

# Addis Ababa Institute of Technology Center of Information Technology and Scientific Computing Department of Information technology

### **ONLINE TICKET STORE**

Software Requirements Specification

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#### **Revision History**

| <b>Date</b> | Description | Author        | Comments    |
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| Nov         | Version 1   | Group Members | First Draft |
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| Dec         | Version 2   | Group Members | Final       |
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## **Document Approval**

The following Software Requirements Specification has been accepted and approved by the following:

| Signature Printed Name |                    | Title   | Date |
|------------------------|--------------------|---------|------|
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### **Definitions, Acronyms, and Abbreviations**

**Admin**: Administrator

FR: Functional Requirement

HTTP: Hypertext Transfer Protocol

SRS: Software Requirements Specification

TCP/IP: Transmission Control Protocol/ Internet Protocol

UC: Use Case

**UX**: User Experience

VIP: Very Important Person



### **DECLARATION**

We declare that this written submission represents our ideas in our own words and where others' ideas or words have been included. We have adequately cited and referenced the original sources. We also declare that we have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.



#### 1. Introduction

#### 1.1 Purpose

The purpose of this document is to provide a better environment for the developer and to plan the whole implementation process as a guide line for programming reasons. And also, to describe the detailed information about the all the Online Ticket Store project structure and requirements to be observed by the programmers.

### 1.2 Scope

This system has features for an event of a certain time and for other event-based systems.

- The system has an interface picture of every event available
- User's signup using their accounts and search for an event.
- There will be an event category for the best events available in the system without searching.
- Members can feedback and share their user experience.

Some other scopes/goals

- Notify users when a new event without promotion arrives.
- Give a location when users are curious about where an event takes places.
- Provide a special treatment as VIP/Background stage occurrence on specific events such as concerts.

#### 1.3 Overview

The remaining part of this document contains a detailed information about the project structure, and to describe a requirement. The first Section provide a general description about the requirements with product perspective, product function, user characteristics, general constraint and assumption and dependencies. On the second section it consists of Specific requirements with three sub sections it shows External interface requirement, Hardware interface, Software interface and Communication interface. Also contains sub sections as Functional requirement, use case and Nonfunctional requirement, inverse requirement, design constraint, Logical database requirement and lastly other requirements. The last section shows the Change management plan for this document and implementation.

### 2. General Description

#### 2.1 Product Perspective

Other event management systems like online ticketing is available almost virally all over the world. Those systems provide service almost in all aspects of events like the system we are going to develop.

Virtual events were first publicly described and presented "Convention View" by Alan Saperstein and Randy Selman of Visual Data Corporation now known as Onstream Media in April 1993 in a presentation to investors at the Waldorf Astoria hotel in New York city.

Virtual event involves interacting people sharing a common virtual environment on the web, rather than meeting in a physical location. Virtual events are highly interactive, looking and feeling a lot like their physical counter parts.

#### 2.2 Product Functions

This system is intended for the users. It will allow the user to search an event. A user can search also by scrolling under the categories. The user can buy a ticket if he got a membership account and a bank account, after that there is a feedback area for better Ux (User Experience) purposes.

#### 2.3 User Characteristics

The system will provide two user actions, those who are administrators such as the event organizers personnel to blog the post or contact the system, those who are members and have a credential account to buy tickets.

The administrators are responsible for blogging posts and event residues to for the users and provide a due date for selling tickets. The members can access every event and search events without limitation and also can buy tickets. Some users who don't have a credential to the system will be suggested to provide an account at limitation cases. The users on the other hand, can use the system to find out where the event is and make a preferred request. This user should have the basic knowledge on how to serve the web in order to search and see updates of the event.

#### 2.4 General Constraints

The main limitations for designing the system is security and transaction failures. Security concerns when the transaction occurs and also, we use banking system for the transaction process which is not simple to manipulate.

A web resource which cannot provide time capacity to the system demands.

The number of event management supply chain income is not sufficient to sustain the required growth of the system.

The response time of the event requirement of the event management markets is too long and to the extend that it jeopardizes the event management supply chain's ability to meet its current commitment to its users.

#### 2.5 Assumptions and Dependencies

The system shall function on a computer that satisfies some up-level hardware and software access also there will be a need of an internet for the database actions and it is assumed that the user has a knowledge of accessing internet and to browse into the system.

The online ticket store will be able to run in any windows and smart phones for the web based there will be a need of an internet browser and its assumed that the user has access to decent internet connection.

### 3. Specific Requirements

#### 3.1 External Interface Requirements

- 3.1.1 User Interfaces
- 3.1.1.2 User interfaces prototype



### 3.1.1.2.1 Sign in for Admin



#### 3.1.1.2.2 Manage Events



Figure 2: Manage Events

#### 3.1.1.2.3 Add Event



Figure 3: Add Event

#### 3.1.1.24 Remove Event

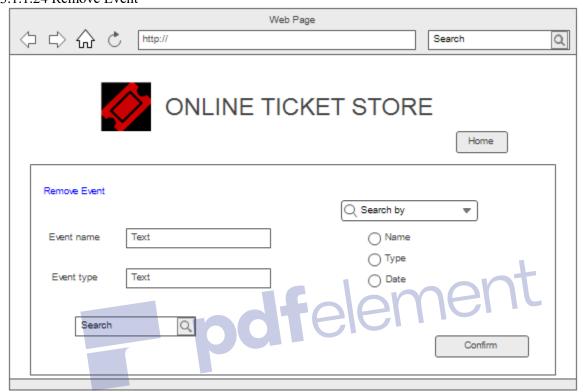


Figure 4: Remove Event

#### 3.1.1.2.5 Users Home page

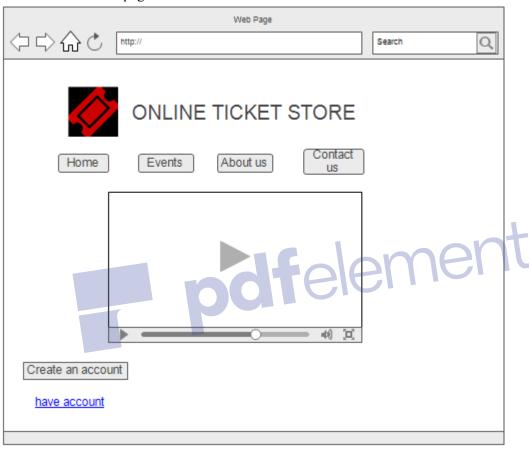


Figure 5: Users Home page

#### 3.1.1.2.6 View Event

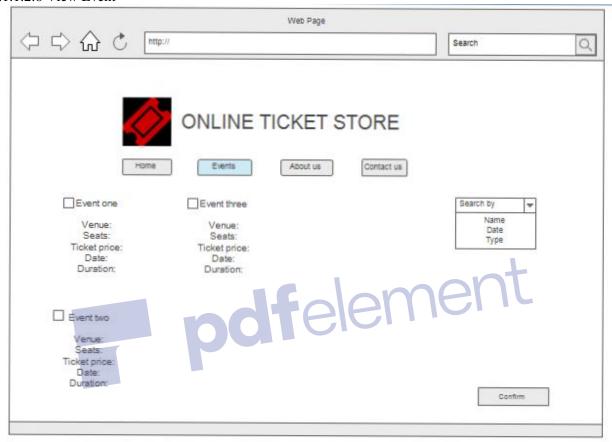


Figure 6: View Event

#### 3.1.1.2.7 Create Account



Figure 7: Create Account

#### 3.1.1.2.8 Contact Us



Figure 8: Contact Us

#### 3.1.2 Hardware Interface

The system doesn't require Hardware interface.

#### 3.1.3 Software Interface

The system uses some software for compatibility reasons like browsers on latest version such as Mozilla Firefox and Google Chrome.

#### 3.1.4 Communications Interfaces

The system shall use the HTTP protocol for communication over the internet and for the transaction to be completed the Authentication number is sent to user by TCP/IP protocol.

#### 3.2 Functional Requirements.

#### **3.2.1 FR-01 View Event**

Table 1: View Event

| Name           | FR-01 View Event                             |
|----------------|--|
| Introduction   | The system shall allow the user view events  |
| Description    | The system shall allow the user want to view |
|                | new event                                    |
| Input          | None   |
| Output         | Display events                               |
| Error handling | The system shows an error when customer is   |
|                | unable to view the events on the category    |
|                | when credential is not valid.                |

|  | •  | when credential is not valid.              |  |  |  |
|--|--|--|--|--|--|
| 3.2.2 FR-02 Search Event Table 2: Search Event |  |  |  |  |  |
| Name   |  | FR-01 Search Event                         |  |  |  |
| Introd   | uction   | The system shall allow the user search for |  |  |  |
|  |  | events                                     |  |  |  |
| Descr  | iption   | The system shall allow to find desired an  |  |  |  |
|  |  | event by key word and also the system      |  |  |  |
|  |  | contains categories sports and concerts    |  |  |  |
| Input  |  | Event title                                |  |  |  |
| Outpu  | t  | Display the searched and related event     |  |  |  |
| Error  | Error handling The system shows a message when a |  |  |  |  |
|  |  | customer searched for wrong event.         |  |  |  |

#### 3.2.3 FR-03 Buy tickets

Table 3: Buy Tickets

| Name         | FR-03 Buy Tickets   |
|--------------|---|
| Introduction | The system shall allow the users to buy   |
|              | tickets   |
| Description  | The system shall allow the users to buy ticket online from the system by validating the |
|              | money transferred to the account.   |

| Input          | Bank Account                                   |
|----------------|--|
| Output         | Successful money transaction and get           |
|                | authentication number                          |
| Error handling | The system shows an error message when         |
|                | Buying a ticket for a certain event failed due |
|                | to money transaction is not done               |

### 3.2.4 FR-04 Authentication number

Table 4: Get authentication number

| 3.7            | TTD 0.4.411111111                               |  |  |  |
|----------------|---|--|--|--|
| Name           | FR-04 Authentication Number                     |  |  |  |
| Introduction   | The system shall allow the users get            |  |  |  |
|                | authentication number                           |  |  |  |
| Description    | The system shall allow the users get            |  |  |  |
|                | authentication number when they transfer the    |  |  |  |
|                | required money and the event managers are       |  |  |  |
|                | need to authenticate the users are buy tickets  |  |  |  |
|                | successfully                                    |  |  |  |
| Input          | Money transfer                                  |  |  |  |
| Output         | The user receives authentication number         |  |  |  |
| 10             | successfully                                    |  |  |  |
| Error handling | The system will not give an authentication      |  |  |  |
|                | number to a certain event if the transaction is |  |  |  |
|                | not done.                                       |  |  |  |

### 3.2.5 FR-05 Manage Events

Table 5: Manage Events

| Name           | FR-05 Manage Events                         |  |  |
|----------------|---|--|--|
| Introduction   | The system shall allow the events add or    |  |  |
|                | remove                                      |  |  |
| Description    | The system shall allow event managements    |  |  |
|                | for addition of new events and removal of   |  |  |
|                | outdated events by administrator            |  |  |
| Input          | Event information                           |  |  |
|                | Name, Category                              |  |  |
| Output         | Successfully add new events or remove       |  |  |
|                | outdated events                             |  |  |
| Error handling | The system will not allow the admin to add  |  |  |
|                | or remove event if their credential is      |  |  |
|                | compromised with security issue that pops a |  |  |

message try to input the credentials again

#### 3.3 Use Cases

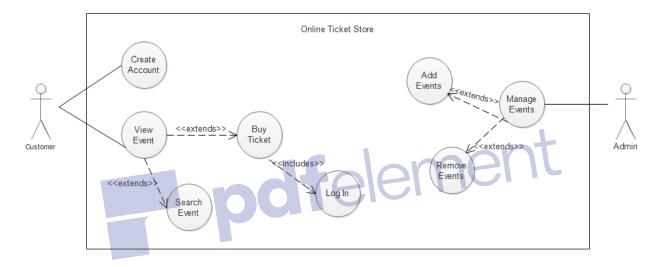


Figure 5: Use Case Diagram

#### **UC-01: View Event**

Use Case Name: View Event

Goal: The user wants to view any new event posted

Primary Actor: Customer

Scope: Online Ticket Store System

Level: User

Success End: User has view event posted

Failure End: User not able to view event posted

Trigger: Opening the web page

Main Success Scenario

1. User opens the web page

2. System display events

#### **UC-02: Search Event**

Use Case Name: Search Event

Goal: The user wants to search an event

Primary Actor: Customer

Scope: Online Ticket Store System

Level: User

Success End: User has search event he/she needed

Failure End: User not able to search events

Trigger: Opening the web page

Main Success Scenario

- 1. User selects search event option
- 2. User enters search item into search box
- 3. System displays the searched event with related event

#### **Variations**

2a.1 User searches an event by filter (by date, by category, by name, most viewed)

3a.1 System shows the searched event does not exist

#### **UC-03: Create Account**

Use Case Name: Create Account Goal: The user wants to be member

Primary Actor: Customer

Scope: Online Ticket Store System

Level: User

Success End: User has created account successfully

Failure End: User not able to create account Trigger: User needs to member of the system

Main Success Scenario

- 1. System displays event page with create account screen
- 2. System requests the user's information
- 3. User enter required information

#### Extensions

3a User does not fill the required information

3a.1 The system prompts an error message indicating to fill the rest of the input 3a.2 The system cannot find the user email address

lement

#### UC-04: Log In

Use Case Name: Log In

Goal: The user wants to buy ticket

Primary Actor: Admin

Scope: Online Ticket Store System

Level: User

Success End: User has log in successfully

Failure End: User not able to log in

ement

Trigger: User needs to log in to his/her account

Main Success Scenario

- 1. User opens login page
- 2. System displays login form
- 3. User enter account credential
- 4. System verify account
- 5. System redirect to specific page

#### Extensions

- 3a. Error Name
  - 3a.1 System prompt error message
  - 3a.2 System return to login form
- 3b. Error Password
  - 3b.1 System prompt error message
  - 3b.2 System return to login form

#### **UC-05: Buy Ticket**

Use Case Name: Buy ticket

Goal: The user wants to buy a ticket for a specific event

Primary Actor: Customer

Scope: Online Ticket Store System

Level: User

Preconditions: - The users must have bank account

- User must have an account

Success End: User have purchases a ticket for event

Failure End: User have insufficient amount in his/her bank account

Trigger: login to the system Main Success Scenario

- 1. User choose a specific event
- 2. User selects buy ticket option
- 3. System displays confirmation message
- 4. System sent authentication number

#### **UC-06: Remove Event**

Use Case Name: Remove Event

Goal: The admin wants to remove Outdated events

Primary Actor: Organizations

Scope: Online Ticket Store System

Level: Admin

Precondition: Admin must be logged in

Success End: Events are no longer member of the system

Failure End: Event recorded is unsuccessfully removed form the system

Trigger: Admin requires to delete an event

Main Success Scenario

- 1. Admin opens web page
- 2. System displays web page with log in screen
- 3. Admin inputs his/her credentials
- 4. Admin selects manage events option
- 5. System displays remove events option
- 6. Admin selects remove events option
- 7. System shows selected information
- 8. Admin enters the required information about the event
- 9. System confirm admin registration changes

**UC-07: Add Events** 

Use Case Name: Add Event

Goal: The admin wants to add new events into the system

Primary Actor: Admin

Scope: Online Ticket Store System

Level: Admin

Precondition: Admin must be logged in Success End: Admin added new event

Failure End: System fails to add a new event

Trigger: New events are available

Main Success Scenario

- 1. Admin selects add event option
- 2. System displays required queries about the event
- 3. Admin enters required information about the event
- 4. Admin confirm to register changes

Extensions: 5a The event is already existed

5a.1 System shows the event is already exist to the admin

ement

### 3.4 Non-Functional Requirements

- **3.4.1 Performance**: The user will have a better response time to access to system or to buy a ticket and achieve the authentication number.
- **3.4.2 Reliability:** The system is reliable when it comes to false alarm events like unapproved events or postponed events that has not been posted from the Admin's or from the organizers will not be posted and the users be announced at the site immediately.
- **3.4.3 Availability:** As most of the sites the system also works 24/7 but there will not be events all week or month so, it will initiate the coming soon events and announce the due date of the event.
- **3.4.4 Security:** Security is a major issue to websites and other internet-based platforms. We manage to maintain the database secure as possible and recoverable when an incident happens.
- **3.4.5** Usability: The System should have a ease of access UI and can be used by majority of the people. Also, the transaction part is easy to manipulate by the users of the system.

### 3.5 Inverse Requirements

The system is not applicable for the outside of country or continental events like tour events that needs a tour visa and other requirements to participate on the events so it's not going to be implemented on the system because of lack of infrastructure and budget for the implementation.

### 3.6 Design Constraints

Some design limitations are the data on transaction and event processing portions need large storage on the database.

Also, the administrators should be well approved by the event organizers to apply changes on the site when a certain event occur.

### 3.7 Logical Database Requirements

| 1 | abl | e ( | 6: | Ľ | <b>a</b> ta | base | 2 | tr | uc | tur | e |
|---|-----|-----|----|---|-------------|------|---|----|----|-----|---|
|---|-----|-----|----|---|-------------|------|---|----|----|-----|---|

| Data             | Attributes            | Use                            |
|------------------|-----------------------|--------------------------------|
| Event data       | Date of event         | This data gives ease of access |
|                  | Event cost            | to user for when the event     |
|                  | Event requirement     | occurred and the price of      |
|                  |                       | ticket. Also, gives other      |
|                  |                       | information to the users.      |
| Transaction data | Authentication number | Transaction data is used to    |

|                 | Account id           | show how many people participate in the event and how may tickets sold. |
|-----------------|----------------------|---|
| Membership data | Username<br>Password | It uses to verify members from admins.                                  |

#### Entity Relationship (ER)Diagram

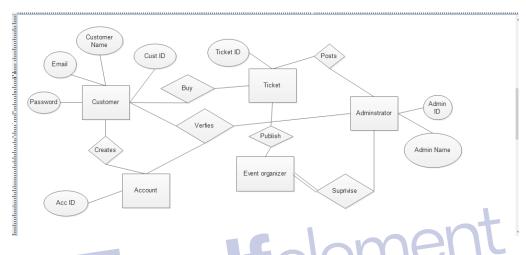


Figure 10: ER Diagram

### 3.8 Other Requirements

Other requirements contain privacy and policy of the site on the transaction and other access to the system. It will be well documented in the site for the member only access.

### 4. Change Management Process

We use the stage delivery life cycle process so; it's easy to update some major upgrade to the SRS and also to the system as predicate to use test before implementations. These changes and upgrades must be applied confirmed by the group members of the project and needs to be implemented if the update is necessary to made.



### References

Websites Wikipedia "Online ticket store"

