out of every 5cars on Indian roads, two are for sure taxis. The journey of taxi cabs industry started in the year 1910. The first taxis launched were the traditional Ambassador which were painted black and yellow and were meant to serve the Indians for daily commuting business. These were metered taxis and had spread over to various cities like Mumbai, Delhi, and Bangalore etc. Presently, the cab industry has changed from the traditional black and yellow metered taxis to the hi-end technology driven machines. Taxis are an important part of the Indian automotive market especially in metros like Delhi, Mumbai, Bangalore and Chennai. The changing lifestyles have led to an excessive reliance on private cars in today's markets. Various Public transportation services are important for civic life. In many countries, especially in the Middle East, attention has been diverted towards developing and improving the public transport systems. Several reasons behind this initiative and growth are problems like traffic congestions in cities, low mobility,

high individual costs. This research paper reveals people's perceptions of public transport in India and helps to identify facilitators and barriers to such services". The working women have significantly transformed and influenced the modern marketing concept in present world [2]. In this research paper the changing perception of both working and nonworking women in Urban India is highlighted. It states that women because of their multiple roles have influenced their own and of their family members perception. The study also reveals that working women are price, quality and brand conscious. Price, competitiveness, quality assurance and customer service has thus become vital components of marketing now. For the business firms, this has become the way to their growth and survival[3]. A company's business therefore, depends on its ability to create and retain its customers. Thus, a company, which wants to increase their market share has to think of customers and act customer (especially women in this changing scenario). The role of customer perception, women especially cannot be ignored when we discuss the public sector and its services in India. Dunckel-Graglia examined, analyzed, and evaluated the women-only transportation which focuses on the roles of culture and public opinion [4]. Local feminist groups have advanced this system by putting forward their argument - Violence in regular public transit is gender discrimination. It has been well depicted that women's fear of using public transportation due to several reasons has led them to change their travel behavior. The strategic tool which helps to enhance customer relationship in today's world is known as Technology. The radio taxi company, Meru Cabs, started their operations in April 2007 at Mumbai and was one of the firsts to provide "radio taxi" service in India. Meru Cabs have always been delivering a reliable taxi service by paying key attention and concentrating on three C's, namely customer, call centre and chauffeur. All this forms an integral part of customer satisfaction and acceptance on a larger scale" [4].

## III. EXPERIMENTAL RESULTS

### A. *Unit Testing*

Unit testing concentrates the verification effort on the smallest software unit, i.e., the module. Detailed design and process specifying tests are used to detect errors within the module boundary. Before starting integration testing, all modules must be successful in the unit test.

Every service can be considered as a module in this project. Basic modules are available. Each module has been tested for different sets of inputs. When the module is developed and developed, every module is working flawlessly. When the user accepts the inputs are validated.

The programmes are tested as a system in this application developer. The modules and routines that are assembled and integrated for a specific function are software units within a system. Unit testing on modules is performed first, independent of each other, in order to find errors. This allows errors to be detected.

### B. *Integrated Testing*

We have to conduct integration tests after the unit test. The aim is to see whether modules can be properly integrated and to test the interfaces between modules. This testing activity can be seen as a design test, and therefore the focus on the interaction of the test module. In this project, which includes all the modules, I examined the effects of integration by providing various combinations of inputs in one of the services.

### C. *Validation Testing*

The software was assembled fully as a package at the culmination of the integration test, interface failures were uncovered and corrected and a final software validation testing process was started. We tested the system in a way that the customer can reasonably expect; the system was tested against the specification of the system requirements.

### D. *System Testing*

A critical element of software quantity assurance is software testing, which represents the final assessment of the specifications, design and coding. The test phase includes system testing using different test data. In system testing, the preparation of test data plays a crucial role. The system is tested following the preparation of the test data.

These test data, errors and corrections have been identified after the test steps and corrections have been recorded. Therefore, before it is ready for implementation, series testing is done on the system.

Smart Cab Barcode System is based on the website, which means that the project works mainly on various web pages below.

1. Home Page

Home Page is the initial page for this website where you can navigate the login page, the main menu, vehicle details, customer information, driver failures, and the barcode creation of smart cab barcode system from the user's project.
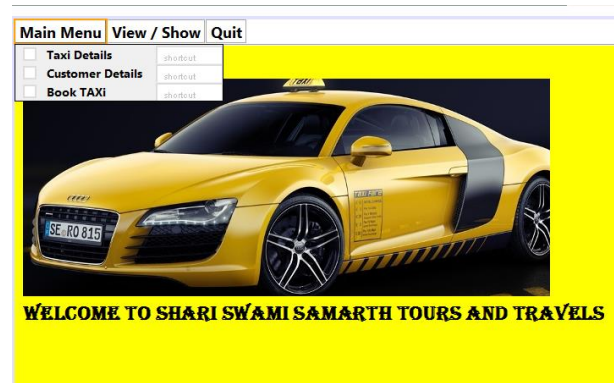


Figure 1: Homepage of website

2. Log In

Log in the Page is used to identify the authorized user, and ensures that the user logs in this application has a unique ID and password.
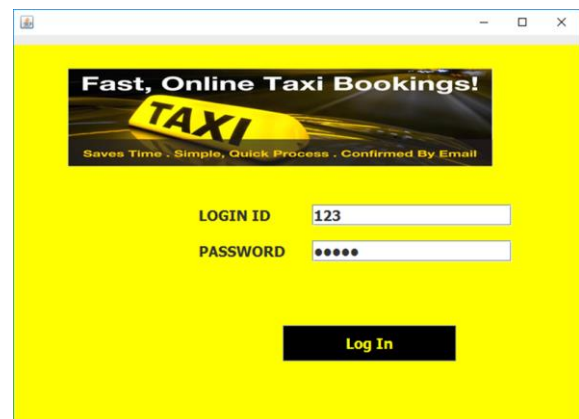


Figure 2: Login module

### 3. Vehicle Details

We store all vehicle details, together with miles and km/cost in the company. You can update the information if necessary.
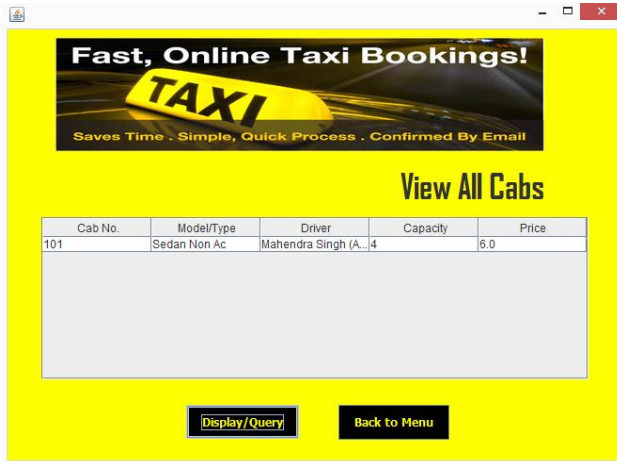




Figure 3: Vehicle details section

### 4. Customer Details

In customer details we store all the details of the customer both new and existing customer.
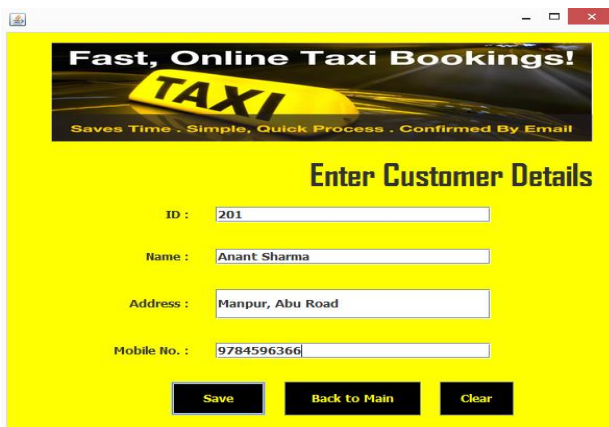


Figure 4: Customer details section

### 5. Driver Details

In driver details we store all the details of the drivers working for the company with their availability and their charges /day.

### 6. Barcode Generate

The unique bar code is automatically downloaded to the passenger's device if the person fills all the details and clicks on the book button. When passengers reach their destination, the barcode that passengers have on their device will be scanned.
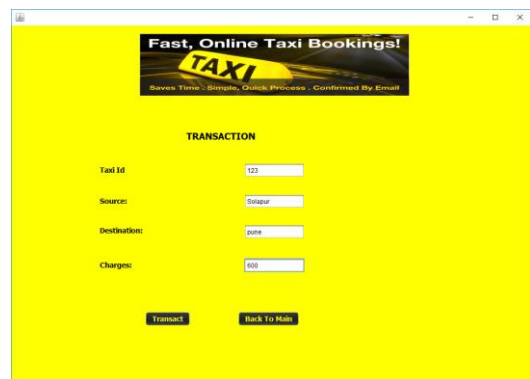


Figure 5: Barcode generation
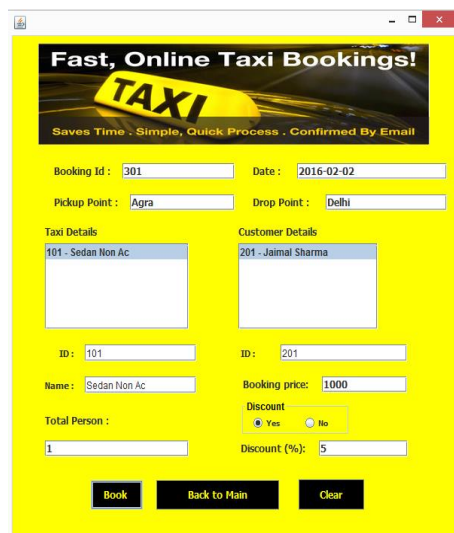




Figure 6: Transaction panel

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Figure 7: View all bookings

## VI. CONCLUSIONS

The cabs are very important for travelling from place to place. To move from one place to another, people use cabins. If there is an application that enables the user to use a smart cab, the barcode scan application can use the smart cab system. It is an application that allows the drivers to scan the card with a single code. This can be especially easily implemented for the cab or automobile drivers. The drivers' owner can ensure that the drivers work for the number of hours required. This is one of the applications that can be easily implemented in real time. The owners of the vehicles who have employed the drivers can rely on this application with great ease.

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