**1.Introduction**

Today, technology is used for nearly everything in people’s daily lives. Technology is now a part of people that they can never get rid of. Technology makes people’s lives a lot better and easier. One of the products that people use actively everyday is smartphone. People can travel, connect with each other, shop, and do lots of other things with using it. For making these things, mobile applications are being written.

The crossing part that includes travelling and shopping defines our application: “ Name”. “Name” is a mobile bus ticket application located in Turkey.

**1.1 Purpose of the System**

The aim of the system is providing an efficient platform for users so they can search convenient trips to the places that want to travel and buy their tickets easily. Mobile-based application creates an ease for the customers, therefore they can search and buy their bus tickets quickly and without confused with the lots of processes they have to make.

**1.2 Scope of the System**

There are 4 parts of usage in this system: Customer, Guest, Admin, Manager.

On customer part, users can continue using the program either logging in or not. The main function that system provides is buying bus tickets. Application starts with the page that includes choosing functions of destination and date. Users can search their desired trip with this function. Customers who make login to the system, can get a free ticket if they buy 10 tickets before. Basically, system provides customers to search the wanted trips and buy tickets on these trips. Customers can also see their previous tickets, edit their profile information and freeze their account if they want.

Guests can use the system without login. They can search and see the trips that they want and buy tickets with their personal information. However, they can’t benefit on free ticket campaign.

On admin part, users have to login. These users can be defined as the head of the system. They have the authority to do every change on the system. Admin can update users’-both managers and customers- info, delete manager accounts, edit bus schedules such as add, update or delete trips, edit bookings such as update and delete.

On manager part, users have to login. These users can manage booking such as edit and delete them and edit bus schedules such as add, update and delete trips.

## 1.3 Objectives and Success Criteria of the Project

Our objective is to create a system which has understandable, easy to use functions, fast interface which customers can search their targeted trips and buy their tickets quickly, irreproachable payment function which gives customer no suspicion on their safety. Lastly, creating a system which works for 24/7 so the customers can make their operations anytime they want. The success criteria for the project would be:

\*User’s satisfaction

\*The rate of usage

\*The popularity of the system

\*Usefulness

## 1.4 Definitions, Acronyms, and Abbreviations

RAD: Requirements Analysis Document

**1.5 Overview**

This document contains the sections “Current System”, “Proposed System”, “Overview”, “Functional Requirements”, “Nonfunctional Requirements”, “System Models”, “Project Schedule”, “Glossary”, “References”.

In the section “Current System”, we talked about the features and existing situation of the current bus ticket system which is based on buying the ticket on ticket shops. We mentioned the disadvantages of the system such as the wasted time on getting ticket and the disorders on setting up the passenger information and travel plans. We also explained that current system doesn’t satisfy the necessities of today’s world of technological possibilities. We mentioned that the current system stays very primitive with the situation of not using technology. In addition, we represented that current bus ticket system is not futuristic, not fast and requires a lot of man-power.

In the section “Proposed System”, we talked about our new bus ticket system’s features and advantages. We talked about the matters which the technology and the system bring us. For instance, using the system on buying bus ticket makes the procedure very fast and reduced the man-power to the minimal level.

In the section “Overview”, we mentioned the features ,functions of the system and the system itself briefly. In addition, we made the explanation of usage on user’s view.

In the section “Functional Requirements”, we mentioned the functions and properties of our new system. We described the functions of our system in point of our actors: Customer, guest, admin, manager. We lastly advert on the relationship between our actors and the system which includes their interaction with system and their environment.

In the section “Nonfunctional Requirements”, we talked about nonfunctional parts of our new system such as usability, performance, reliability or availability and so on. We described all nonfunctional requirements of our project.

In the section “System Models”, we published scenarios and use cases of our project. We defined scenarios, actors, and use cases, flow events, object and dynamic models and other relevant subjects in this part.

In the section “Project Schedule”, we published our planned schedule of developing the project. We preapared a gantt chart and showed our planned timeline.

In the section “Glossary”, we wrote the terminology of our project and identify the participating objects.

In the section “ References”, we published the list of documents we used during the project development.

**2. Current System**

As we mentioned on the introduction part, the current system is insufficient on many ways and has some disadvantages.

Firstly, the old system allows passengers to buy their tickets only on the ticket stores. This situation creates a waste of time for the customers. People must go to the store, get in ticket line if the store is the main one on the city, choose the appropriate trip and the seat, get the printed ticket and leave. This process needs lots of effort from both customers and the staff.

Secondly, when the customer wants to change his/her trip on trip’s hour or destination, he/she has to go to the store and repeat the above process again. This situation also creates a waste of time and the ticket changes may create problems on the system since the old(current) system is manual, runs slow and unobstructed to the errors.

Thirdly, the current system needs lots of workers on work field. At basic level, the store needs workers to use ticket system, communicate with customers, provide security and so on. Hence the worker means money spending for the company.

Fourthly, on manual system it is hard to keep in touch with the customers when the company needs to make proclamation about the trips or the campaign about prices. The company has to make advertisements on related environments or reach the customers one by one.

Lastly, the currents system doesn’t use the technology sufficiently. In the era of technology, the companies have to use the technology nearly on their every function and process in order to get rid of extra costs and speed up their system. In general, the current system is functional but not optimal.

**3.Proposed System**

The new system designed as mobile application. This system brings lots of ease and advantages with itself.

Firstly, customers can buy their tickets on application in a short time. At basic level, they just have to enter the application, search their targeted trip and make the payment. This short procedure saves people from the necessity of visiting the ticket store. The procedure creates a save of time for customers.

Secondly, customers easily can make a request about their trips such as changing the trip time or the destination. They can use the request function, also the admin or the manager can easily see the request and make the alterations.

Thirdly, since the system turns into to the mobile application, it doesn’t need many workers in field. Surely the system needs programmers, designers and other related workers and paying for the system may be costly in the beginning, however in long term it will be economically proper than the old system and it needs much less worker once the system starts to run.

Lastly, the company can use the system efficiently when they want to make some announcements and campaigns just making notifications. This way, the company can reach the customers in a second. In addition, the mobile application is one of the most efficient ways to use technology. Transferring the manual system to the mobile application can be interpreted as the thriving usage of technology in the job sector.

**3.1 Overview**

Trustbus is an online bus ticket system which can be used by everyone who lives in Turkey. The system includes four types of users: Customer, Guest, Admin and Manager. Although the customer and the guest nearly have the same specialties, customers sign up to the system and this sign up procedure gives the customers extra possibilities such as free ticket opportunity.

Customers use the system to search the appropriate trip to the destination which they want to travel and buy the ticket. They have the privilege of one free ticket when they buy 10 tickets. They can make updates on their profile information.

Guests have the same functions with customers, however they don’t have to register or login to the system, they can just search and buy their tickets. Unfortunately they can’t benefit from the campaigns like free ticket.

Admins use the system to make backdoor adjustments, repairs such as editing managers’ and customers’ profiles, deleting managers’ profiles who don’t work on the company anymore, managing bookings and so on. Admins have all the abilities on the system.

Managers use the system to manage bookings and edit bus schedules. They fix the inconsistencies and discrepancies of the bookings and trips, make updates on the system.

In all, this will be a system which reduces the man-work, hours of process and problems on previous system.