



FPT UNIVERSITY



Capstone Project Document

UltraTix - Artist Show Ticket Selling Platform

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Definition and Acronyms

Acronym	Definition
UltraTix	Artist Show Ticket Selling Platform
Show	An event is sold the ticket on the system
Ticket	Electronic ticket
Ticket Type	Types of tickets in the show, has 2 types VIP and normal
Sale stage	Each stage sell ticket for a show
Campaign	Each campaign sells tickets for each artist
Post	The post of the artist
Link	Link to sell tickets for each show for the artist
JWT	JSON Web Token
BR	Business Rule
ERD	Entity Relationship Diagram
GUI	Graphical User Interface
PM	Project Manager
SDD	Software Design Description
SPMP	Software Project Management Plan
SRS	Software Requirement Specification
UAT	User Acceptance Test
UC	Use Case
API	Application Program Interface

Table 1. Definition and Acronyms

I. Project Introduction

1. Overview

1.1 Project Information

- Project name: Artist Show Ticket Selling Platform
- Project code: UltraTix
- Group name: UltraTeam
- Software type: Web & Mobile Application

1.2 Project Team

a. Supervisor

Full Name	Role	Email	Mobile
Nguyễn Thé Hoàng	Lecturer	hoangnt20@fe.edu.vn	0986 628 525

Table 2. Supervisor

b. Team Members

Full Name	Role	Email	Mobile
Huỳnh Thé Khoa	Leader	khoahktse141143@fpt.edu.vn	0866 058 578
Trịnh Lê Cát Tường	Member	tuongtlcse62859@fpt.edu.vn	0383 938 384
Trần Bạch Dương	Member	duongtbse141138@fpt.edu.vn	0901 393 716
Đinh Thị Như Quỳnh	Member	quynhdtnse140541@fpt.edu.vn	0708 126 209

Table 3. Team Members

2. Product Background

Nowadays, many applications on the market sell artist music show tickets. However, they just provide customers with basic functions such as showing information and buying tickets. Sometimes shows don't always have big advertising on social networking sites. There is some small show that has advertisements that are not strong enough to only reach a small number of audiences. That makes customers miss the opportunity to buy tickets or know too late that tickets are sold out to attend their admired artist's show. Besides, when seeing artists post information about a show they attend, customers will have trouble finding where to sell tickets for that show quickly.

3. Existing Systems

3.1 Lasttix

Brief Introduction: Lasttix was founded in 2009 with the single goal of making live events more affordable in Australia. We've done this by launching the app which in one clear interface helps you instantly identify the best ticket prices no matter where you are or what your budget is.

Link to website: Lasttix.com

Advantage: Provide for users to search and buy tickets for shows with many types of ticket prices and supports payment fast at certain places that are cooperating with the application.

Disadvantage: It only supports the normal functions of buying and paying, so it is still difficult to reach users because few people know about it. Not making good use of the propaganda from artists who participate in shows that sell tickets on the platform.

3.2 Ticketbox

Brief Introduction: Ticketbox is an application that sells tickets to cinemas, music events, and seminars in Vietnam. We offer an easier and faster way to buy - sell event tickets. We cooperate with many of Vietnam's leading large-scale events and program organizers. Organizers, please focus on organizing the event so that it is exciting and impressive, we have taken care of everything related to tickets!

Link to website: Ticketbox.vn

Advantage: Provide for users to search and buy tickets for shows with a variety of ticket prices and fast payment support at places that are cooperating with the application.

Disadvantage: It only supports the normal functions of buying and paying, so it is still difficult to reach users because few people know about it. Not making good use of the propaganda from artists who participate in shows have been selling tickets on the platform.

4. Business Opportunity

This platform will help artists post information about the show they will attend and share the ticketing link with their fans to enjoy the benefits of ticket sales and event promotion. Customers just need to click on the shared link to quickly access the ticket webpage of the show. At the same time, customers can easily follow the activities and shows that have their favorite artists on this application. Besides, people spreading and sharing the links with each other will easily promote the show as well as the application to know more people. When an artist sells out of tickets assigned by the organizers, the organizers can pull a large number of customers who are fans of the artists to the system to buy tickets. This helps the organizers speed up the process of selling tickets for a show quickly and smoothly.

5. Software Product Vision

For artists who want to profit from selling tickets for their fans. For customers who want to buy tickets conveniently, quickly, and especially directly through their favorite artists. For organizers who want to promote ticket sales for shows through artists. The ticketing platform is an Internet-based and smartphone-enabled application that will help artists create a link to sell tickets to the shows they participate in. From that, they can receive a discount on the number of tickets sold that have been negotiated in advance with the organizer. Customers can directly click on the link to buy tickets and receive quick payment processing. Unlike manual processes of buying tickets at the box office or searching for websites that have to sell these show tickets, this will save them time and effort. Because artists sell a certain number of tickets, customers who are their fans can buy tickets directed on the system for their artist's shows. The show organizers also benefit from selling tickets via the platform.

6. Project Scope & Limitations

6.1 Major Features

FE-01: Order ticket from the app/web and with/without the link of the artist

FE-02: Create, update the post

FE-03: Create, update, cancel, request approval, and view report the show

FE-04: Get the ticket sale link

FE-05: Scan ticket QR code

FE-06: Create organizer's account, approve artist's account, disable the account

FE-07: Follow artist accounts, view and interact with artist's post

FE-08: Transfer money for show revenue, commission

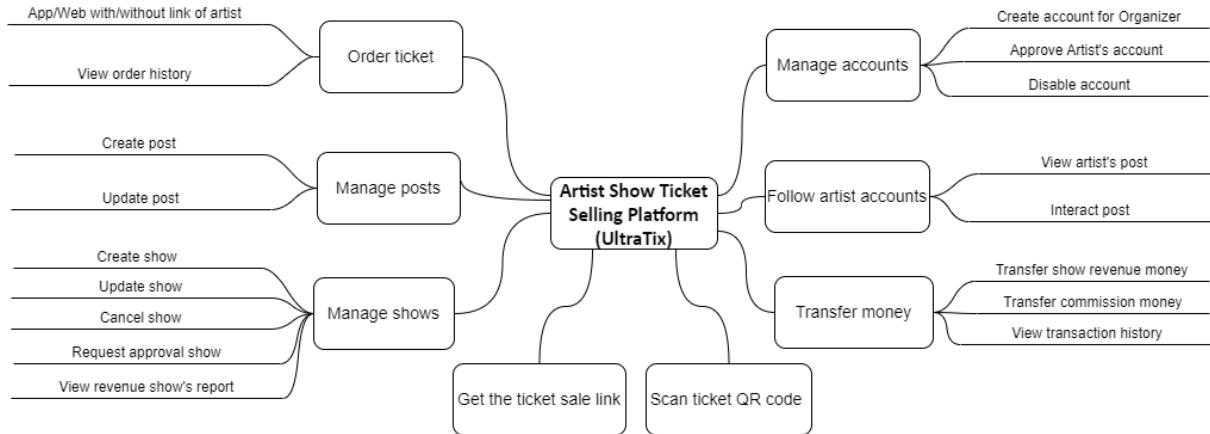


Figure 1. Major Features

6.2 Limitations & Exclusions

LI	Description
01	The system does not support creating shows for customers
02	Staff create shows but cannot post them that must send a request to the Organizer for approval and public
03	The system will not approve all shows and posts, but only controls the reputation of the organizers and artists participating in the system.
04	Artist tickets are sold in limited quantities to balance ticket sales direct from the organizer in the system
05	Organizers need to cancel shows before the allotted time, they must notify to Admin refund tickets for customers
06	Artists who cancel attending the show must send a request to the Organizer

Table 4. Limitations & Exclusions

II. Project Management Plan

1. Overview

1.1 Scope & Estimation

#	WBS Item	Complexity	Est. Effort (man-days)
1	<i>Requirement Analysis</i>		11
1.1	Define the background and context of the product	Complex	5
1.2	Find problems of users	Medium	3
1.3	Existed system analysis	Simple	1
1.4	Business opportunity analysis	Medium	2
2	<i>Technology Training</i>		20
2.1	Learn .Net API framework	Complex	5
2.2	Learn VueJS framework	Complex	5
2.3	Learn Flutter	Complex	5
2.4	Learn DevOps tool	Complex	5
3	<i>Design</i>		22
3.1	Design use case diagram	Medium	3
3.2	Determine system architecture	Medium	2
3.3	Design package diagram	Medium	2
3.4	Design class diagram	Medium	2
3.5	Design sequence diagrams	Medium	3
3.6	Design state diagram	Medium	3
3.7	Design activity diagram	Medium	3
3.8	Design database	Complex	4
4	<i>Document writing</i>		68
4.1	Write project introduction	Medium	7

4.2	Write project management plan	Medium	7
4.3	Write software requirement specification	Complex	14
4.4	Write software design document	Complex	14
4.5	Write test document	Complex	14
4.6	Write user guide document	Medium	7
4.7	Write the final document	Complex	5
5	<i>Interface design</i>		45
5.1	Design web application interface	Complex	25
5.2	Design mobile application interface	Complex	20
6	<i>Implementation</i>		139
6.1	Implement authentication/authorization features	Complex	7
6.2	Implement admin features	Complex	20
6.3	Implement organizer features	Complex	20
6.4	Implement artist features	Complex	25
6.5	Implement staff features	Complex	20
6.6	Implement customer features	Complex	25
6.7	Implement features for the customer (mobile application)	Complex	20
6.8	Implement features for the staff (mobile application)	Complex	7
7	<i>Testing</i>		22
7.1	Unit Test	Medium	7
7.2	Integration Test	Medium	7
7.3	System Test	Complex	8
8	<i>Closing</i>		8
8.1	Deliver report	Medium	3

8.2	Prepare slides for thesis defense	Medium	5
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Total Estimated Effort (man-days) **343**

Table 5. Scope & Estimation

1.2 Project Objectives

- Milestone timeliness: 70%.
- Allocated Effort(man-days): 4 (Member) * 15 (Week) * 6 (Day/week) = 360 man-days

1.3 Project Risks

#	Risk Description	Impact	Possibility	Response Plans
1	Team members do not meet the deadline	High	Medium	Assign more member another to support the task
2	Conflicts among team members	High	Medium	- The whole group discussion to solve the problem - Leader stands to resolve and mediate
3	Technology risks: cannot find solutions to problems	High	Medium	- Thorough research in the early stages - Team members experiment with multiple methods

Table 6. Project Risks

2. Management Approach

2.1 Project Process

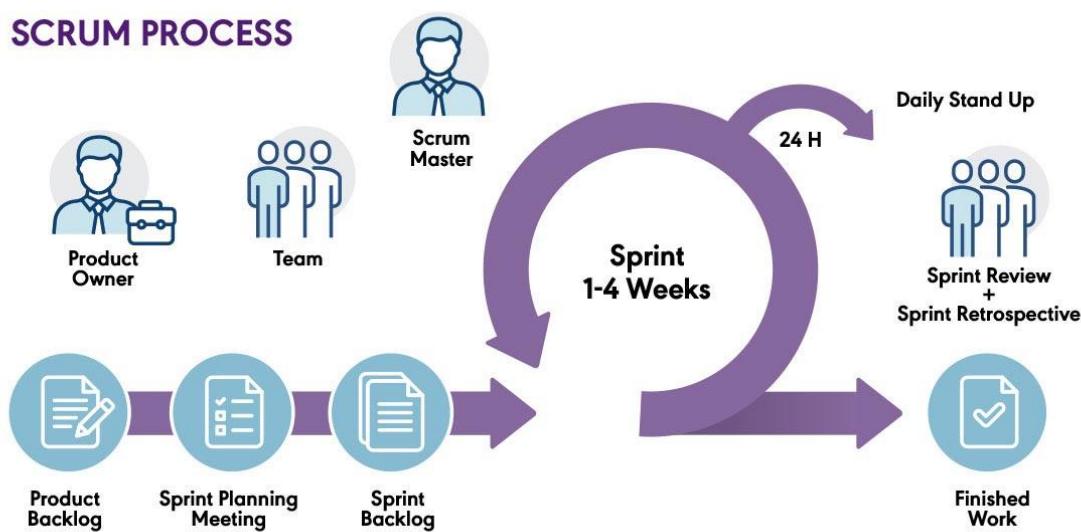


Figure 2. Project Process

- The UltraTix system was developed using the Scrum model which is an Agile framework. We choose the Scrum model with a small team of 4 people for some reasons:

- Suitable for projects that have tended to be subject to change and update in stages.
- During a period in sprints, we will easily analyze what is next and refactor if needed.
- Optimise team performance and efficiency.

References: [The agile journey a scrum overview](#)

2.2 Quality Management

- Make rules about clean coding conventions to easily manage and support each other.
- Carefully cross-review code.
- Do user testing.

2.3 Training Plan

Training Area	Participants	When, Duration	Waiver Criteria
.Net 6	Trịnh Lê Cát Tường, Huỳnh Thê Khoa	5 days	Mandatory
VueJS	Trần Bạch Dương, Đinh Thị Như Quỳnh	5 days	Mandatory
Flutter	Huỳnh Thê Khoa	5 days	Mandatory
Azure Service	All Member	5 days	Mandatory
GitHub	All Member	2 days	Mandatory
Trello	All Member	2 days	Mandatory
DrawIO	All Member	1 day	Mandatory

Table 7. Training Plan

3. Project Deliverables

#	Deliverable	Due Date	Notes
1	Project Plan	15/9/2022	Make project goal plan
2	Report 1	22/09/2022	Project introduction

3	Report 2	29/09/2022	Project management plan
4	Report 3	13/10/2022	Software requirement specification
5	Report 4	27/10/2022	Software design document
6	Report 5	10/11/2022	Test case document, test documentation
7	Report 6	18/11/2022	Software user guides
8	Report 7	23/11/2022	Final project final
9	Code front-end	05/12/2022	Code, design screen
10	Code back-end	30/11/2022	Code, Unit test case
12	Code mobile	05/12/2022	Code, design screen
12	Final packages	16/12/2022	Final code package and documents

Table 8. Project Deliverables

4. Responsibility Assignments

Responsibility	Khoa HT	Tuong TLC	Duong TB	Quynh DTN
Project Planning & Tracking	D	S	R	R
Prepare Project Introduction Document	S	D	D	D
Prepare SRS Document (User Requirements)	S	S	S	D
Backend for system	D	D	R	R
Frontend for web application	R	R	D	D
Mobile app	D	R	R	R
DevOps	R	D	R	R
Others	D	D	D	D

Table 9. Responsibility Assignments

5. Project Communications

Communication Item	Who/ Target	Purpose	When, Frequency	Type, Tool, Method(s)
Working in group	Team members	-Members support each other in a project - Discuss together to solve the problem	4 times per week	Online, Offline
Mentoring	Team members and Mentors	- Review the team's work progress - Give advice and direction - Technical support	2 times per week	Online, Offline

Table 10. Project Communications

6. Configuration Management

6.1 Document Management

We use Google Drive for storing documents, diagrams, and relevant files. We also use Google Docs for continuous editing and storing of the main Document and using Trello to create tasks, bugs, reports, etc., then we apply SCRUM with dynamic time for the sprints.

6.2 Source Code Management

We use the GitHub server to store code and follow Git management best practices.

6.3 Tools & Infrastructures

Category	Tools / Infrastructure
Technology	VueJS (FrontEnd), Android/IOS (App), dotNet 6 (BackEnd)
Database	Azure SQL Database
IDEs/Editors	Visual Studio Code, Visual Studio 2019/2022
Diagramming	DrawIO
Documentation	Ms. Office, Google Docs/Sheets/Slides
Version Control	GitHub (Source Codes), Google Drive (Documents)
Deployment server	Microsoft Azure Cloud Services
Project management	Trello (Task tracking)

Table 11. Tools & Infrastructures

III. Software Requirements Specification

1. Product Overview

UltraTix is a project that develops more functionality based on the usual ticketing application. The system combines all 3 factors: technology, artists, and event companies. UltraTix is an application that helps artists share the show's ticketing link with fans to receive more benefits from sold tickets. Besides, the sale of tickets from artists will bring great advertising benefits to the shows for event companies. In particular, the limited number of tickets available to artists will encourage their fans to come to buy tickets on the system when the artist's tickets are sold out.

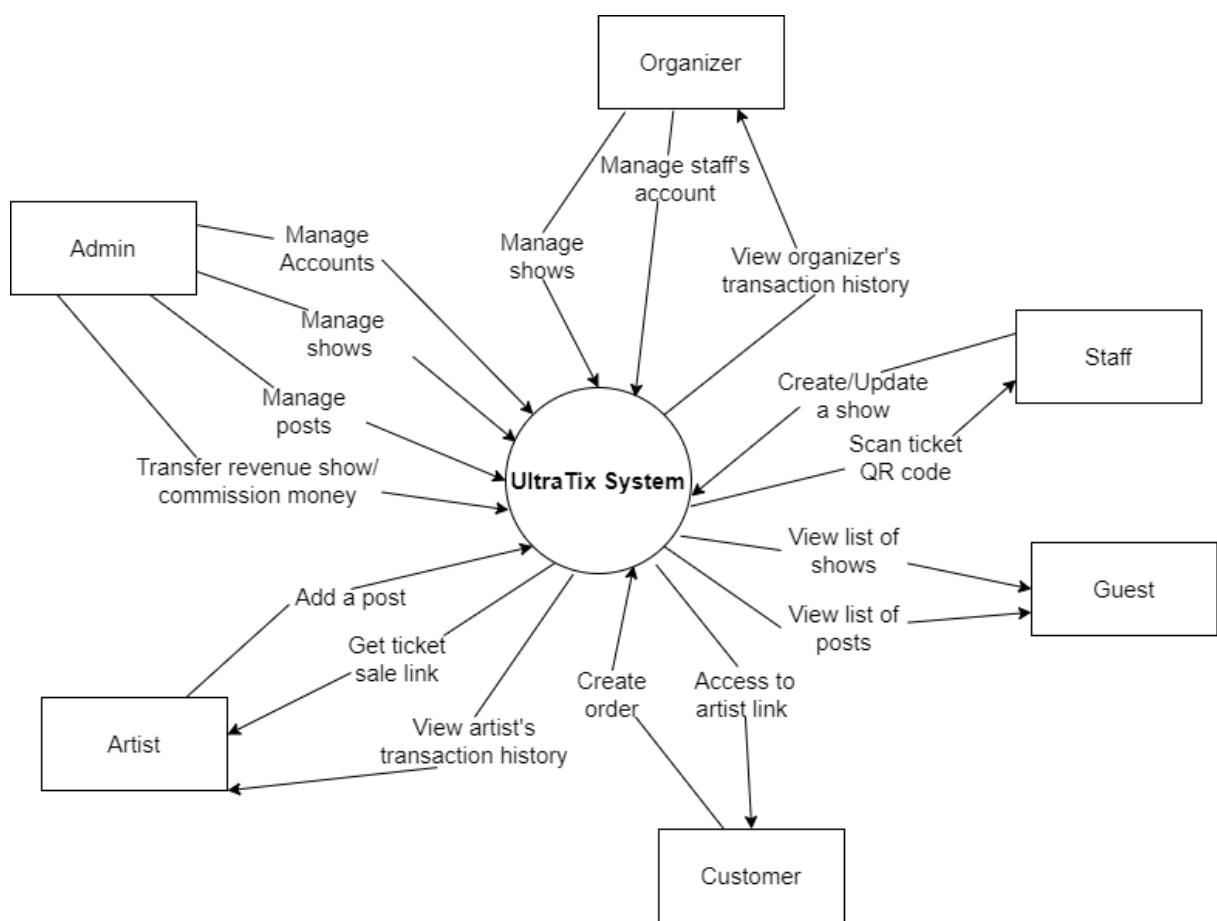


Figure 3. Product Overview

2. User Requirements

2.1 Actors

#	Actor	Description
1	Guest	User who has logged into UltraTix system
2	Member	User has been identified and has been granted an account
3	Customer	User who has logged into UltraTix system with role Customer
4	System Administrator	User who has logged into UltraTix system with role Administrator
5	Organizer	User who has logged into UltraTix system with role Organizer
6	Artist	User who has logged into UltraTix system with role Artist
7	Staff	User who has logged into UltraTix system with role Staff

Table 12. Actors

2.2 Use Cases

2.2.1 Diagram(s)

2.2.1.1 Web Application

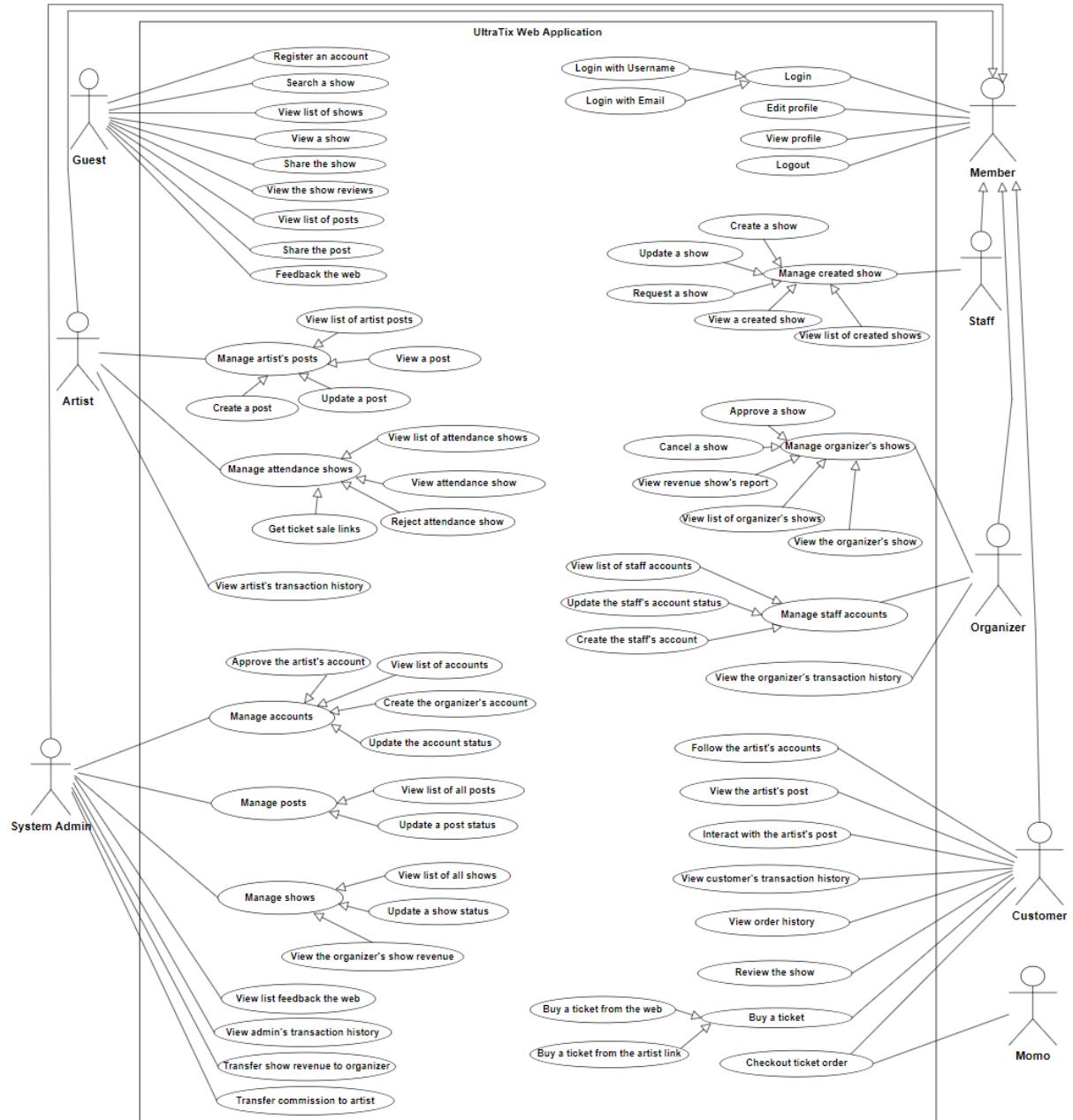


Figure 4. Use Case Diagram Web Application

2.2.1.2 Mobile Application

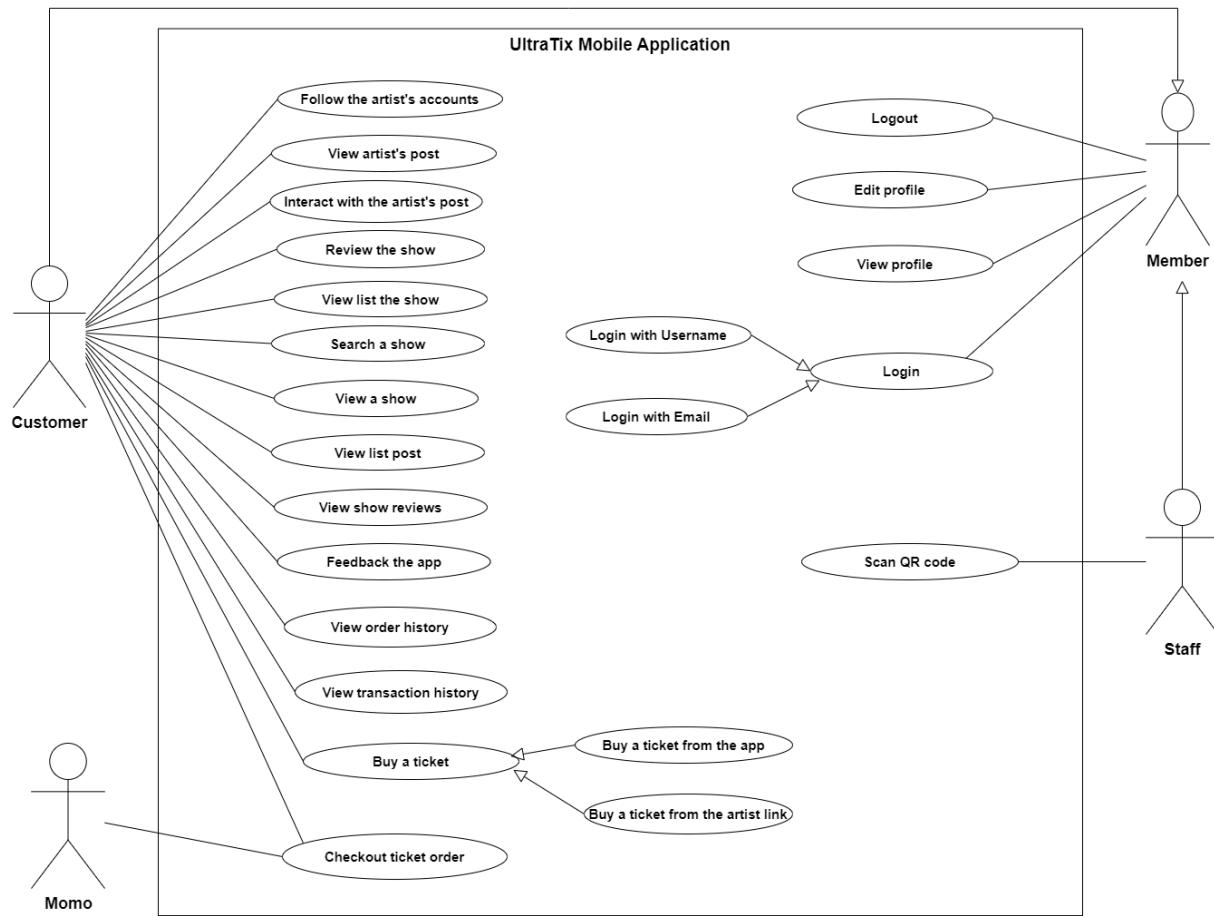


Figure 5. Use Case Diagram Mobile Application

2.2.2 Descriptions

2.2.2.1 Web Application Descriptions

ID	Actors	Use Case	Use Case Description	Secondary Actors
UC.01	Guest	Register an account	The user registers an account	/A
UC.02	Guest	Search a show	The user searches for the show	/A
UC.03	Guest	View list of shows	The user views the list of the show	/A
UC.04	Guest	View a show	The user views detail the show	/A
UC.05	Guest	Share the show	The user shares the show to social network	/A

C.06	Guest	View the show reviewers	The user view the reviews in each show	/A
C.07	Guest	View list of posts	The user views the list of the post	/A
C.08	Guest	Share a post	The user shares the post to social network	/A
C.09	Guest	Feedback the web	The user reports website problems	/A
C.10	Member	Login	The user signs in to the account with a username or email with the role of admin, organizer, staff, artist, or customer	/A
C.11	Member	Logout	The admin, organizer, staff, artist, or customer logs out of the app	/A
C.12	Member	View profile	The admin, organizer, staff, artist, or customer views personal information	/A
C.13	Member	Edit profile	The admin, organizer, staff, artist, or customer edits personal information	/A
C.14	System Admin	View list of accounts	The admin views the list of management accounts	/A
C.15	System Admin	Create the organizer's account	The admin creates an account for the organizer	/A
C.16	System Admin	Update the account status	The admin can disable/active managed accounts	/A
C.17	System Admin	Approve the artist's account	The admin can approve the artist's account that is required to authenticate	/A
C.18	System Admin	View list of all posts	The admin views the list of the artist's post	/A
C.19	System Admin	Update a post status	The admin can hide/show managed posts	/A
C.20	System Admin	View list of all shows	The admin views the list of the show	/A
C.21	System Admin	Update a show status	The admin can hide/show managed shows	/A

C.22	System Admin	View the organizer's show revenue	The admin views revenue of the organizer	/A
C.23	System Admin	View list feedback the web	The admin views user's reviews for the web	/A
C.24	System Admin	Transfer show revenue to organizer	The admin transfers money to the organizer after the show ends	/A
C.25	System Admin	Transfer commission to artist	The admin transfers money to the artist after the end of the show	/A
C.26	System Admin	View admin's transaction history	The admin views transaction history	/A
C.27	Organizer	View list of staff accounts	The organizer views the list of staff accounts	/A
C.28	Organizer	Update the staff's account status	The organizer disable/active managed staff accounts	/A
C.29	Organizer	Create the staff's account	The organizer creates staff accounts	/A
C.30	Organizer	View list of organizer's show	The organizer views the list of managed shows	/A
C.31	Organizer	View the organizer's show	The organizer views detail a managed show	/A
C.32	Organizer	Approve a show	The organizer can approve/reject the requested show after staff creating	/A
C.33	Organizer	Cancel a show	The organizer cancels the show	/A
C.34	Organizer	View revenue show's report	The organizer views the report revenue after the show	/A
C.35	Organizer	View the organizer's transaction history	The organizer views transaction history	/A
C.36	Staff	Create a show	The staff creates a show	/A

C.37	Staff	Update a show	The staff updates information, status the show	/A
C.38	Staff	View list of created shows	The staff views list of created show	/A
C.39	Staff	View a created show	The staff views detail a created show	
C.40	Staff	Request a show	The staff requires the organizer to approve the show after the creation	/A
C.41	Artist	View list of attendance shows	The artist views the list of attendance shows	/A
C.42	Artist	View attendance show	The artist views detail an attendance show	/A
C.43	Artist	Reject attendance show	The artist rejects an attendance show	/A
C.44	Artist	Get ticket sale links	The artist gets a booking link	/A
C.45	Artist	View list of artis's posts	The artist views list of posts	/A
C.46	Artist	View a post	The artist views detail a post	/A
C.47	Artist	Create a post	The artist creates a post	/A
C.48	Artist	Update a post	The artist updates the post	/A
C.49	Artist	View artist's transaction history	The artist views transaction history	/A
C.50	Customer	Buy a ticket	The customer buys tickets directly from the web or from the artist's links	/A
C.51	Customer	Checkout ticket order	The customer pays for tickets buyed with	omo
C.52	Customer	Follow the artist's accounts	The customer follows the artist's account	/A
C.53	Customer	View artist's post	The customer views the artist's posts	/A

C.54	Customer	Interact with artist's post	The customer likes, comments on a artist's post	A
C.55	Customer	Review a show	The customer rates, comments a show	A
C.56	Customer	View customer's transaction history	The customer views transaction history	A
C.57	Customer	View order history	The customer views order history	A

Table 13. Use Case Diagram Web Application Descriptions

2.2.2.2 Mobile Application Descriptions

ID	Actors	Use Case	Use Case Description	Secondary Actors
UC.0 1	Member	Login	The user signs in to the account with a username or email with the role of admin, organizer, staff, artist, or customer	N/A
UC.0 2	Member	Logout	The admin, organizer, staff, artist, or customer logs out of the app	N/A
UC.0 3	Member	View profile	The admin, organizer, staff, artist, or customer views personal information	N/A
UC.0 4	Member	Edit profile	The admin, organizer, staff, artist, or customer edits personal information	N/A
UC.0 5	Guest	Search a show	The user searches for the show	N/A
UC.0 6	Guest	View list of shows	The user views the list of the show	N/A
UC.0 7	Guest	View a show	The user views detail the show	N/A
UC.0 8	Guest	View the show reviewers	The user view the reviews in each show	N/A
UC.0 9	Guest	View list of posts	The user views the list of the post	N/A
UC.1 0	Guest	Feedback the app	The user reports app problems	N/A
UC.1 1	Customer	Buy a ticket	The customer buys tickets directly from the web or from the artist's links	Momo

UC.1 2	Customer	Checkout ticket order	The customer pays for tickets bought with	N/A
UC.1 3	Customer	Follow the artist's accounts	The customer follows the artist's account	N/A
UC.1 4	Customer	View artist's post	The customer views the artist's posts	N/A
UC.1 5	Customer	Interact with artist's post	The customer likes, comments on a artist's post	N/A
UC.1 6	Customer	Review a show	The customer rates, comments a show	N/A
UC.1 7	Customer	View customer's transaction history	The customer views transaction history	N/A
UC.1 8	Customer	View order history	The customer views order history	N/A
UC.1 9	Staff	Scan QR code	The staff scan the ticket QR code	

Table 14. Mobile Application Descriptions

3. Functional Requirements

3.1 System Functional Overview

3.1.1 Screens Flow

3.1.1.1 <Admin> Web Application Screen Flow

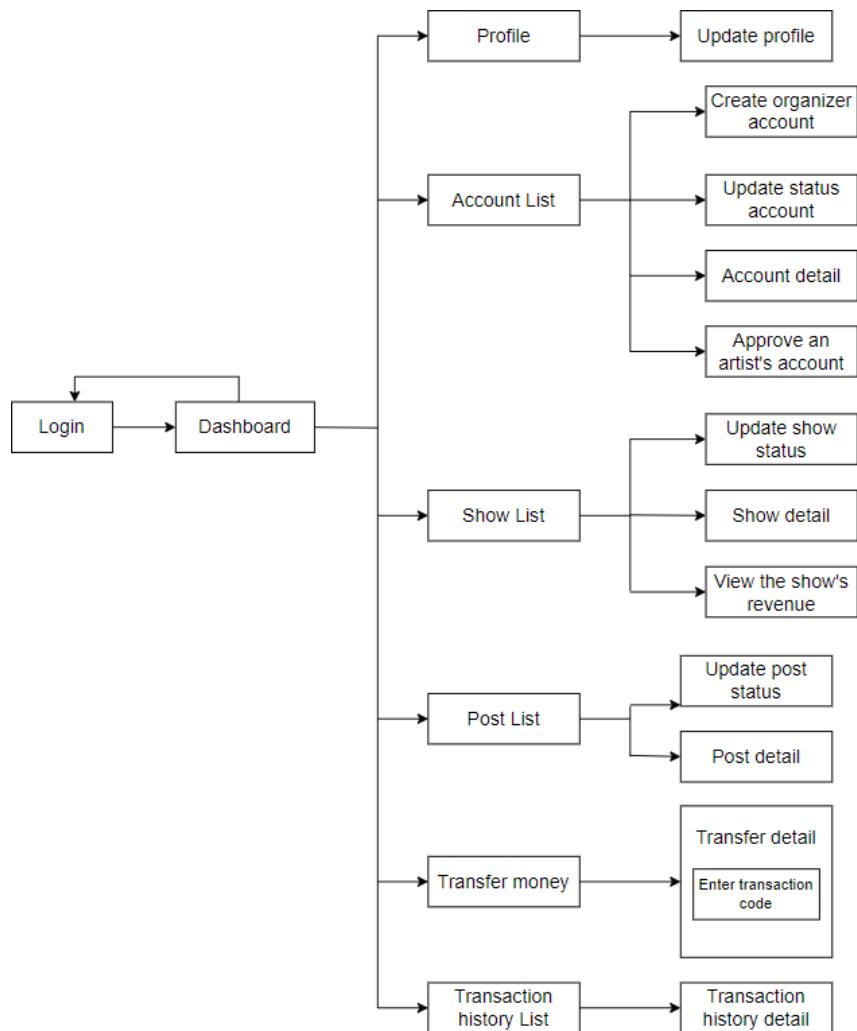


Figure 6.<Admin> Web Application Screen Flow

3.1.1.2 <Organizer> Web Application Screen Flow

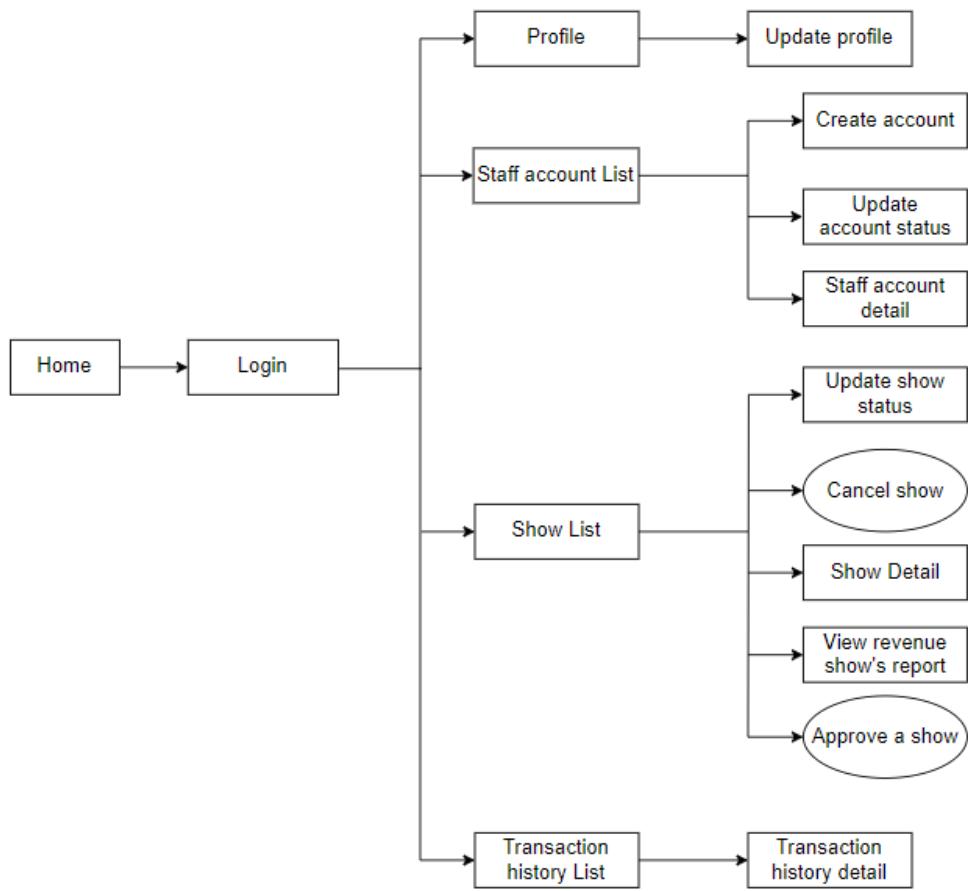


Figure 7.<Organizer> Web Application Screen Flow

3.1.1.3 <Artist> Web Application Screen Flow

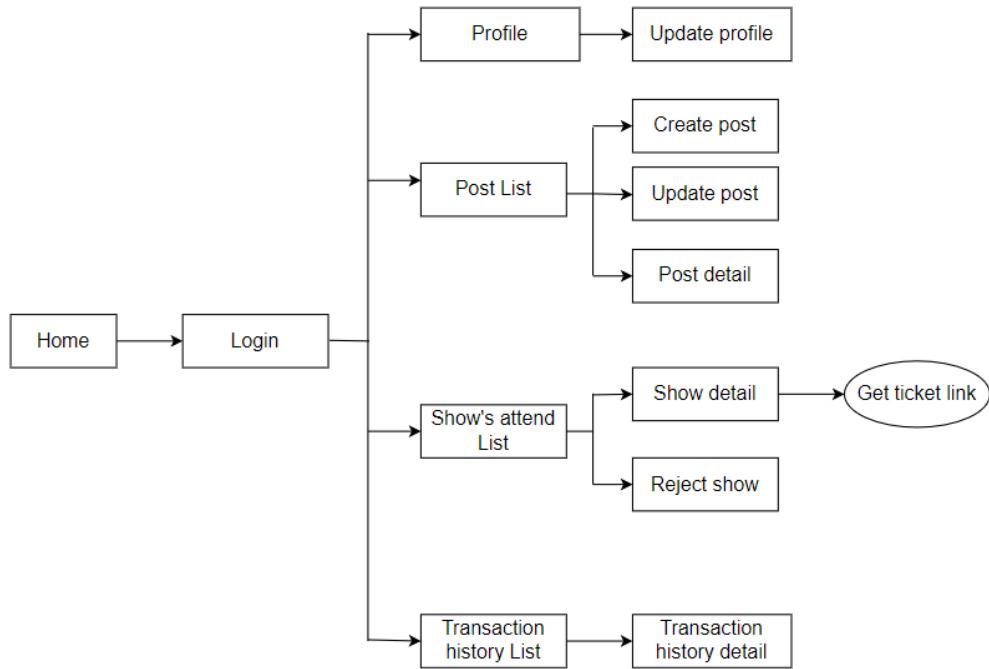


Figure 8.<Artist> Web Application Screen Flow

3.1.1.4 <Staff> Web Application Screen Flow

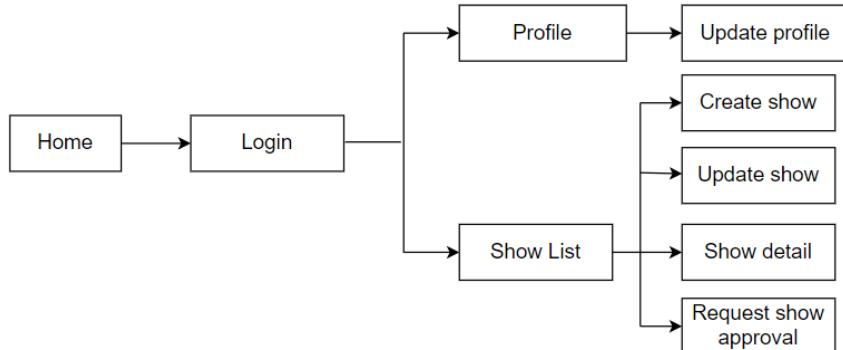


Figure 9.<Staff> Web Application Screen Flow

3.1.1.5 <Customer> Web Application Screen Flow

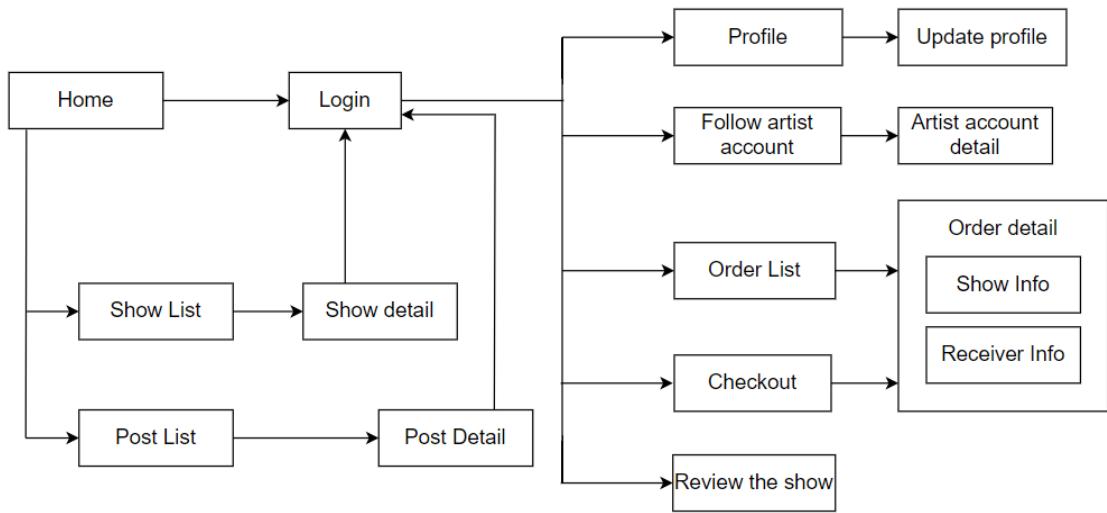


Figure 10.<Customer> Web Application Screen Flow

3.1.1.6 <Guest> Web Application Screen Flow

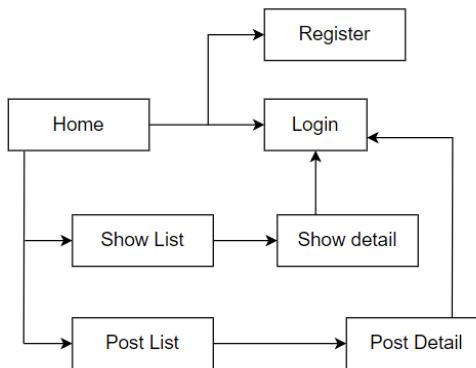


Figure 11.<Guest> Web Application Screen Flow

3.1.1.7 <Customer> Mobile Application Screen Flow

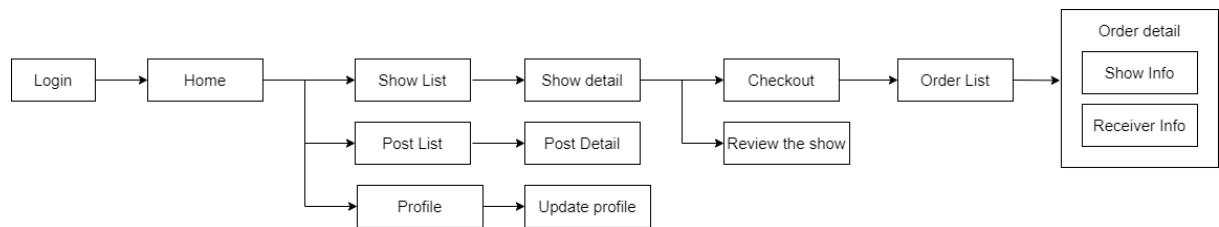


Figure 12.<Customer> Mobile Application Screen Flow

3.1.1.8 <Staff> Mobile Application Screen Flow

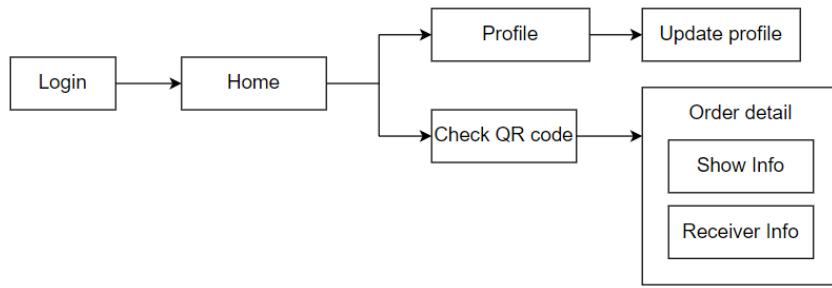


Figure 13.<Staff> Mobile Application Screen Flow

3.1.2 Screen Descriptions

3.1.2.1 Admin Web Application Screen Flow

#	Feature	Screen	Description
1	Authenticate user	Login	This page allows users to sign in with a username/email and password for verifying account before using functions of the system
2	View profile	Profile	This page displays personal information
3	Edit profile	Update profile	This page allows editing personal information, passwords
4	Manage account	Account list	This page allows to view a list of accounts that have been created
5	Manage account	Create organizer account	This page allows to create an account for the organizers
6	Manage account	Update status account	This page allows to edit the active or disable status of the account
7	Manage account	Account detail	This page displays the details of the account but does not allow to edit the information
8	Manage account	Approve an artist's account	This page allows the admin to accept artist's registered account
9	Manage post	Post list	This page displays a list of posts by the artist
10	Manage post	Update post status	This page allows to hide or reopen post
11	Manage post	Post detail	This page displays post info but not edited
12	Manage post	Remove post	This page allows to delete pos
13	Manage show	Show list	This page shows the list of created shows
14	Manage show	Update show status	This page allows to hide or reopen show
15	Manage show	Show detail	This page displays show info but not edited
16	Manage show	View the show's revenue	This page shows the revenue ticket sale of a show
17	Transfer money	Transfer money	This site allows transferring revenue show and commission money

18	View transaction history	Transfer detail	This page enter transaction code and displays details of money transfer transactions
19	View transaction history	Transaction history list	This page displays a list of transactions that have occurred
20	View transaction history	Transaction history detail	This page displays the details of the transaction that happened

Table 15.Admin Web Application Screen Flow.

3.1.2.2 Organizer Web Application Screen Flow

#	Feature	Screen	Description
1	Authenticate user	Login	This page allows users to sign in with a username/ email and password for verifying account before using functions of the system
2	View profile	Profile	This page displays personal information
3	Edit profile	Update profile	This page allows editing personal information, passwords
4	Manage staff account	Staff account list	This page allows to view a list of staff accounts that have been created
5	Manage staff account	Create account	This page allows to create an account for the staff
6	Manage staff account	Update status account	This page allows to edit the active or disable status of staff the account
7	Manage staff account	Staff account detail	This page shows the details of the staff account but does not allow to edit the information
8	Manage show	Show list	This page displays the list of shows created by staff
9	Manage show	Update show status	This page allows to hide or reopen show
10	Manage show	Show detail	This page displays show info but not edited
11	Manage show	Cancel show	This page allows to delete show
12	Manage show	Approve a show	This page allows the organizers to accept shows created by staff
13	Approve to reject artist's show	Approve to reject artist's show	This page allows the admin to accept the artist's request to cancel the show
14	View transaction history	Transaction history list	This page displays a list of transactions that have occurred
15	View transaction history	Transaction history detail	This page displays the details of the transaction that happened

Table 16.Organizer Web Application Screen Flow

3.1.2.3 Artist Web Application Screen Flow

#	Feature	Screen	Description
1	Authenticate user	Login	This page allows users to sign in with a username/ email and password for verifying account before using functions of the system
2	View profile	Profile	This page displays personal information

3	Edit profile	Update profile	This page allows editing personal information, passwords
4	Manage post	Post list	This page displays the list of post created
5	Manage post	Update post	This page allows to hide or reopen post, edit post information
6	Manage post	Post detail	This page displays post info but not edited
8	Manage show attend	Show attend list	This page displays a list of participating shows
9	Manage show attend	Show detail	This page displays show info but not edited
10	Get ticket sale link	Get ticket link	This page takes the link to sell tickets to share outside
11	Request organizer reject show	Reject show	This page allows the artist to send a request to cancel the show
12	View transaction history	Transaction history list	This page displays a list of transactions that have occurred
13	View transaction history	Transaction history detail	This page displays the details of the transaction that happened

Table 17.Artist Web Application Screen Flow

3.1.2.4 Staff Web Application Screen Flow

#	Feature	Screen	Description
1	Authenticate user	Login	This page allows users to sign in with a username/ email and password for verifying account before using functions of the system
2	View profile	Profile	This page displays personal information
3	Edit profile	Update profile	This page allows editing personal information, passwords
4	Manage show	Show list	This page displays the list of shows created
5	Manage show	Create show	This page allows the staff to create a new show
6	Manage show	Update show	This page allows editing show information
7	Manage show	Show detail	This page displays show info but not edited
8	Request organizer approve show created	Request show approval	This page allows staff to send an approval request for a created show

Table 18.Staff Web Application Screen Flow

3.1.2.5 Customer Web Application Screen Flow

#	Feature	Screen	Description
1	Authenticate user	Login	This page allows users to sign in with a username/ email and password for verifying account before using functions of the system
2	View profile	Profile	This page displays personal information
3	Edit profile	Update profile	This page allows editing personal information, passwords
4	View list of posts	Post list	This page displays a list of posts by the artist
5	View a post	Post detail	This page displays post info but not edited

6	View list of shows	Show list	This page shows the list of created shows
7	View a show	Show detail	This page displays show info but not edited
8	Follow artist account	Follow artist account	This page allows customers to follow the artist's account
9	View artist account detail	Artist account detail	This page allows to view the artist's account page details
10	Payment order	Checkout	This page allows customers to pay for tickets
11	View order history	Order list	This page displays a list of customer orders
12	View order history	Order detail	This page displays customer order details
13	Review the show	Review the show	This page allows customer feedback the show includes rates, comment

Table 19. Customer Web Application Screen Flow

3.1.2.6 Guest Web Application Screen Flow

#	Feature	Screen	Description
1	Register	Register	This page allows users to sign up account before using functions of the system
2	Authenticate user	Login	This page allows user to sign in with a username/ email and password for verifying account before using functions of the system
3	View post	Post list	This page displays a list of posts by the artist
4	View post	Post detail	This page displays post info but not edited
5	View show	Show list	This page shows the list of created shows
6	View show	Show detail	This page displays show info but not edited

Table 20. Guest Web Application Screen Flow

3.1.2.7 Customer Mobile Application Screen Flow

#	Feature	Screen	Description
1	Authenticate user	Login	This page allows users to sign in with a username/ email and password for verifying account before using functions of the system
2	View profile	Profile	This page displays personal information
3	Edit profile	Update profile	This page allows editing personal information, passwords
4	View list of posts	Post list	This page displays a list of posts by the artist
5	View a post	Post detail	This page displays post info but not edited
6	View list of shows	Show list	This page shows the list of created shows
7	View a show	Show detail	This page displays show info but not edited
8	Payment order	Checkout	This page allows customers to pay for tickets
9	View order history	Order list	This page displays a list of customer orders
10	View order history	Order detail	This page displays customer order details
11	Review the show	Review the show	This page allows customer feedback the show includes rates, comment

Table 21.Customer Mobile Application Screen Flow

3.1.2.8 Staff Mobile Application Screen Flow

#	Feature	Screen	Description
1	Authenticate user	Login	This page allows users to sign in with a username/email and password for verifying account before using functions of the system
2	View profile	Profile	This page displays personal information
3	Edit profile	Update profile	This page allows editing personal information, passwords
9	Scan e-tickets	Check QR code	This page allows staff to check tickets through barcode scanning
10	View order history	Order detail	This page allows staff to view customer order details

Table 22.Staff Mobile Application Screen Flow

3.1.3 Screen Authorization

3.1.3.1 Web Application Screen Authorization

Screen	Gues t	Custome r	Admin	Organizer	Artist	Staff
Register	X					
Login		X	X	X	X	X
Profile		X	X	X	X	X
Update profile		X	X	X	X	X
Account list			X			
Create organizer account			X			
Update status account			X			
Account detail			X			
Approve an artist's account			X			
Post list	X	X	X		X	
Update post status			X		X	
Post detail	X	X	X		X	
Update post						X
Show list	X	X	X	X		X
Update show status			X	X		X
Show detail	X	X	X	X		X
Update show						X
Review the show		X				
Transfer money			X			
Transfer detail			X			
Transaction history list			X	X	X	
Transaction history detail			X	X	X	
Staff account list			X	X		
Create staff account				X		

Update staff status account		X	X		
Staff account detail		X	X		
Cancel show			X		
Approve a show			X		
Show attend list				X	
Show attend detail				X	
Get ticket link				X	
Request to reject show				X	
Request show approval					X
Approve to reject artist's show			X		
Assign staff to cancel artist's show			X		
Follow artist account	X				
Artist account detail	X			X	
Checkout	X				
Order list	X				
Order detail	X				

Table 23. Web Application Screen Authorization

3.1.3.2 Mobile Application Screen Authorization

Screen	Customer	Staff
Login	X	X
Profile	X	X
Update profile	X	X
Post list	X	
Post detail	X	
Show list	X	
Show detail	X	
Artist account detail	X	
Checkout	X	
Order list	X	
Order detail	X	
Check QR code		X
Order detail		X

Table 24. Mobile Application Screen Authorization

3.1.4 Non-Screen Functions

#	Feature	System Function	Description
1	Send notification	Send notification	The system handler will send notifications to users
2	Create the ticket link	Create the ticket link	The system handler will create a show ticket link for each artist
3	Create QR code	Create QR code	The system handler will create a QR code for each order

Table 25. Non-Screen Functions

3.1.5 Entity Relationship Diagram (Without Attribute)

❖ ERD Crow's Foot Notation

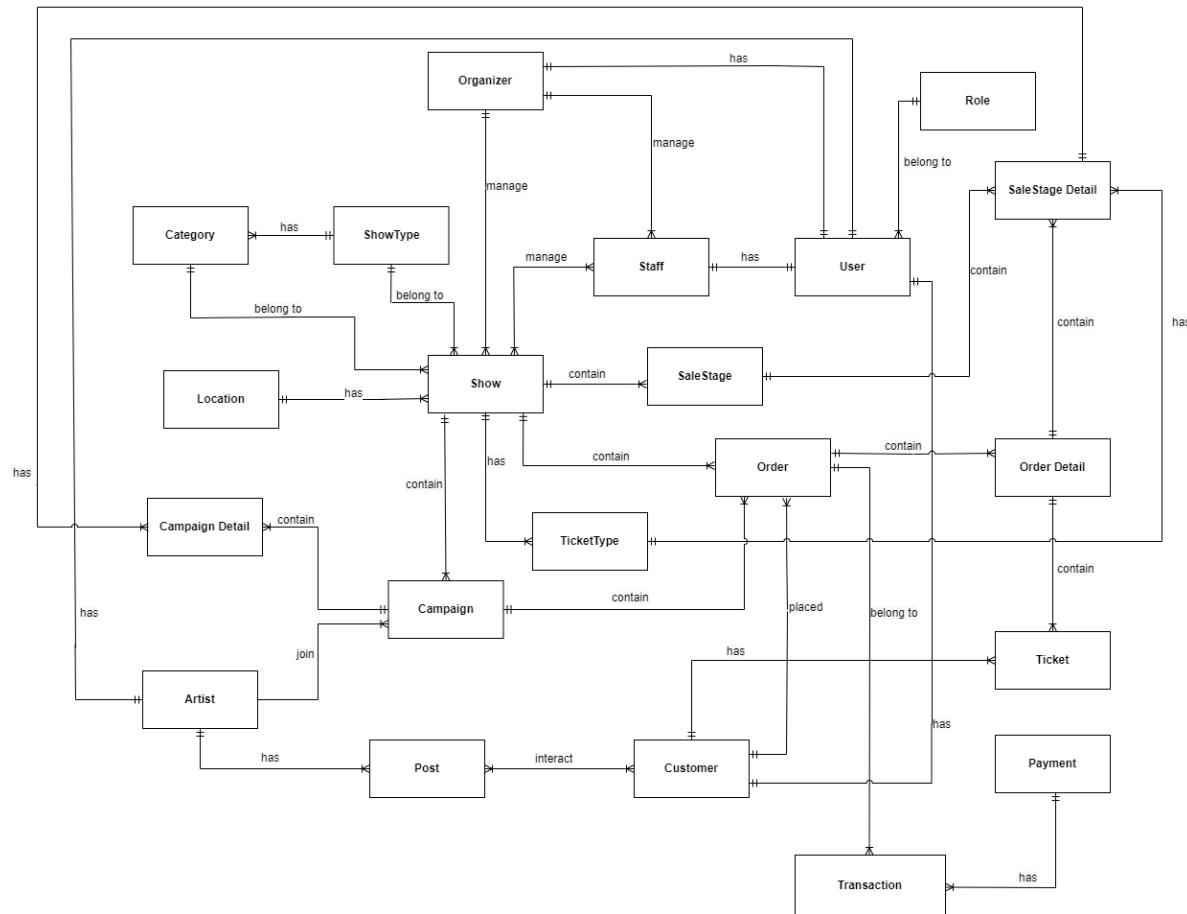


Figure 14.Entity Relationship Diagram

Entities Description

#	Entity	Description
1	Role	Role is an entity that represents information about the role of the user in the system
2	User	User is an entity that represents information about the accounts of users in the system. Each account belongs to one role
3	Organizer	Organizer is an entity that represents information about organizers in the system. Each show belongs to one organizer
4	Staff	Staff is an entity that represents information about staff in the system. Each staff belongs to one organizer
5	Category	Category is an entity that represents information about categories of the show in the system. Each show belongs to a category
6	ShowType	ShowType is an entity that represents information about the type of show in the system. Each category belongs to 1 of 2 types: indoor and outdoor show

7	Location	Location is an entity that represents information about the specific location of a show in the system
8	Show	Show is an entity that represents information about shows in the system. Each show belongs to one show type
9	TicketType	TicketType is an entity that represents general information about the ticket type in the system. Each ticket type contains information about the show name, ticket price, and quantity
10	Ticket	Ticket is an entity that represents ticket-specific information in the system. Each ticket contains information about the show name, ticket price, and ticket type information
11	SaleStage	SaleStage is an entity that represents information about a specified period of time during which a show will be open for ticket sales with a certain number of tickets.
12	SaleStage Detail	Salestage detail is an entity that contains information about a particular ticket that is available for sale in a salestage
13	Campaign	Campaign is an entity that contains information about artists participating in a particular show. Each campaign contains information about the participating artists, limiting the number of discounts available to artists and their posts belonging to one show in that campaign
14	Campaign detail	Campaign detail is an entity that contains ticket sales information, ticket type, number of tickets, artist discount that the artist will sell in an event's campaign, and the discount to the buyer
15	Artist	Artist is an entity that represents information about artists in the system.
16	Post	Post is an entity that represents information about posts in the system. Each post belongs to one artist
17	Customer	Customer is an entity that represents information about customers in the system.
18	Payment	Payment is an entity that represents information about payments in the system. Each order contains a payment
19	Order	Order is an entity that represents information about orders in the system. The customer creates orders
20	OrderDetail	OrderDetail is an entity that contains ticket type, number of tickets, units bought
21	Transaction	Transaction is an entity that represents information about transactions.

Table 26. Entities Description

3.2<Member> Login - Web User

- **Function trigger:** The user clicks “Đăng nhập” button.
- **Function description:** This function allows the user can login to the account.
- **Screen layout:**



Figure 15.<Member> Login - Web User

- **Function Details:**

- Normal flow:
 - + Fill input email/username and password to login.
 - + Click “Đăng nhập” button to login.
- Business rule: BR-11, BR-12, BR-13.
- Exception: If the username/email or password is incorrect, The system will display a message MSG01 asking to re-enter.

3.2<Member> Login - Mobile

- **Function trigger:** The user clicks “Đăng nhập” button.

- **Function description:** This function allows the user can login to the account.

- **Screen layout:**



Figure 16.<Member> Login - Mobile

- Function Details:

- Normal flow:
 - + Fill input email/username and password to login.
 - + Click “Đăng nhập” button to login.
- Business rule: BR-11, BR-12, BR-13.
- Exception: If the username/email or password is incorrect, The system will display a message MSG01 asking to re-enter.

3.3<Customer> Buy ticket normal - Web User

- Function trigger: The user clicks “Mua vé” button.

- Function description: This function allows the user can buy tickets to a show.

- Screen layout:



LIVESHOW NGỌC LINH & THÙY CHI

Đà Nẵng | Nhạc sống

Hơn cả âm nhạc, không gian lãng mạn đậm chất thơ Đà Lạt bao trọn hình ảnh thung lũng Đà Lạt, được ngắm nhìn khoáng khắc hoàng hôn thơ mộng đến khi Đà Lạt về đêm siêu lãng mạn, được giao lưu với thần tượng một cách chân thật và gần gũi nhất trong không gian ấm áp và không khí se lạnh của Đà Lạt.

Vui lòng chọn loại vé:

Mua vé

Khuyến mãi đợt bán vé (5%)

Tên sự kiện	Loại vé	Giá vé	Số lượng	Tạm tính	
LIVESHOW NGỌC LINH & THÙY CHI	Thường	30000 VND	-	2	28500 VND

Hướng dẫn thanh toán bằng hình thức 'Quét Mã'

Tại những cửa hàng thanh toán MoMo bằng hình thức Quét Mã, thu ngân sẽ cung cấp 1 mã QR khi người dùng yêu cầu thanh toán MoMo. Bạn chỉ cần quét mã và nhập số tiền thanh toán để hoàn tất.

HƯỚNG DẪN THANH TOÁN
BẰNG QUÉT MÃ


1. Mở Ví MoMo, chọn "Quét Mã".
 2. Quét mã QR.
 3. Nhập số tiền cần thanh toán.
 4. Kiểm tra & Bấm "Xác nhận".

Tìm điểm chấp nhận thanh toán Ví MoMo

THÔNG TIN NGƯỜI NHẬN VÉ

Họ tên	Cus Thành Phong
Email	customer01@gmail.com
Điện thoại	0866058578

Hình thức thanh toán

Thanh toán qua MoMo



Thông tin đặt vé

Khuyến mãi đợt bán vé (5%)

Loại vé	Số lượng
LIVESHOW NGỌC LINH & THÙY CHI (Thường)	2 28500 VND

Thanh toán

Figure 17.<Customer> Buy ticket normal - Web User

- Function Details:

- Normal flow:
 - + Select the ticket type at the show details page and click the “Mua vé” button.
 - + Fill in the number of tickets and click the "Thanh toán" button.
- Business rule: BR-79, BR-80
- Exception: If the ticket type is not selected, the system will display a message MSG02 asking to choose.

3.4<Customer> Buy ticket via artist's link - Web User

- Function trigger: The user clicks “Mua vé” button.

- **Function description:** This function allows the user can buy tickets to a show.

- **Screen layout:**

The screenshot shows a web-based ticket purchasing interface for a show. At the top, there's a banner for 'HƯƠNG XUÂN 23' featuring a night scene of a bridge and lights. Below the banner, the show title 'HƯƠNG XUÂN 23' is displayed along with two categories: 'Bé Nhỏ' and 'Phòng Trà'. A descriptive text highlights the atmosphere of Da Lat at night. A dropdown menu for selecting ticket type is shown, with the placeholder 'Vui lòng chọn loại vé:'. A large blue button labeled 'Mua vé' is at the bottom left. On the right side, there are two columns: 'THÔNG TIN NGƯỜI NHẬN VÉ' containing customer details like name, email, and phone number; and 'Hình thức thanh toán' showing payment method as 'Thanh toán qua MoMo' with the MoMo logo. The central part of the screen displays a QR code for payment, with a pink banner above it reading 'HƯỚNG DẪN THANH TOÁN BẰNG QUÉT MÃ'. Below the QR code, four steps are listed: 1. Mở Ví MoMo, chọn "Quét Mã"; 2. Quét mã QR; 3. Nhập số tiền cần thanh toán; 4. Kiểm tra & Bấm "Xác nhận".

Figure 18.<Customer> Buy ticket via artist's link - Web User

- **Function Details:**

- **Normal flow:**

- + Visit the artist's link and system directly to a show's detail page.
- + Select the ticket type at the show details page and click the "Mua vé" button.
- + Fill in the number of tickets and click the "Thanh toán" button.

- **Business rule:** BR-79, BR-80

- Exception:

- If the ticket type is not selected, the system will display a message MSG02 asking to choose.
- If you buy too many tickets, the system will display a message MSG03 to choose quantity again.

3.5<Customer> Buy ticket normal - Mobile

- **Function trigger:** The user clicks “Đặt vé” button.

- **Function description:** This function allows the user can buy tickets to a show.

- **Screen layout:**

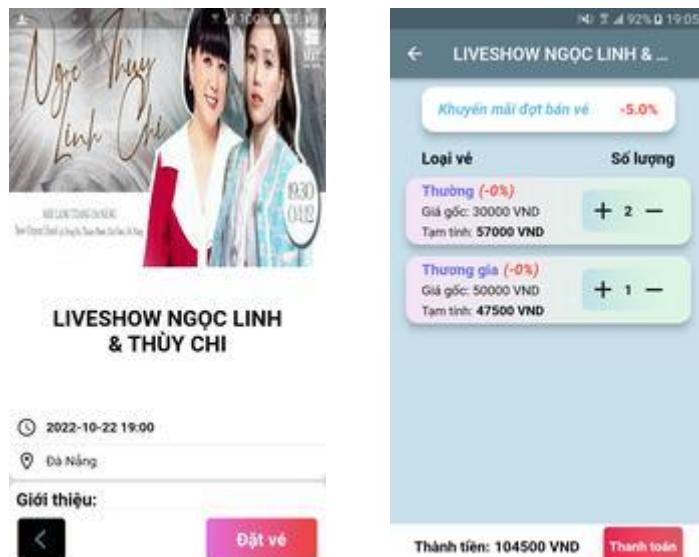


Figure 19.<Customer> Buy ticket normal - Mobile

- **Function Details:**

- Normal flow:
 - + Click the “Đặt vé” button at the show details page.
 - + Fill in the number of tickets and click the "Thanh toán" button.
- Business rule: BR-79, BR-80
- Exception: If you buy too many tickets, the system will display a message MSG03 to choose quantity again.

3.6<Customer> Buy ticket via artist's link - Mobile

- **Function trigger:** The user clicks “Đặt vé” button.

- **Function description:** This function allows the user can buy tickets to a show.

- Screen layout:

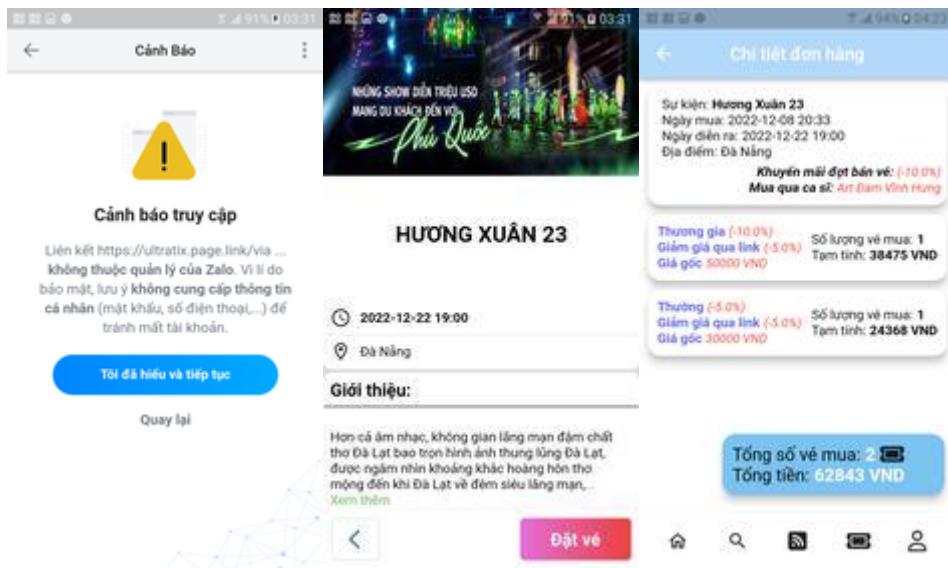


Figure 20.<Customer> Buy ticket via artist's link - Mobile

- Function Details:

- Normal flow:
 - + Visit the artist's link and system directly to a show's detail page.
 - + Click the “Đặt vé” button at the show details page.
 - + Fill in the number of tickets and click the "Thanh toán" button.
- Business rule: BR-79, BR-80
- Exception: If you buy too many tickets, the system will display a message MSG03 to choose quantity again.

3.7<Customer> Payment with momo - Web User

- Function trigger: The user clicks “Thanh toán” button.

- Function description: This function allows the user to scan a QR code to pay for a ticket to the show.

- Screen layout:

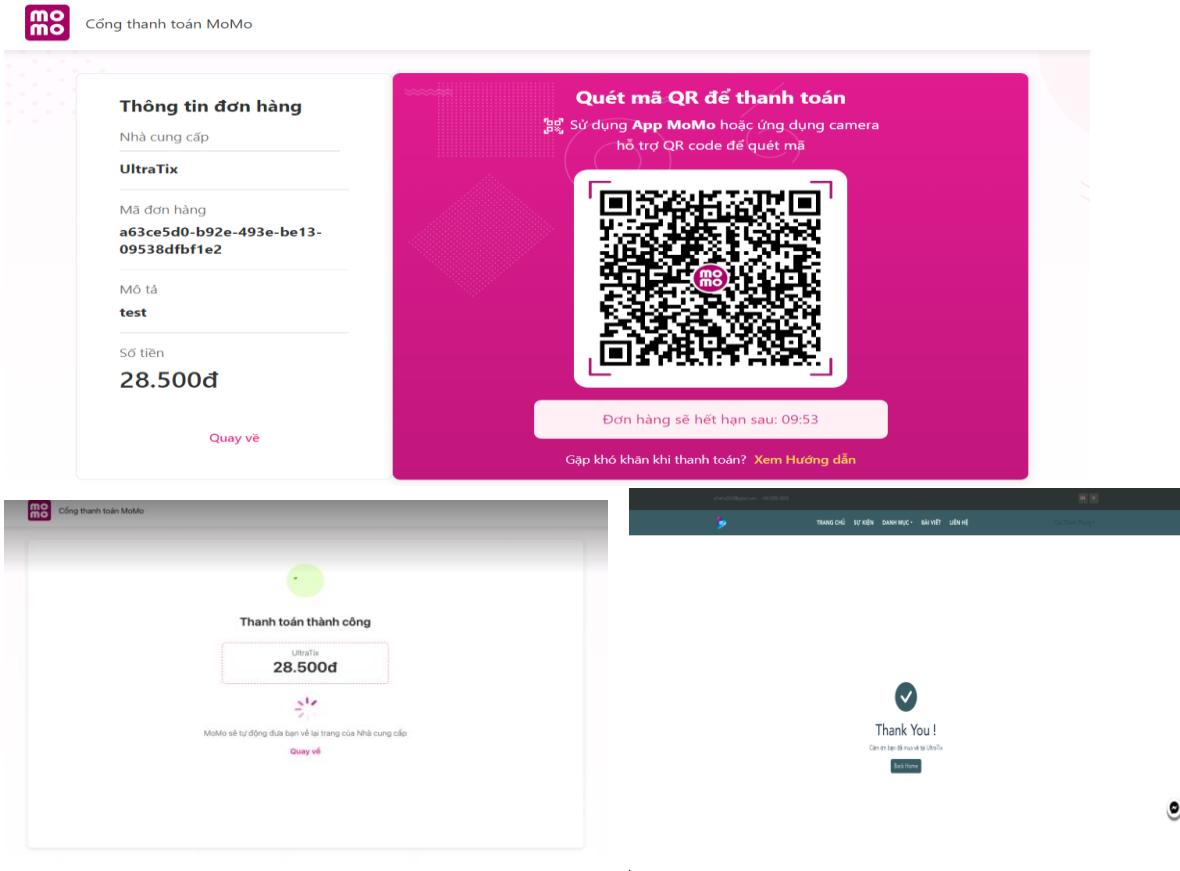


Figure 21.<Customer> Payment with momo - Web User

- Function Details:

- Normal flow:
 - + Click the “Thanh toán” button on the booking ticket details page.
 - + Scan code to pay the order.
- Business rule: N/A
- Exception: When the payment is successful, the system will display a message MSG04 to notify successfully to the customer.

3.7<Customer> Payment with momo - Mobile

- **Function trigger:** The user clicks “Thanh toán” button.

- **Function description:** This function allows the user to scan a QR code to pay for a ticket to the show.

- **Screen layout:**

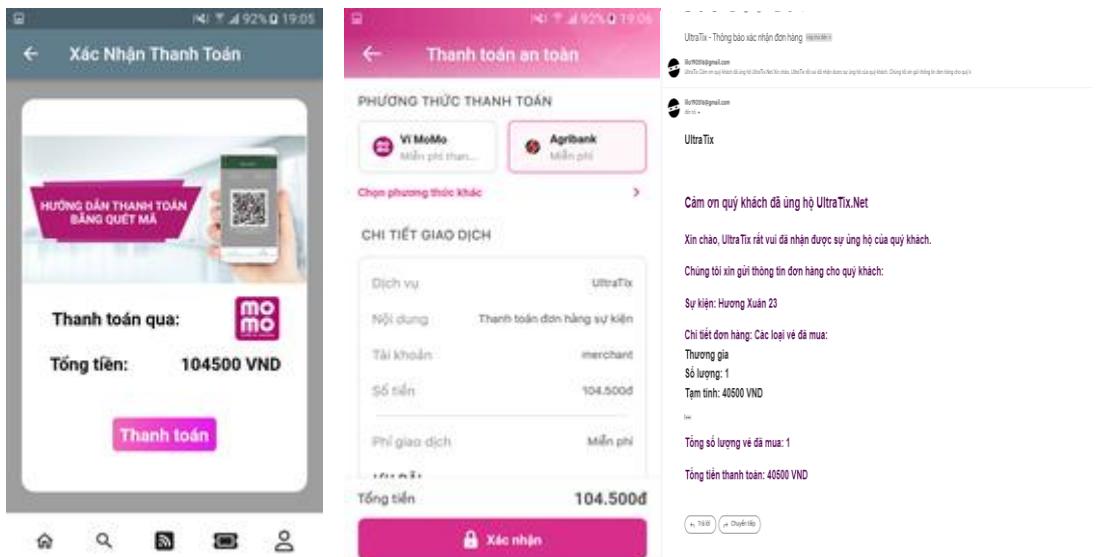


Figure 22.<Customer> Payment with momo - Mobile

- Function Details:

- Normal flow:
 - + Click the “Thanh toán” button on the booking ticket details page.
 - + Scan code to pay the order.
- Business rule: N/A
- Exception: When the payment is successful, the system will display a message MSG04 to notify successfully to the customer.

3.8<Customer> View order history- Web User

- **Function trigger:** The user clicks “Lịch sử thanh toán” button.
- **Function description:** This function allows the user to view order history.
- **Screen layout:**

Qr code	Show Name	Ngày đặt	Tổng tiền	Trạng thái
	LIVESHOW NGỌC LINH & THỦY CHI	2022-12-08T15:10:41.053	28500VND	Mới

Figure 23.<Customer> View order history- Web User

- Function Details:

- Normal flow:
 - + Click the “Lịch sử thanh toán” button on customer’s name.
 - + View order detail on the history page.
- Business rule: N/A
- Exception: N/A

3.9<Customer> View order history - Mobile

- Function trigger: The user clicks “Lịch sử giao dịch” button.

- Function description: This function allows the user to view order history.

- Screen layout:

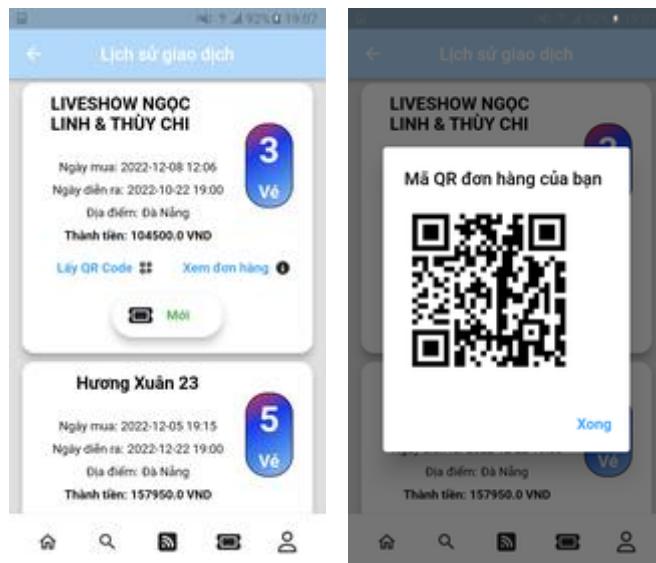


Figure 24.<Customer> View order history - Mobile

- Function Details:

- Normal flow:
 - + Click the “Lịch sử giao dịch” button on personal screen.
 - + Click “Xem đơn hàng chi tiết” to view order detail on the history page.
- Business rule: N/A
- Exception: N/A

3.9<Customer> View list of artist's posts- Web User

- **Function trigger:** The user clicks “Bài viết” tab in the top menu.

- **Function description:** This function allows the user to view list of artist's posts.

- **Screen layout:**

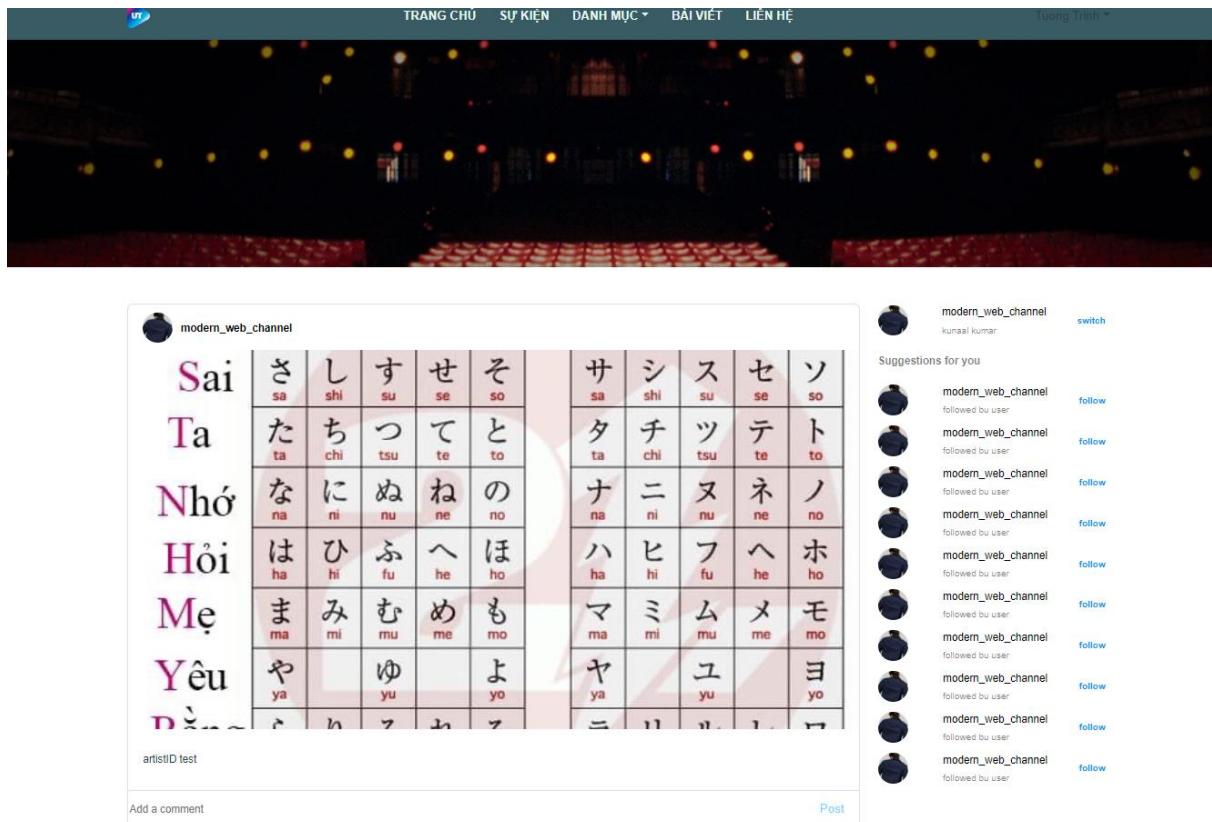


Figure 25.<Customer> View list of artist's posts- Web User

- **Function Details:**

- Normal flow:
 - + Click “Bài viết” tab in the top menu.
 - + View a list of posts and can click to like, or comment on a post.
- Business rule: N/A
- Exception: N/A

3.10<Customer> View list of artist's posts- Mobile

- **Function trigger:** The user clicks “Bài viết” tab in the top menu.

- **Function description:** This function allows the user to view list of artist's posts.

- **Screen layout:**

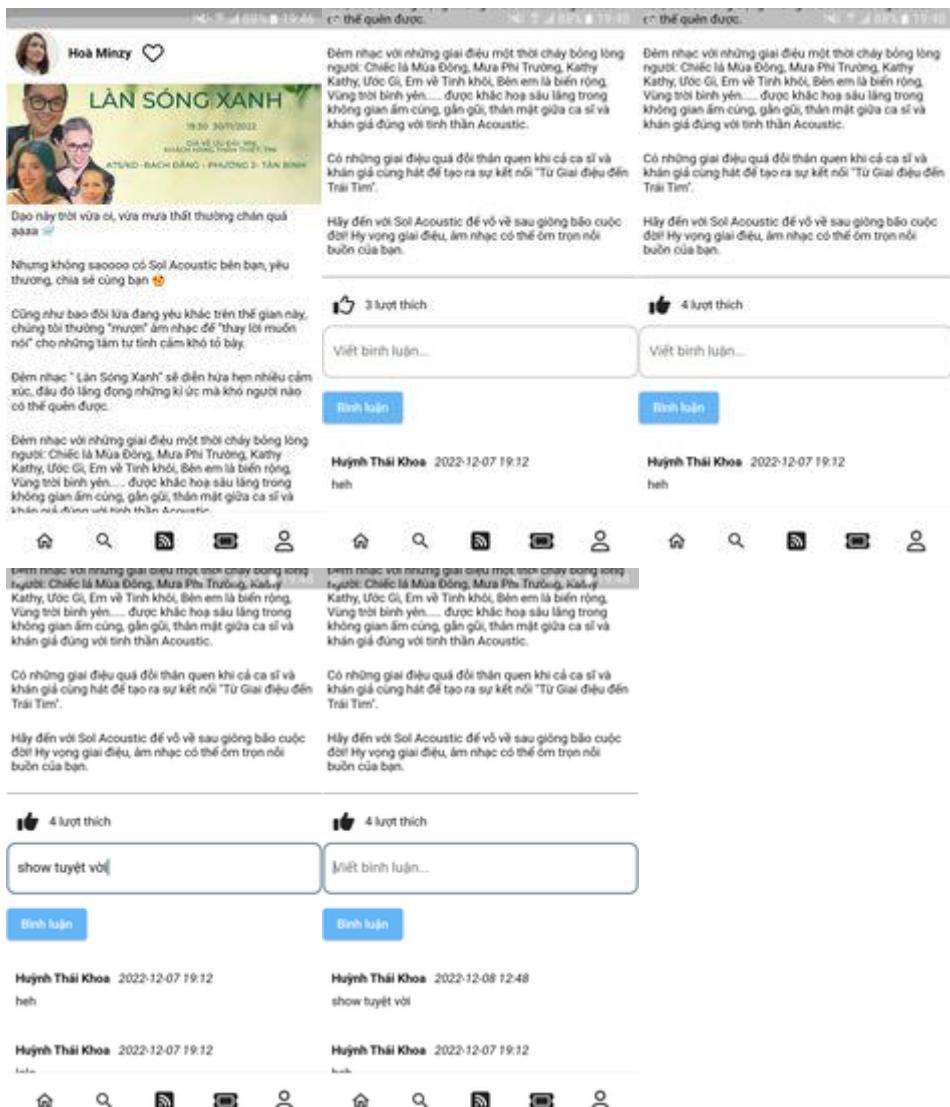


Figure 26.<Customer> View list of artist's posts- Mobile

- Function Details:

- Normal flow:
 - + Click “Bài viết” tab in the bottom menu.
 - + View a list of posts and can click to like, or comment on a post.
- Business rule: N/A
- Exception: N/A

3.11<Artist> Create a post- Web User

- **Function trigger:** The user clicks “Bài viết” button.

- **Function description:** This function allows the artist to create a post.

- **Screen layout:**

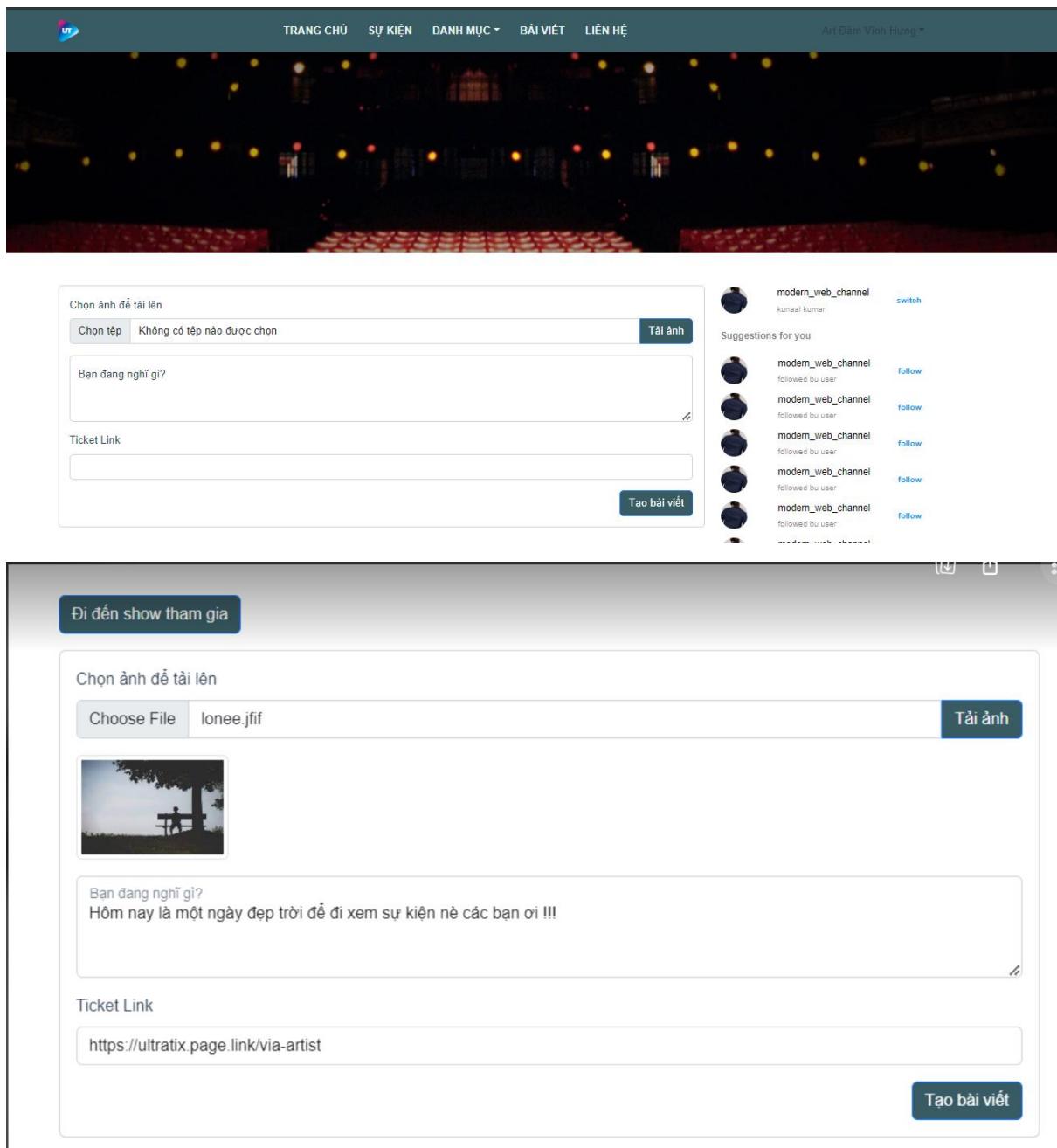


Figure 27.<Artist> Create a post- Web User

- Function Details:

- Normal flow:
 - + Click “Bài viết” button on “Tường nhà” tab in the top menu.
 - + Fill input information and choose load image.
 - + Click “Tạo bài viết” button to create a post.
- Business rule: BR-71, BR-72
- Exception:

- If you do not fill in the content, the system will display a message MSG05 to request input information.
- When the creation is successful, the system will display a message MSG06 to notify successfully to the artist.

3.12<Artist> Get ticket link - Web User

- **Function trigger:** The user clicks “Tường nhà” button.
- **Function description:** This function allows the artist to get link.
- **Screen layout:**

The screenshot shows the UltraTV website interface. At the top, there is a navigation bar with links: TRANG CHỦ, SỰ KIỆN, DANH MỤC, BÀI VIẾT, LIÊN HỆ, and TƯỜNG NHÀ. Below the navigation bar is a large banner image of a concert stage with red seats and lights. The main content area contains two tables of event information.

Tên sự kiện	Hình ảnh	Loại	Ngày bắt đầu	Ngày kết thúc	Link đặt vé
Amazing Show: TRUNG QUÂN IDOL - Ái PHƯƠNG		Indoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
LIVESHOW MYRA TRẦN & LÂM BÁO NGỌC		Outdoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
Jimmii Nguyễn Concert		Outdoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
Sol Acoustic: Bức Thư Tình Đầu Tiên		Indoor	2022-10-04 16:32:06	2022-10-04 16:32:06	

Tên sự kiện	Hình ảnh	Loại	Ngày bắt đầu	Ngày kết thúc	Link đặt vé
Amazing Show: TRUNG QUÂN IDOL - Ái PHƯƠNG		Indoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
LIVESHOW MYRA TRẦN & LÂM BÁO NGỌC		Outdoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
Jimmii Nguyễn Concert		Outdoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
Sol Acoustic: Bức Thư Tình Đầu Tiên		Indoor	2022-10-04 16:32:06	2022-10-04 16:32:06	
LIVESHOW BẰNG KIỀU		Outdoor	2022-11-20 16:01:47	2022-11-20 16:01:47	
[ITC Multimedia] Music Show "Tay trái chỉ trắng"		Outdoor	2022-10-22 19:00:46	2022-10-22 19:00:46	
LIVESHOW KAI ĐỊNH		Outdoor	2022-10-22 19:00:46	2022-10-22 19:00:46	
Hương Xuân 23		Indoor	2022-12-22 19:00:46	2023-01-07 19:00:46	https://ultratv.net/show/cd2cc358-39f4-4038-a9be-319ce234adbf9?cdtb63ed66-20b6-4b21-bc23-3c6bd2b3ff575
Sol Acoustic: Cùng Hòa Cả		Indoor	2022-10-04 16:32:06	2022-10-04 16:32:06	

Figure 28.<Artist> Get ticket link - Web User

- Function Details:

- Normal flow:

- + Click “Tường nhà” tab in the top menu.
- + Copy link to get the link.
- Business rule: N/A
- Exception: N/A

3.13<Admin> Update status of show - Web User

- **Function trigger:** The user clicks “Hide/Public” button.
- **Function description:** This function allows the admin update status of show.
- **Screen layout:**

Show Name	Start Date	End Date	Show Type	Location	Organizer	Category	Status
LIVESHOW NGỌC LINH & THỦY CHI	19:10 22-Oct-2022	19:10 22-Oct-2022	Outdoor	Đà Nẵng	dev01	Nhạc sống	Public <button>Hide</button>
LIVESHOW VÂN MAI HƯƠNG	19:12 22-Dec-2022	19:10 22-Oct-2022	Indoor	Đà Nẵng	dev01	Sân khấu	Public <button>Hide</button>
Show name	00:12 1-Dec-2022	00:12 30-Dec-2022	Outdoor	Show name	dev01	Others	Draft <button>Hide</button>
Hương Xuân 7	19:12 22-Dec-2022	19:01 7-Jan-2023	Indoor	Đà Nẵng	dev01	Phòng trà	Hidden <button>Public</button>
Test Creat Show With Creation Step Check 03	07:12 5-Dec-2022	07:12 5-Dec-2022	Outdoor	Ha noi	dev01	Phòng trà	Pending <button>Hide</button>
Hương Xuân 23	19:12 22-Dec-2022	19:01 7-Jan-2023	Indoor	Đà Nẵng	dev01	Phòng trà	Public <button>Hide</button>
Amazing Show: PHẠM QUÝNH ANH	16:10 4-Oct-2022	16:10 4-Oct-2022	Outdoor	Bắc Cạn	dev01	Acoustic	Public <button>Hide</button>
Amazing Show: TRUNG QUÁN IDOL - HIỀN THỰC	10:10 5-Oct-2022	10:10 5-Oct-2022	Indoor	Thanh Mai, Hà Nội	dev01	Acoustic	Public <button>Hide</button>
LIVESHOW LÂN NHÃ & HOÀNG NHÃ BAND	19:10 22-Oct-2022	19:10 22-Oct-2022	Outdoor	Đà Nẵng	dev01	Sân khấu	Public <button>Hide</button>

Figure 29.<Admin> Update status of show - Web User

- **Function Details:**
 - Normal flow:
 - + Click “Show” tab in navigation pane.
 - + Click “Hide/Public” button on list of shows page .
 - Business rule: BR-26
 - Exception: If you do not fill in the content, the system will display a message MSG05 to request input information.

3.14<Admin> Update status of post - Web User

- **Function trigger:** The user clicks “Hide/Public” button.

- **Function description:** This function allows the admin update status of post.

- **Screen layout:**

Artist	Post content	Post image	Status	Action
Art Đàm Vĩnh Hưng	View post content		Public	Hide
Hoà Minzy	View post content		Public	Hide
Hoà Minzy	View post content		Hidden	Publish
Hoà Minzy	View post content		Hidden	Publish
Art Đàm Vĩnh Hưng	View post content		Public	Hide
Erik	View post content		Public	Hide
Erik	View post content		Public	Hide
Erik	View post content		Public	Hide
Thúy Chi	View post content		Public	Hide

Figure 30.<Admin> Update status of post - Web User

- **Function Details:**

- Normal flow:
 - + Click “Post” tab in navigation pane.
 - + Click “Hide/Public” button on list of posts page .
- Business rule: BR-25
- Exception: If you do not fill in the content, the system will display a message MSG05 to request input information

3.15<Staff> Create a show - Web User

- **Function trigger:** The user clicks “Thêm mới” button.

- **Function description:** This function allows the staff to create a show.

- **Screen layout:**

A Show

Staff Nguyễn Văn Trinh

* Show name:

* Show Description: maxLength is 6

* Show Description Detail:

* Show Start Date: Select date

* Show End Date: Select date

* Show Type:

Img Url: Select File
Start Upload

Description Image Url: Select File
Start Upload

* Category:

* Category:

* Location Description:

Ticket Types: Ticket Type Name
 Ticket Type Description
 0
 0
 0
 + Add Ticket Type

Submit

UltraTix

localhost:2001/show/0b48ad58-d9ec-4137-99a4-19c15a84c258/create-sale-stage

Staff Nguyễn Văn Trinh

A Show

Sale Stages: Sale Stage Order
 Sale Stage Description
 Select date
 Select date
 0
 Ticket Type Quantity
 + Add Sale Stages

Submit

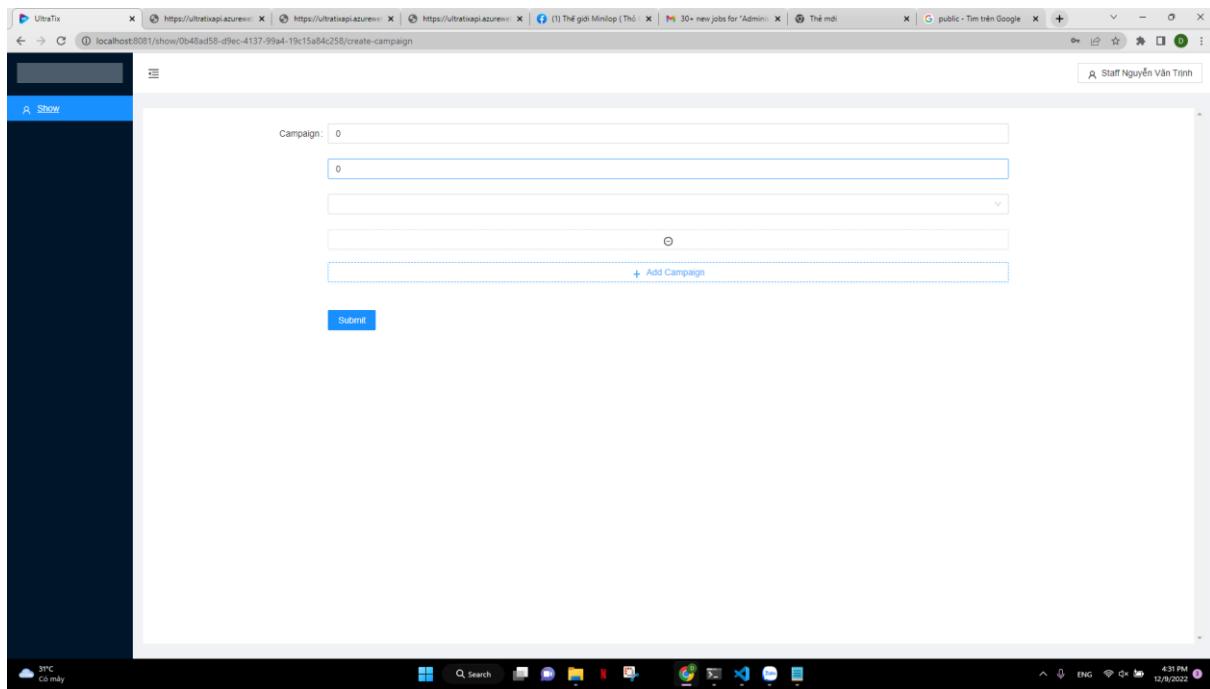


Figure 31.<Staff> Create a show - Web User

- **Function Details:**

- Normal flow:
 - + Click “Show” tab in navigation pane.
 - + Click “Thêm mới” button on list of shows page.
 - + Fill input information and select file.
 - + Click “submit” button to create a post.
- Business rule: BR-38, BR-41
- Exception:
 - If you do not fill in the content, the system will display a message MSG05 to request input information.
 - When the creation is successful, the system will display a message MSG06 to notify successfully to the staff.

3.16<Organizer> Approve show - Web User

- **Function trigger:** The user clicks “Approve Show” button.
- **Function description:** This function allows the organizer to approve a show.
- **Screen layout:**

The screenshot shows the 'Organizer' application interface. On the left, a dark sidebar contains navigation links: 'Staff', 'Show', and 'Show Request', with 'Show Request' being the active tab. The main area displays a table of show requests:

Show Name	State	operation
Test Creat Show With Creation Step Check 06	Pending	<button>Approve Show</button>
Test Creat Show With Creation Step Check 06	Pending	<button>Approve Show</button>
Test Creat Show With Creation Step Check 06	Approve	<button>Approve Show</button>
Test Creat Show With Creation Step Check 06	Approve	<button>Approve Show</button>
Test Creat Show With Creation Step Check 06	Approve	<button>Approve Show</button>
Test Creat Show With Creation Step Check 06	Pending	<button>Approve Show</button>
Test Creat Show With Creation Step Check 03	Pending	<button>Approve Show</button>
Test Creat Show With Creation Step Check 06	Pending	<button>Approve Show</button>
Test Creat Show With Creation Step Check 06	Pending	<button>Approve Show</button>
LIVESHOW BACH CÔNG KHANH	Pending	<button>Approve Show</button>

A modal dialog titled 'Approve Show' is open, prompting for a description. The input field contains 'App'. At the bottom are 'Cancel' and 'OK' buttons.

Figure 32.<Organizer> Approve show - Web User

- Function Details:

- Normal flow:
 - + Click “Show request” tab in navigation pane.
 - + Click “Approve show” button and fill in the information description.
 - + Click “ok” button to approve show.
- Business rule: BR-39
- Exception: N/A

3.17<Organizer> Create the staff's account- Web User

- **Function trigger:** The user clicks “Thêm mới” button.

- **Function description:** This function allows the organizer to create an account of staff.

- **Screen layout:**

The screenshot shows a web-based application interface for creating a staff account. On the left, there is a vertical navigation pane with a dark background and light text. It contains three items: 'Staff' (which is highlighted in blue), 'Show', and 'Show Request'. At the top right of the main content area, there is a small text 'Organizer Văn B'. The main content area has a light gray background and contains several input fields and a dropdown menu. The fields are labeled with red asterisks indicating they are required. The labels and their corresponding input fields are: 'User Name' (text box), 'email' (text box), 'Password' (text box with a 'reset' icon), 'Address' (text box), 'Phone' (text box), 'Avatar Img URL' (text box), 'Role' (dropdown menu currently set to 'Staff'), and 'Is Active' (checkbox). Below these fields is a blue 'Submit' button.

Figure 33.<Organizer> Create the staff's account- Web User

- **Function Details:**

- Normal flow:

- + Click “Staff” tab in navigation pane.
- + Click “Thêm mới” button on the list of staff’s accounts page
- + Fill in the information.
- + Click “submit” button to approve show.

- Business rule: BR-13

- Exception:

- If you do not fill in the content, the system will display a message MSG05 to request input information.
- When the creation is successful, the system will display a message MSG06 to notify successfully to the organizer.

4. Non-Functional Requirements

4.1 External Interfaces

4.1.1 User Interfaces

UI-01: UI supports Vietnamese.

UI-02: GUI is clear and easy to understand

UI-03: The information is displayed clearly, and is easy to understand.

UI-04: Need a confirmation before performing important tasks.

UI-05: Notify the user of the result after performing an action

4.1.2 Software Interfaces

SI-01: Web application: browser Google Chrome (version 70 or higher) and Firefox (version 60 or

higher), Internet Explorer (version 10 or higher), or any web browser that supports HTML5 & CSS3.

SI-02: Mobile application: phone operating system requires Android version 6.0 or higher.

SI-03: System handler: Windows 10 (Professional edition version 1909) or higher.

4.1.3. Hardware Interfaces

HI-01: Desktop or laptop (Connecting to the internet)

HI-02: Mobile phone (Connecting to the internet)

4.2 Quality Attributes

4.2.1 Usability

- For customers, it is easy to use the application without going through the GUI.
- For admins, organizers, artists, and staff can use the application after reading the GUI.
- The user interface is designed to be easy to use, even for non-IT staff.

4.2.2 Reliability

- Needs to be thorough testing to prevent serious errors that can affect the system.
- Admins, organizers, artists, and staff should need less than one week of training to be productive with the system.

4.2.3 Performance

- All common response time is *under 5* seconds (except the create show feature).
- Response time for the create show feature (*using the salesman algorithm*) is *under 30* seconds.

4.2.4 Security

- Each role can only use its own functionality.
- Before saving data to the database, all input is validated.
- All user information provided to the system is confidential.

4.2.5 Supportability

- Should apply RESTful Web API standard.
- Should follow the coding convention.
- All development tools should be listed with attached documents.

4.2.6 Design Constraints

- Web application: VueJS
- Mobile application: Flutter framework and Dart
- Back-end server: .NET Core

5. Requirement Appendix

5.1 Business Rules

ID	Rule Definition
BR-01	Id will be generated by the system
BR-02	Id is not changed when updated
BR-03	Username must be unique
BR-04	Username can not be updated
BR-05	Email must be unique
BR-06	Registered accounts must authenticate via email.
BR-07	If you forgot your password, you must authenticate via email and create a new password.

BR-08	Admin, Organizer, Artist, and Staff must log in before using the system
BR-09	Phone number length of the account must be 10 - 11 characters
BR-10	Password length of the account must be 8 - 20 characters
BR-11	Admins, Customers, and Artists have to login by admins, customers, and artists accounts.
BR-12	Organizers have to log in with their username that was provided by the admin.
BR-13	The staff has to log in with the username that was provided by the organizer.
BR-14	The artist registers an account and sends a verification request
BR-15	Artist accounts must be approved by the admin after the creation
BR-16	Only users who are authorized as “Staff” or “Customers” can access the mobile application.
BR-17	Customer, Artist, and admin can log in by email account.
BR-18	Customers login into mobile by email/username
BR-19	Status default of new account is active
BR-20	All account has two statuses: active and inactive
BR-21	All account can view and update their profile
BR-22	Before changing the password the old password must be confirmed
BR-23	Admin creates an account for an organizer
BR-24	Admin only updates the account status of customers, organizers, artists, and staff
BR-25	Admin only updates posts status
BR-26	Admin only updates shows status
BR-27	Admin cannot cancel show
BR-28	Admin does not need to approve the newly created show
BR-29	Admin can only transfer ticket sales to organizers and commission to artists after the show ends
BR-30	The discounts of each artist for each show will depend on the discussion between the artist and the organizer
BR-31	The promotions for customers at each show will be decided by the organizer
BR-32	The system will charge for each show, based on the show's revenue levels, there will be specific fees
BR-33	Buy ticket normal:

	<p>* By ticket type: number of tickets bought * original price * (1 - discount on ticket type) * (1 - discount on ticket sales) \Rightarrow Total amount to pay = Total amount for each type of ticket</p>
BR-34	<p>Buy ticket via artist link: $*$ By ticket type: number of tickets bought * original price * (1 - discount on ticket type) * (1 - discount on ticket sales) * (1 - discount when buying via artist link) \Rightarrow Total amount to pay = Total amount for each type of ticket</p>
BR-35	Artist the commission per transaction = Total amount for each ticket type (when buying via artist link) * artist discount
BR-36	The total commission for a artist in a show will be equal to that artist's total commission on transactions in that show
BR-37	Revenue for organizer = Total payable
BR-38	Staff must create the show at least 7 days before the show starts
BR-39	The show is created by staff and must be approved by the organizers
BR-40	The show is updated by staff and must be approved by the organizers
BR-41	The staff creates the show has the following information: Add sale stages, add ticket type, add artists, add discounts for singers, add the number of tickets sold for artist, add discounts for customers who buy tickets
BR-42	Type show includes 2 levels: indoor and outdoor
BR-43	Type show indoor includes 2 levels: VIP and normal
BR-44	Each show type have more than 1 category
BR-45	Each show have 1 category
BR-46	Only the staff can handle campaign, sale stage
BR-47	After the campaign and sale stage are in status public, staff cannot update and only edit when the organizer allowed
BR-48	For staff, the show has seven statuses: Draft, Pending, Approved, and Rejected, Canceled, Finished
BR-49	For the organizer, the show has six statuses: Pending, Approved, and Rejected, Canceled, and Finished
BR-50	For the admin, the show has two statuses: Hide, Public
BR-51	For the customer, the show has two statuses: Is Coming, On-Going
BR-52	For the artist, the show has three statuses: On Coming, On Going, Cancelled

BR-53	If the organizer approves the show, the show will change to approved status
BR-54	After the show is in status public, staff only edit when the organizer allowed
BR-55	If the organizers refuse show requests, the show status will be changed to rejected. The staff needs to edit the show and request again
BR-56	Staff can't cancel shows, only organizers can cancel shows
BR-57	The organizer who wants to cancel the show must notify the admin
BR-58	Before the ticket sale date, the new show may be canceled
BR-59	When cancelling the show, the system will refund tickets to customers who bought tickets
BR-60	When an artist cancels a show, the commission for their sold tickets goes back to the organizers
BR-61	Artist must cancel the show before the show starts in 3 days
BR-62	When an artist cancels a show, customers who purchased tickets through their link will be notified and refunded if required
BR-63	The Organizer creates an account for the staff
BR-64	Organizer only updates the account status of staff
BR-65	Only the organize can view their report show
BR-66	The organizers can view the report show after the show ends
BR-67	In the web application, the staff manages show
BR-68	In the mobile application, the staff scan the QR code ticket
BR-69	Each artist participating in the show has a different link
BR-70	Artists can post the link on the post section of the system or share it outside
BR-71	The post has 2 statuses: Public and Hidden
BR-72	Newly created posts will have a status of public
BR-73	When not following the artist, the latest posts will be shown
BR-74	When buying tickets using an artist's link, customers can enjoy a discount according to that artist's applicable promotion campaign and sales stages discounts
BR-75	When buying tickets directly through the system, customers can enjoy discounts according to the ticket sales stages of that show
BR-76	The guest can't buy tickets

BR-77	To buy a ticket, the user must be logged in to the system
BR-78	When a customer buys a ticket, the ticket type generates the corresponding number of tickets that the customer has purchased. Customers who create new orders will create tickets
BR-79	The number of buy tickets cannot be more than 10 tickets
BR-80	Tickets cannot be booked more than the number of tickets available
BR-81	When an order is "new", email notification of the completed order will be sent to the customer's email
BR-82	Each order contains a QR code and booking ticket information
BR-83	Staff scans the QR code to view the bought ticket number
BR-84	Ticket sales will end before the scheduled start date
BR-85	Order has 3 states: New, Checked, Cancelled
BR-86	Order is created successfully has the status is new
BR-87	Only the admin, the organizer can view orders of their session

Table 27.1 Business Rules

5.2 Application Messages List

#	Message code	Message Type	Context	Content
1	MSG01	In red, under the text box	Input-required fields are incorrect	<i>Incorrect user name or password. Please check again.</i>
2	MSG02	In red	Ticket type not selected	<i>Please select ticket type</i>
3	MSG03	In red	The number of tickets exceeds the limit	<i>The number of tickets exceeds the limit. Please check again.</i>
4	MSG04	Toast message	Payment the order successfully	<i>Payment the order successfully</i>
5	MSG05	In red, under the text box	Input-required fields are empty	<i>The * field is required.</i>
6	MSG06	Toast message	Adding new successfully	<i>Add successfully.</i>

Table 28.Application Messages List

IV. Software Design Document

1. System Design

1.1 System Architecture

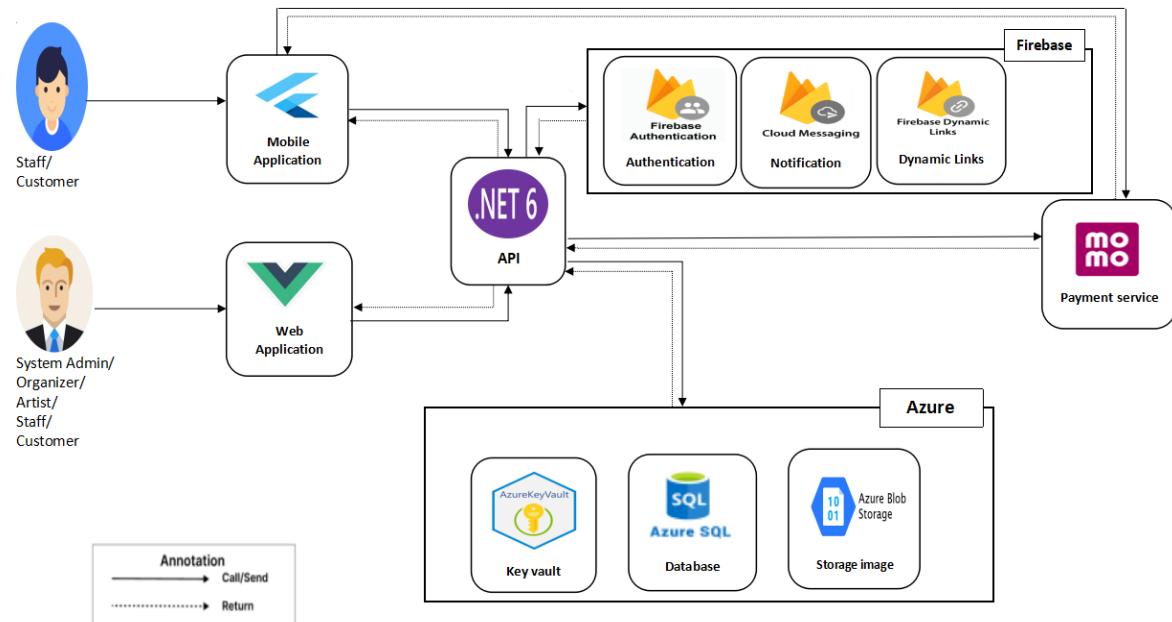


Figure 34. System Architecture

1.2 Package Diagram

1.2.1 Back-end Package Diagram

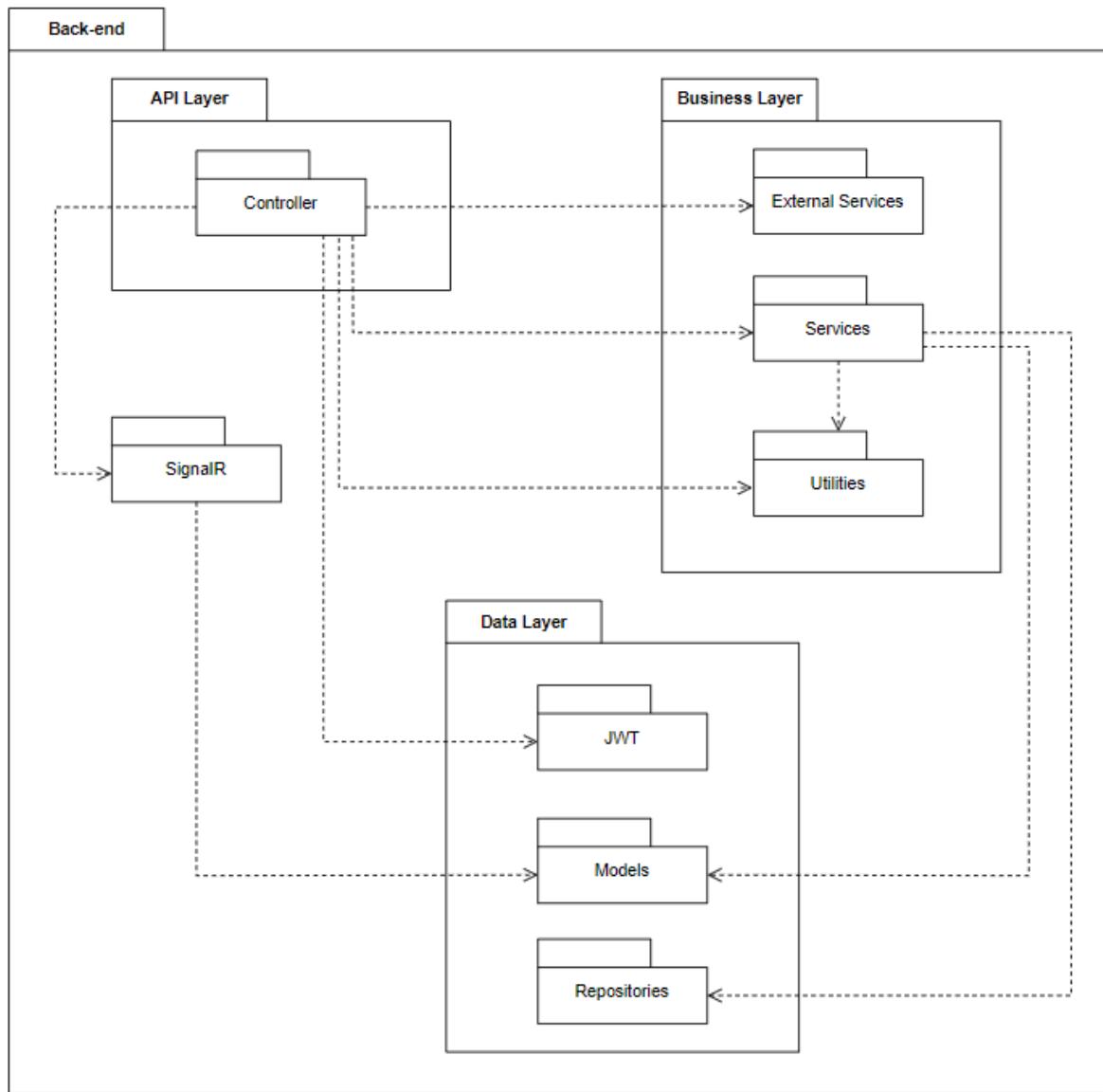


Figure 35.Back-end Package Diagram

Package Descriptions

No	Package	Description
01	Controller	Package contains classes responsible for Api controller
02	External Services	Package contains classes responsible for Services provided by an External Party
03	Services	Package contains classes responsible for Service of system

04	Utilities	Package contains classes responsible for JWT security handler, where to decode JWT token
05	JWT	Package contains classes responsible for Verifying secure information
06	Models	Package contains classes responsible for Entity of database table, ViewModels (response), RequestModel (request)
07	Repositories	Package contains classes responsible for Query to database
08	SignalR	Package contains classes responsible for SignalR hub

Table 29.Back-end Package Descriptions

1.2.2 Web Application Package

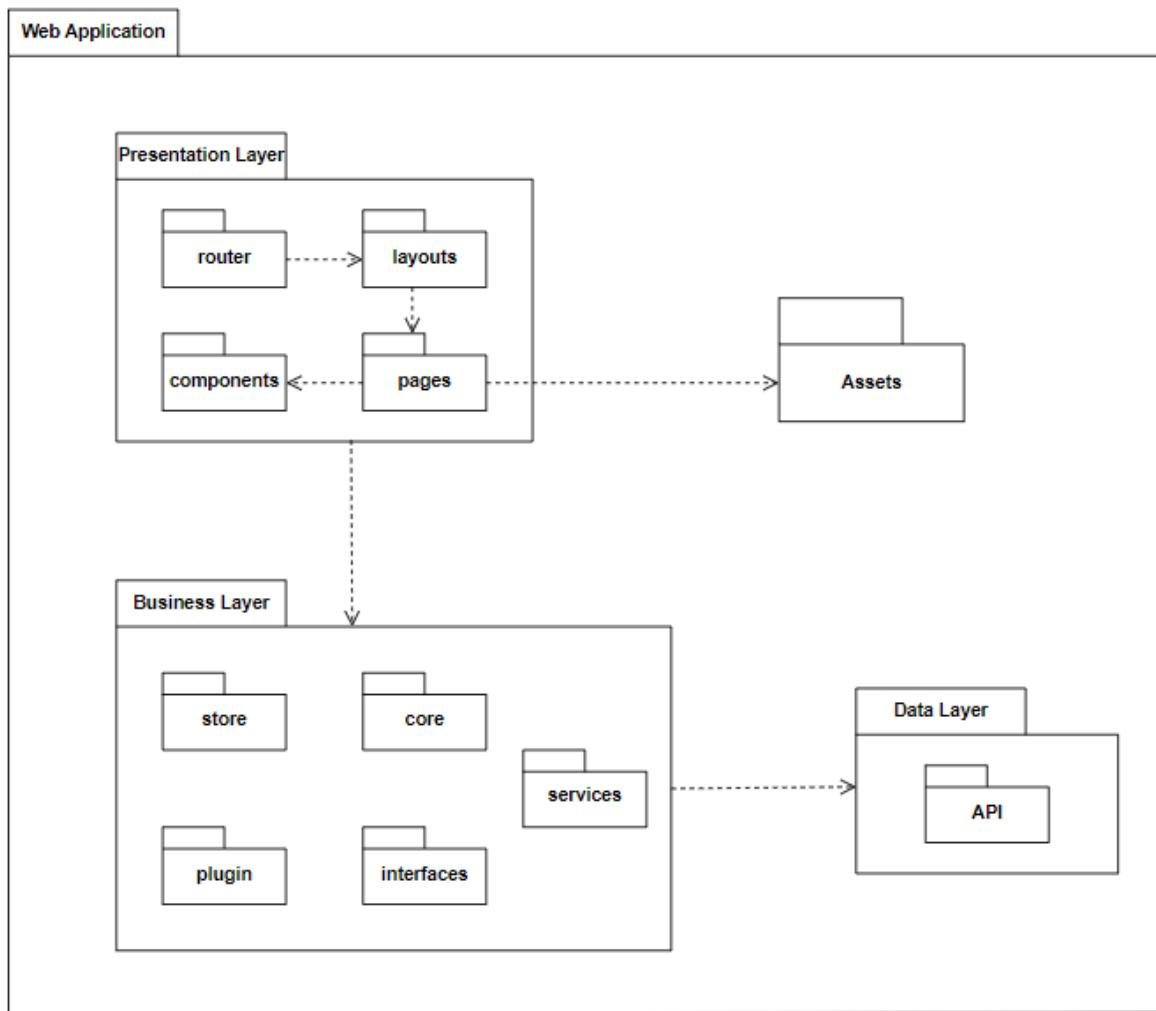


Figure 36.Web Application Package

Package Descriptions

No	Package	Description
01	router	The package contains routing files.
02	layouts	Package contains layouts
03	components	Package contains components that can be reused in pages
04	pages	Package contains the pages
05	assets	Package contains assets module where to work with Webpack
06	store	The package contains store that manages state
07	core	Packages contains mixins, enums, or filters
08	plugin	Package contains plugins imported from outside
09	interfaces	Package contains the interfaces
10	services	Package contains and receives the api
11	API	Package contains and receives the services

Table 30. Web Application Package Description

1.2.3 Mobile Package

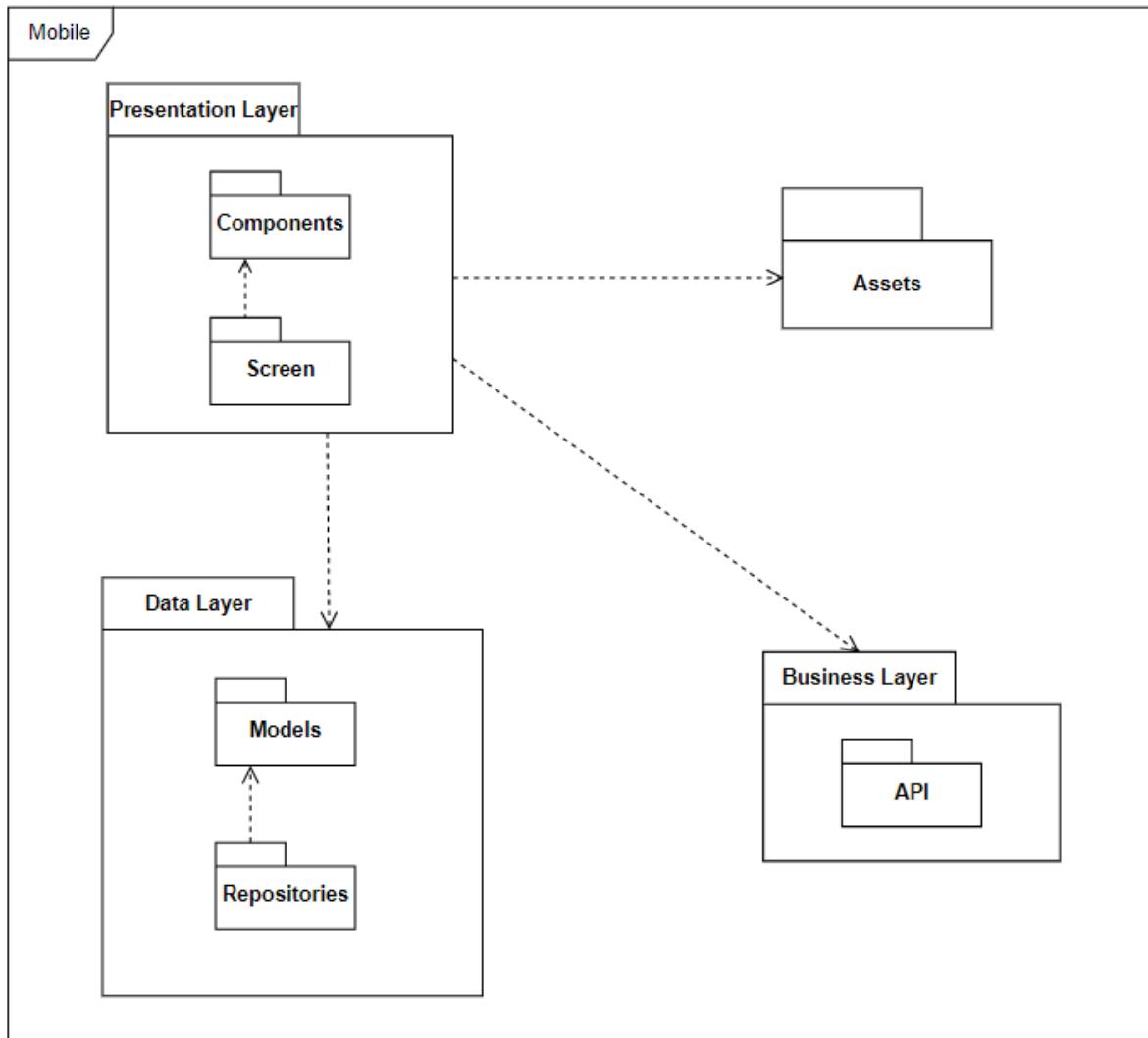


Figure 37. Mobile Package

Package Descriptions

No	Package	Description
01	Screen	Package contains classes responsible for Screens of mobile application
02	Components	Package contains classes responsible for Component of the screen
03	Models	Package contains classes responsible for receiving data and converting data to objects.
04	Repositories	Package contains classes responsible for calling data from Providers through Screens.

05	Assets	Package contains classes responsible for pictures, texts, and colors.
06	API	Restful API

Table 31. Mobile Package Description

2. Database Design

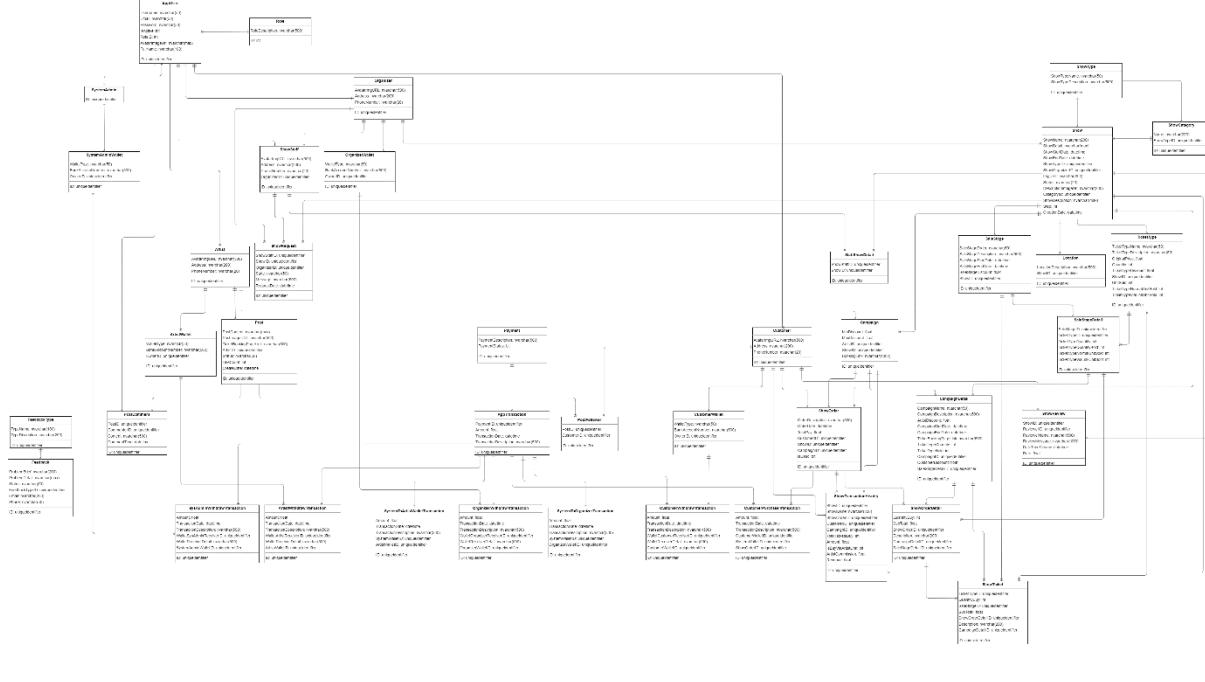


Figure 38. Database Design

2.1 Role

Field name	Type	Description	Unique	Not null	PK/FK
ID	int	Unique identifier of each account	Yes	Yes	PK
RoleDescription	nvarchar(500)	Description of the role	No	Yes	No

Table 32.Role

2.2 AppUser

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of	Yes	Yes	PK

		user account			
Username	nvarchar(50)	Description of the role	No	Yes	No
Email	nvarchar(50)	Email of user	No	Yes	No
Password	nvarchar(50)	Password of user	No	Yes	No
IsActive	bit	Status of user	No	Yes	No
RoleID	int	Unique identifier of role	Yes	Yes	FK
AvatarImageUrl	nvarchar(max)	Avatar of user	No	No	No
FullName	nvarchar(100)	Name of user	No	Yes	No

Table 33.AppUser

2.3 SystemAdmin

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of admin	Yes	Yes	PK

Table 34.SystemAdmin

2.4 Organizer

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of organizer	Yes	Yes	PK
AvatarImgURL	nvarchar(500)	Avatar of organizer	No	No	No
Address	nvarchar(200)	Address of organizer	No	Yes	No
PhoneNumber	nvarchar(20)	Phone number of organizer	No	Yes	No

Table 35. Organizer

2.5 ShowStaff

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of organizer	Yes	Yes	PK
AvatarImgURL	nvarchar(500)	Avatar of organizer	No	No	No
Address	nvarchar(200)	Address of organizer	No	Yes	No
PhoneNumber	nvarchar(20)	Phone number of organizer	No	Yes	No
OrganizerId	uniqueidentifier	Unique identifier of organizer	Yes	Yes	FK

Table 36. ShowStaff

2.6 ShowRequest

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of show request	Yes	Yes	PK
ShowStaffID	uniqueidentifier	Unique identifier of staff	Yes	Yes	FK
ShowID	uniqueidentifier	Address of show	Yes	Yes	FK
OrganizerID	uniqueidentifier	Phone number of organizer	Yes	Yes	FK

State	nvarchar(50)	Status of show request	Yes	Yes	No
Message	nvarchar(500)	Message of show request	Yes	No	No
RequestDate	datetime	Date of show request	Yes	Yes	No

Table 37.ShowRequest

2.7 Post

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of post	Yes	Yes	PK
PostContent	nvarchar(max)	Content of post	No	Yes	No
PostImageURL	nvarchar(500)	Image of post	No	Yes	No
TicketBookingPageLink	nvarchar(500)	Link of post	No	Yes	No
ArtistID	uniqueidentifier	Unique identifier of artist	Yes	Yes	FK
Status	nvarchar(50)	Status of post	No	Yes	No
LikeCount	int	The number of likes of post	No	Yes	No

CreateDate	datetime	Create date of post	No	Yes	No
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Table 38.Post

2.8 PostComment

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of post comment	Yes	Yes	PK
PostID	uniqueidentifier	Unique identifier of post	Yes	Yes	FK
CommentorID	uniqueidentifier	Unique identifier of commentator	Yes	Yes	FK
Content	nvarchar(500)	content of post comment	No	Yes	No
CommentTime	datetime	time of post comment	No	Yes	No

Table 39.PostComment

2.9 Feedback

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Feedback	Yes	Yes	PK
ProblemBrief	nvarchar(200)	Problem of Feedback	No	Yes	No

ProblemDetail	nvarchar(max)	Problem detail of Feedback	No	Yes	No
Status	nvarchar(50)	Status of Feedback	No	Yes	No
FeedbackTypeID	uniqueidentifier	Unique identifier of FeedbackType	Yes	Yes	FK
Email	nvarchar(200)	Email of Feedback	No	Yes	No
Phone	nvarchar(50)	Phone of Feedback	No	Yes	No

Table 40. Feedback

2.10 Payment

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Payment	Yes	Yes	PK
PaymentDescription	nvarchar(500)	Description of payment	No	Yes	No

PaymentStatus	bit	Status of payment	No	Yes	No
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Table 41. Payment

2.11 AppTransaction

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of app transaction	Yes	Yes	PK
PaymentID	uniqueidentifier	Unique identifier of payment	Yes	Yes	FK
Amount	float	Amount of app transaction	No	Yes	No
TransactionDate	datetime	Date of app transaction	No	Yes	No
TransactionDescription	nvarchar(500)	Description of app transaction	No	Yes	No

Table 42. AppTransaction

2.12 PostFollower

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of post follower	Yes	Yes	PK
PostID	uniqueidentifier	Unique identifier of	Yes	Yes	FK

		post			
CustomerID	uniqueidentifier	Unique identifier of customer	Yes	Yes	FK

Table 43.PostFollower

2.13 Customer

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Feedback	Yes	Yes	PK
AvatarImgURL	nvarchar(500)	Avatar of customer	No	No	No
Address	nvarchar(200)	Address of customer	No	Yes	No
PhoneNumber	nvarchar(20)	Phone Number of customer	No	Yes	No

Table 44.Customer

2.14 StaffShowDetail

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of staff show detail	Yes	Yes	PK
ShowStaffID	uniqueidentifier	Unique identifier of show staff	Yes	Yes	FK
ShowID	uniqueidentifier	Unique identifier of show	Yes	Yes	FK

Table 45.StaffShowDetail

2.15 Campaign

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Campaign	Yes	Yes	PK
MinDiscount	float	Min discount of campaign	No	Yes	No
MaxDiscount	float	Max discount of campaign	No	Yes	No
ArtistID	uniqueidentifier	Unique identifier of Artist	Yes	Yes	FK
ShowID	uniqueidentifier	Unique identifier of Show	Yes	Yes	FK
BookingLink	nvarchar(1000)	Booking link of campaign	No	Yes	No

Table 46.Campaign

2.16 ShowOrder

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Show order	Yes	Yes	PK
OrderDescription	nvarchar(500)	Description of order	No	No	No
OrderDate	datetime	Date of order	No	Yes	No

TotalPay	float	Total pay of order	No	Yes	No
CustomerID	uniqueidentifier	Unique identifier of Customer	Yes	Yes	FK
ShowID	uniqueidentifier	Unique identifier of Show	Yes	Yes	FK
CampaignID	uniqueidentifier	Unique identifier of Campaign	Yes	Yes	FK
IsUsed	bit	Status of order	No	Yes	No

2.17 ShowTransactionHistory

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of show order history	Yes	Yes	PK
ShowID	uniqueidentifier	Unique identifier of show order history	Yes	Yes	FK
ShowName	nvarchar(200)	Show name of show order	No	Yes	No
ShowOrderID	uniqueidentifier	Unique identifier of show order	Yes	Yes	FK

CustomerID	uniqueidentifier	Unique identifier of customer	Yes	Yes	FK
CampaignID	uniqueidentifier	Unique identifier of Campaign	Yes	Yes	FK
TotalTicketsBuy	int	Total ticket buy of show order history	No	Yes	No
Amount	float	Amount of show order history	No	Yes	No
IsBuyViaArtistLink	bit	Status of show order history buy via artist link	No	Yes	No
ArtistCommission	float	Commission of show order history	No	Yes	No
Revenue	float	Revenue of show order history	No	Yes	No

2.18 ShowOrderDetail

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Show Order Detail	Yes	Yes	PK
QuantityBuy	int	Quantity buy of Show Order Detail	No	Yes	No

SubTotal	float	Sub Total of Show Order Detail	No	Yes	No
ShowOrderID	uniqueidentifier	Unique identifier of Show Order	Yes	Yes	FK
Description	nvarchar(200)	Description of Show Order Detail	No	No	No
CampaignDetailID	uniqueidentifier	Unique identifier of campaign detail	Yes	Yes	FK
SaleStageDetailID	uniqueidentifier	Unique identifier of sale stage detail	Yes	Yes	FK

2.19 CampaignDetail

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Campaign Detail	Yes	Yes	PK
CampaignName	nvarchar(50)	Name of Campaign Detail	No	Yes	No
CampaignDescription	nvarchar(500)	Description of Campaign Detail	No	Yes	No
ArtistDiscount	float	Artist discount of Campaign Detail	No	Yes	No
CampaignStartDate	datetime	Start Date of Campaign	No	Yes	No

		Detail			
CampaignEndDate	datetime	End Date of Campaign Detail	No	Yes	No
TicketBookingPageLink	nvarchar(500)	Link of Campaign Detail	No	Yes	No
TicketTypeQuantity	int	Type quantity of Campaign Detail	No	Yes	No
TicketTypeSold	int	Type sold of Campaign Detail	No	Yes	No
CustomerDiscount	float	Customer discount of Campaign Detail	No	Yes	No
CampaignID	uniqueidentifier	Unique identifier of Campaign	Yes	Yes	FK
SaleStageDetailID	uniqueidentifier	Unique identifier of Sale Stage Detail	Yes	Yes	FK

2.20 SaleStage

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Sale Stage	Yes	Yes	PK
SaleStageOrder	nvarchar(50)	Order of Sale Stage	No	Yes	No

SaleStageDescription	nvarchar(500)	Description of Sale Stage	No	Yes	No
SaleStageStartDate	datetime	Start Date of Sale Stage	No	Yes	No
SaleStageEndDate	datetime	End Date of Sale Stage	No	Yes	No
SaleStageDiscount	float	Discount of Sale Stage	No	Yes	No
ShowID	uniqueidentifier	Unique identifier of Show	Yes	Yes	FK

2.21 Show

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of show	Yes	Yes	PK
ShowName	nvarchar(200)	Name of show	No	Yes	No
ShowDetail	nvarchar(max)	Show detail of show	No	Yes	No
ShowStartDate	datetime	Start Date of show	No	Yes	No
ShowEndDate	datetime	End Date of show	No	Yes	No
ShowTypeID	uniqueidentifier	Type of show	No	Yes	No

ShowOrganizerID	uniqueidentifier	Show organizer of show	No	Yes	No
ImgURL	nvarchar(200)	Img of show	No	Yes	No
Status	nvarchar(20)	Status of show	No	Yes	No
DescriptionImageUrl	nvarchar(200)	Image of show	No	Yes	No
CategoryID	uniqueidentifier	Category of show	No	Yes	No
ShowDescription	nvarchar(max)	Description of show	No	Yes	No
Step	int	Step of show	No	Yes	No
CreationDate	datetime	Date of show	No	Yes	No

2.22 ShowType

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of show type	Yes	Yes	PK
ShowTypeName	nvarchar(50)	Name of show type	No	Yes	No
ShowTypeDescription	nvarchar(500)	Description of show type	No	Yes	No

2.23 ShowCategory

Field name	Type	Description	Unique	Not null	PK/FK

ID	uniqueidentifier	Unique identifier of category	Yes	Yes	PK
Name	nvarchar(200)	Name of category	No	Yes	No
ShowTypeID	uniqueidentifier	Type of category	Yes	Yes	FK

2.24 Location

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of location	Yes	Yes	PK
LocationDescription	nvarchar(500)	Description of location	No	Yes	No
ShowID	uniqueidentifier	Unique identifier of show	Yes	Yes	FK

2.25 TicketType

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of ticket type	Yes	Yes	PK
TicketTypeName	nvarchar(50)	Name of ticket type	No	Yes	No
TicketTypeDescription	nvarchar(50)	Description of ticket	No	Yes	No

		type			
OriginalPrice	float	Origina price of ticket type	No	Yes	No
Quantity	int	Quantity of ticket type	No	Yes	No
TicketTypeDiscount	float	Discount of ticket type	No	Yes	No
ShowID	uniqueidentifier	Unique identifier of show	Yes	Yes	FK
UnitSold	int	Unit sold of ticket type	No	Yes	No
TicketTypeNormalUnit Sold	int	Normal unit sold of ticket type	No	Yes	No
TicketTypeViaLinkUnit Sold	int	Ticket Type Via Link Unit Sold of ticket type	No	Yes	No

2.26 SaleStageDetail

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Sale stage detail	Yes	Yes	PK
SaleStageID	uniqueidentifier	Unique identifier of Sale stage	Yes	Yes	FK

TicketTypeID	uniqueidentifier	Unique identifier of ticket type	Yes	Yes	FK
TicketTypeQuantity	int	Quantity of Sale stage detail	No	Yes	No
TicketTypeQuantitySold	int	Quantity sold of Sale stage detail	No	Yes	No
TicketTypeNormalUnitSold	int	Normal unit sold of Sale stage detail	No	Yes	No
TicketTypeViaLinkUnitSold	int	Ticket Type Via Link Unit Sold of sale stage detail	No	Yes	No

2.27 ShowReview

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Show review	Yes	Yes	PK
ShowID	uniqueidentifier	Unique identifier of Show	Yes	Yes	FK
ReviewerID	uniqueidentifier	Unique identifier of reviewer	Yes	Yes	FK
ReviewerName	nvarchar(500)	Name of Show review	No	Yes	No

ReviewMessage	nvarchar(1000)	Review message of Show review	No	Yes	No
DateTimeReview	datetime	Date time review of Show review	No	Yes	No
Rate	float	Rate of Show review	No	Yes	No

2.28 ShowTicket

Field name	Type	Description	Unique	Not null	PK/FK
ID	uniqueidentifier	Unique identifier of Show ticket	Yes	Yes	PK
TicketTypeID	uniqueidentifier	Type of Show ticket	Yes	Yes	FK
QuantityBuy	int	Quantity of Show ticket	No	Yes	No
SaleStageID	uniqueidentifier	Unique identifier of Sale stage	Yes	Yes	FK
SubTotal	float	Sub Total of Show tick	No	Yes	No
ShowOrderDetailID	uniqueidentifier	Order Detail of Show ticket	No	Yes	No

Description	nvarchar(200)	Description of Show ticket	No	Yes	No
CampaignDetailID	uniqueidentifier	Unique identifier of Campaign detail	Yes	Yes	FK

3. Detailed Design

3.1 Payment with momo

3.1.1 Class Diagram Payment with momo

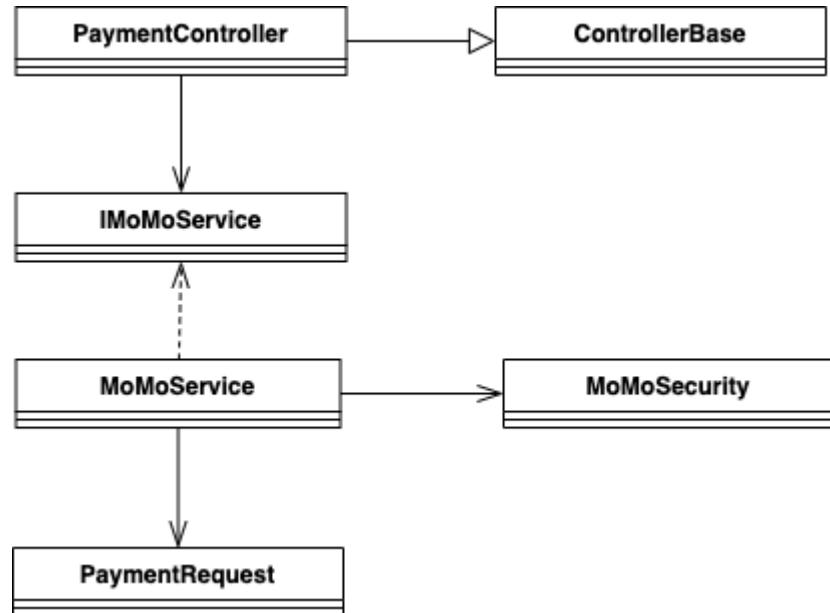


Figure 39. Class Diagram Payment with momo

3.1.2 Sequence Diagram Payment with momo

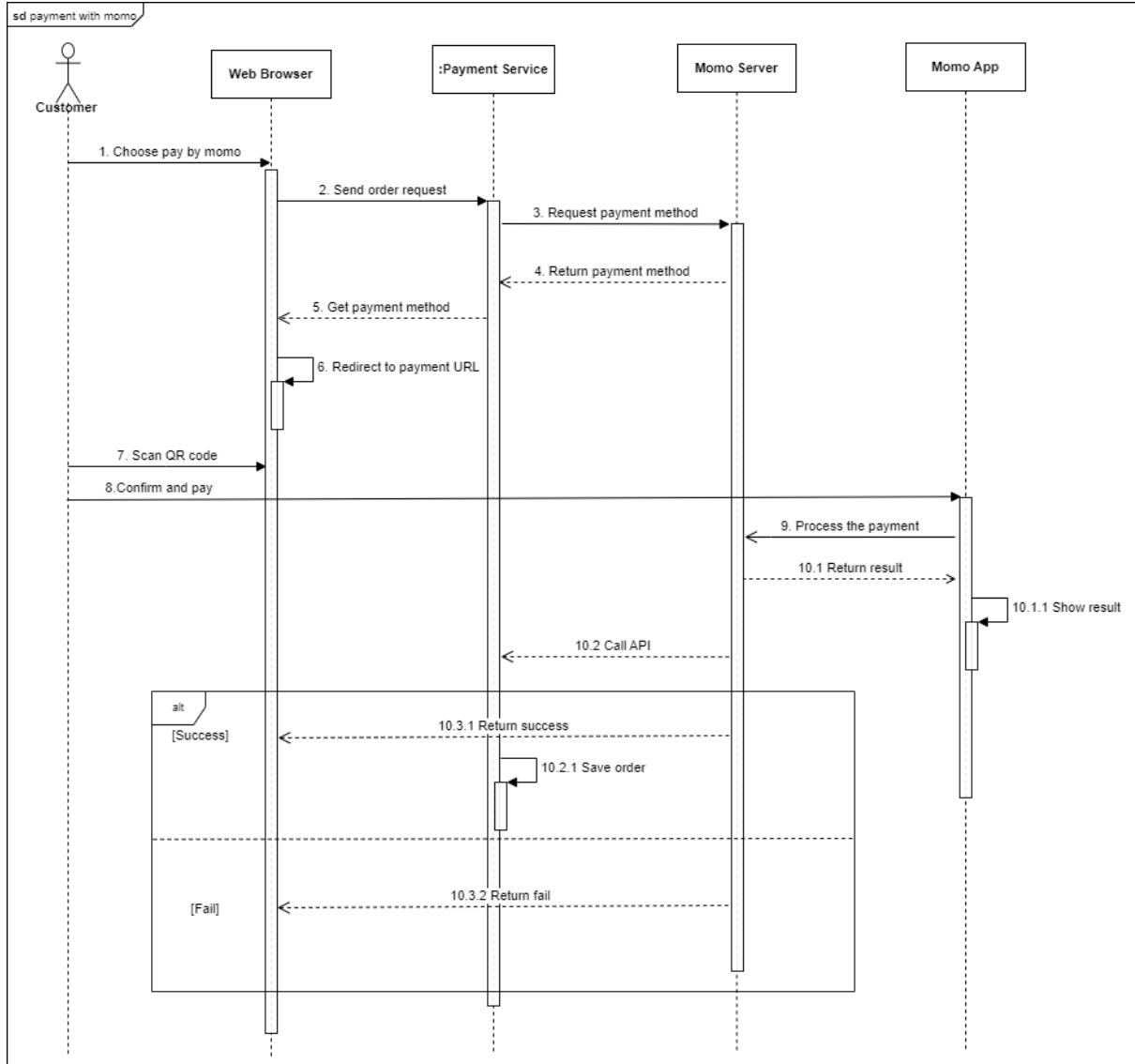


Figure 40.Sequence Diagram Payment with momo

3.2 Create show

3.2.1 Class Diagram Create show

3.2.1.1 Class Diagram Create saleStage

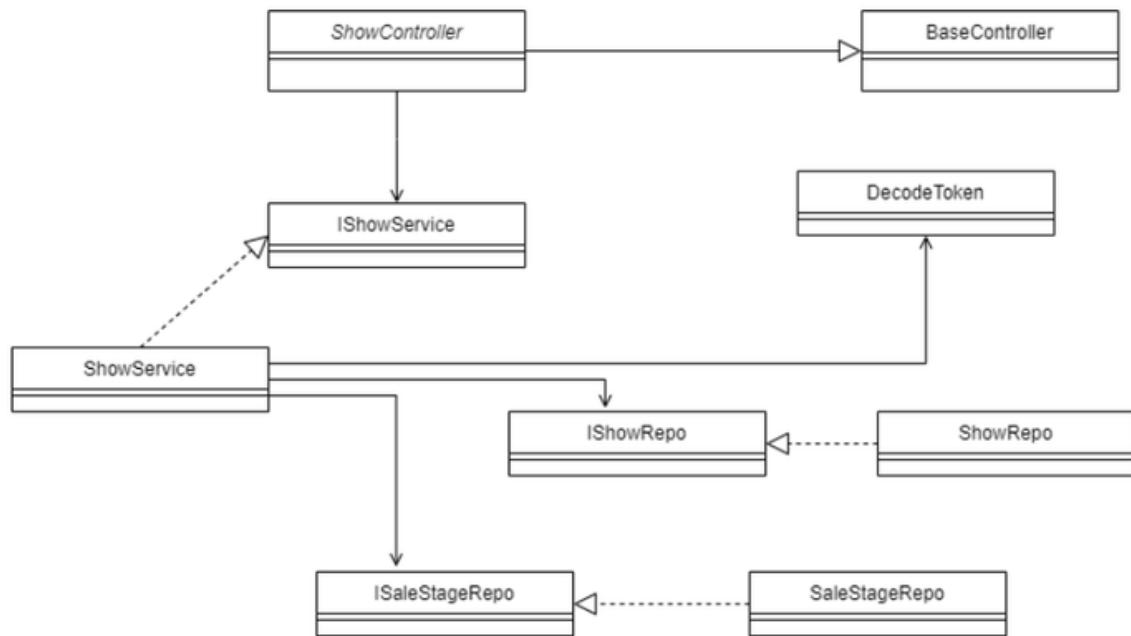


Figure 41. Class Diagram Create saleStage

3.2.1.2 Class Diagram Create Campaign

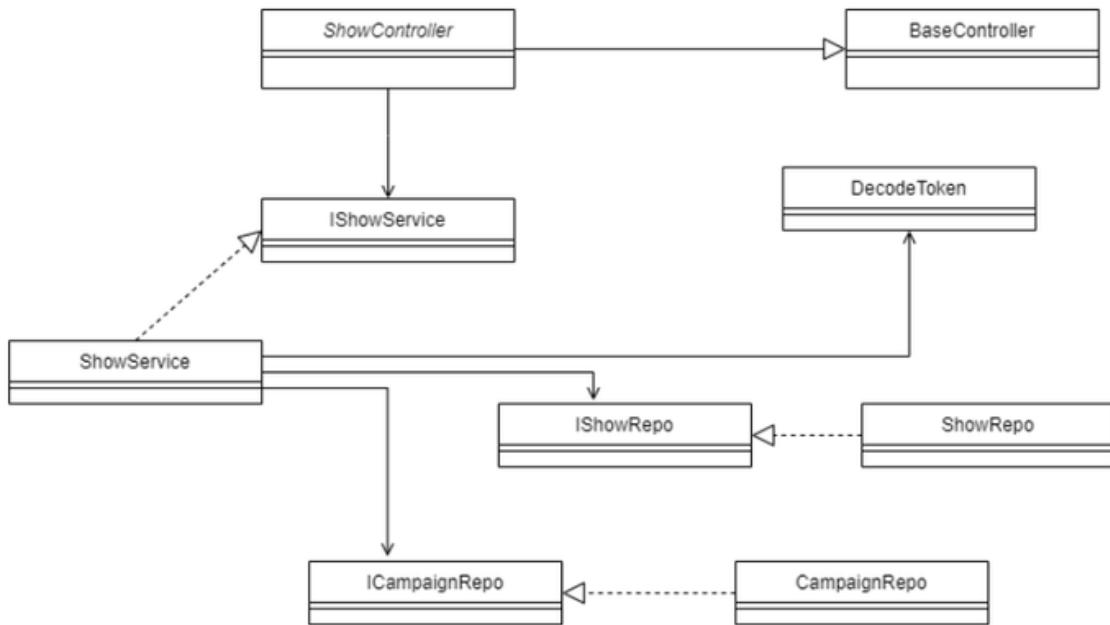


Figure 42. Class Diagram Create Campaign

3.2.1.3 Class Diagram Create Show

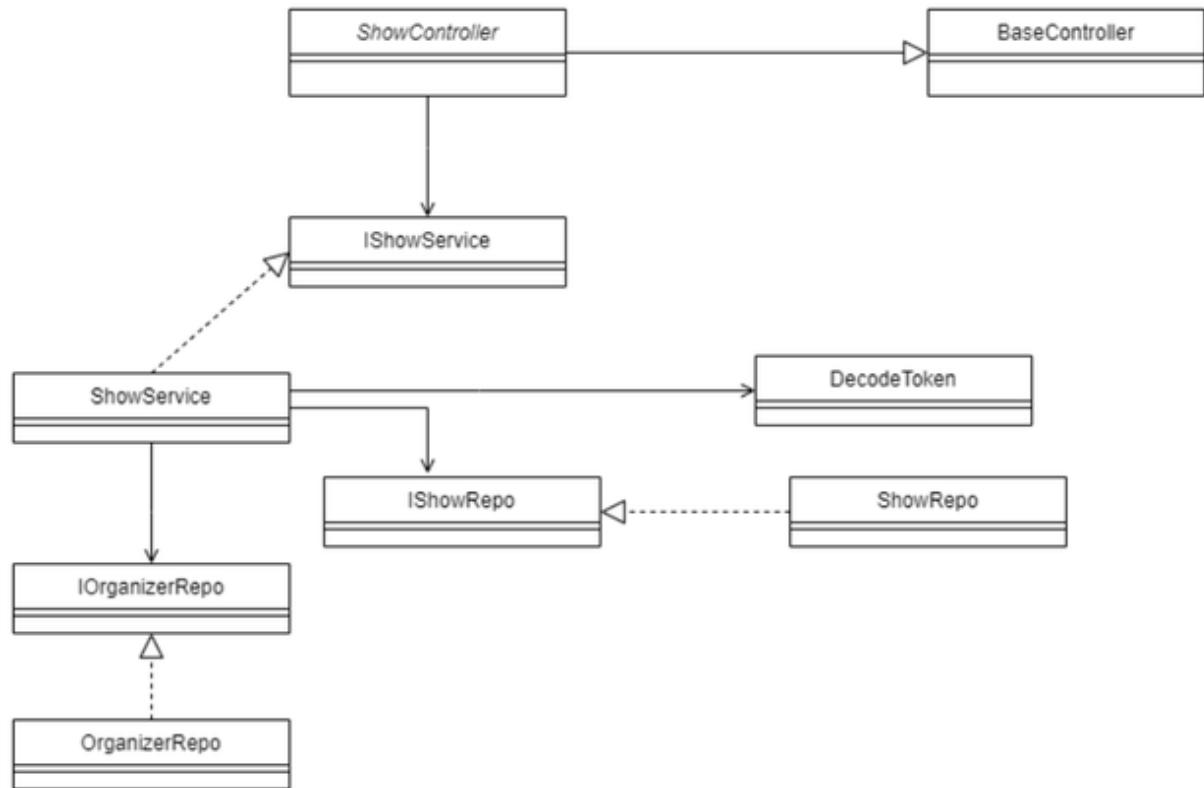


Figure 43. Class Diagram Create Show

3.2.2 Sequence Diagram Create show

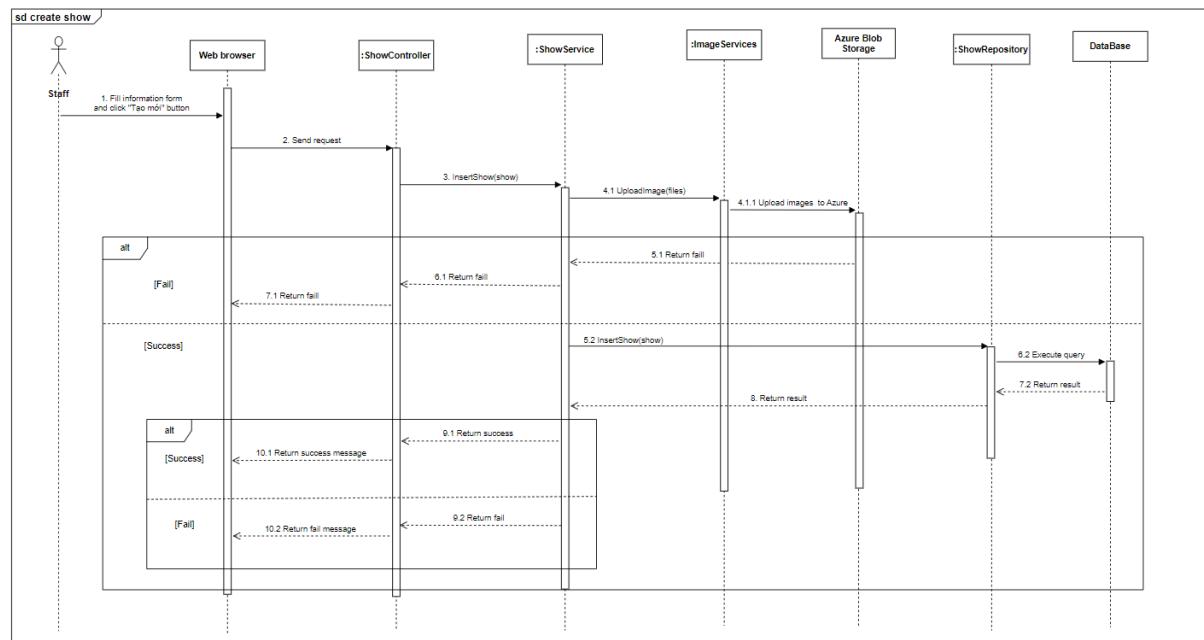


Figure 44. Sequence Diagram Create show

3.3 Create post

3.3.1 Class Diagram Create post

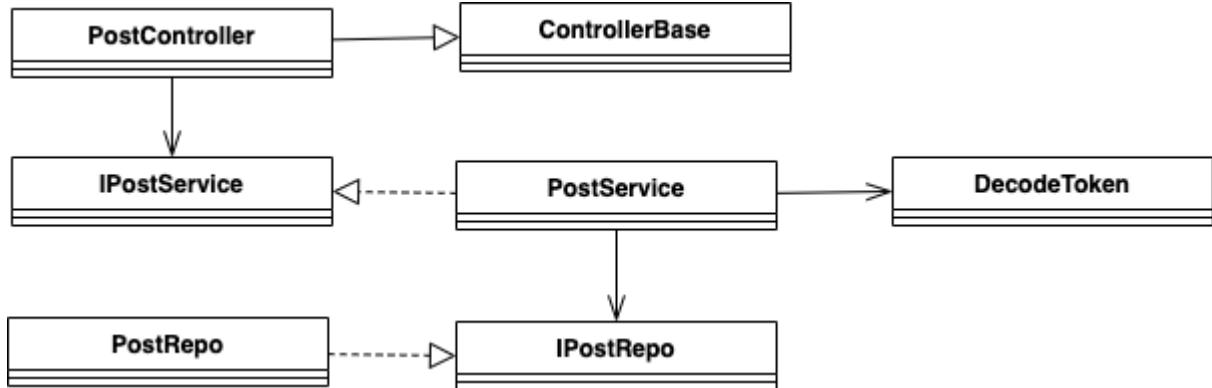


Figure 45. Class Diagram Create post

3.3.2 Sequence Diagram Create post

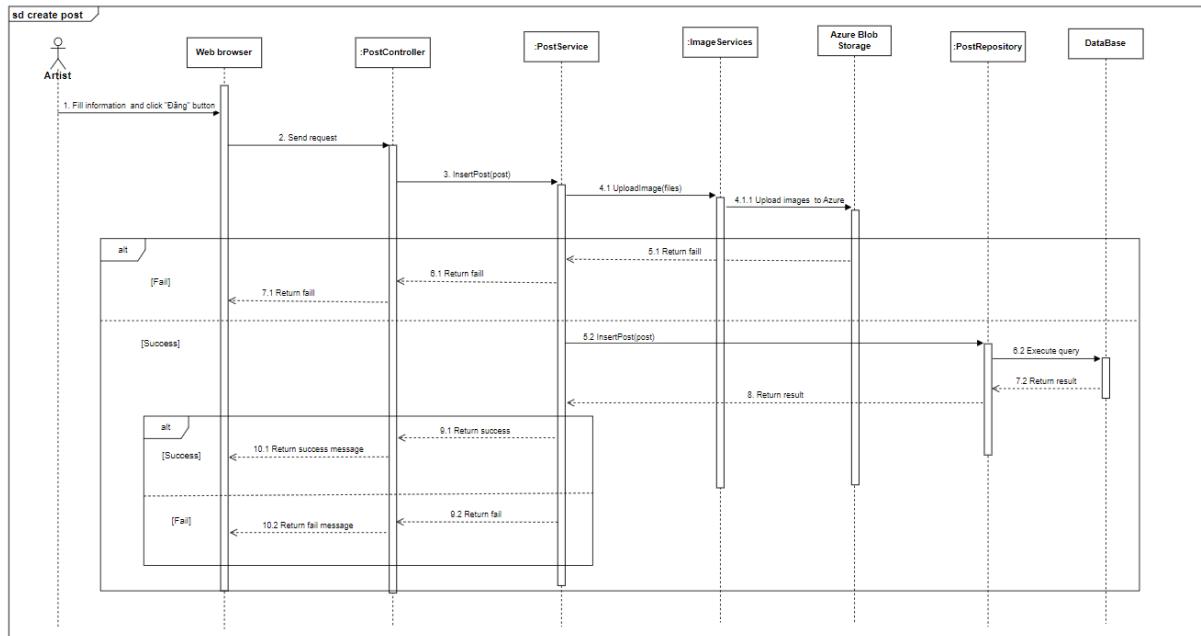


Figure 46. Sequence Diagram Create post

3.4 View order history

3.4.1 Class Diagram View order history

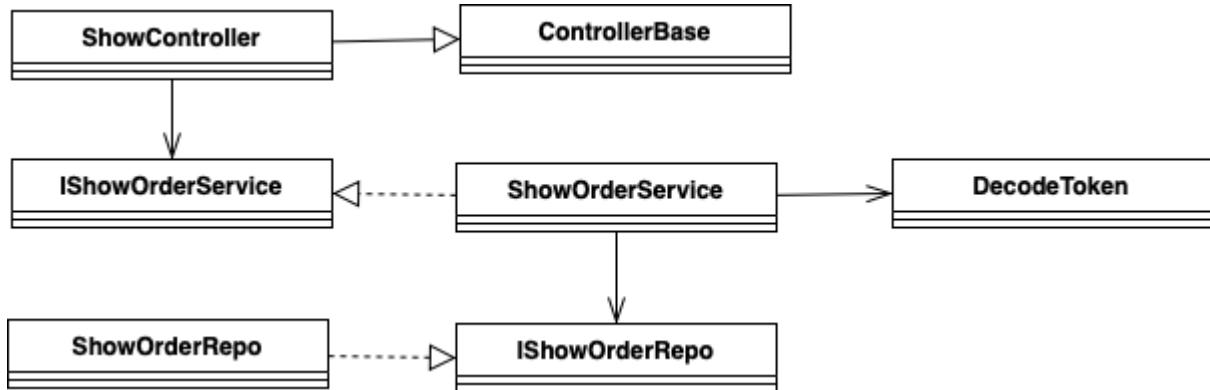


Figure 47. Class Diagram View order history

3.4.2 Sequence Diagram View order history

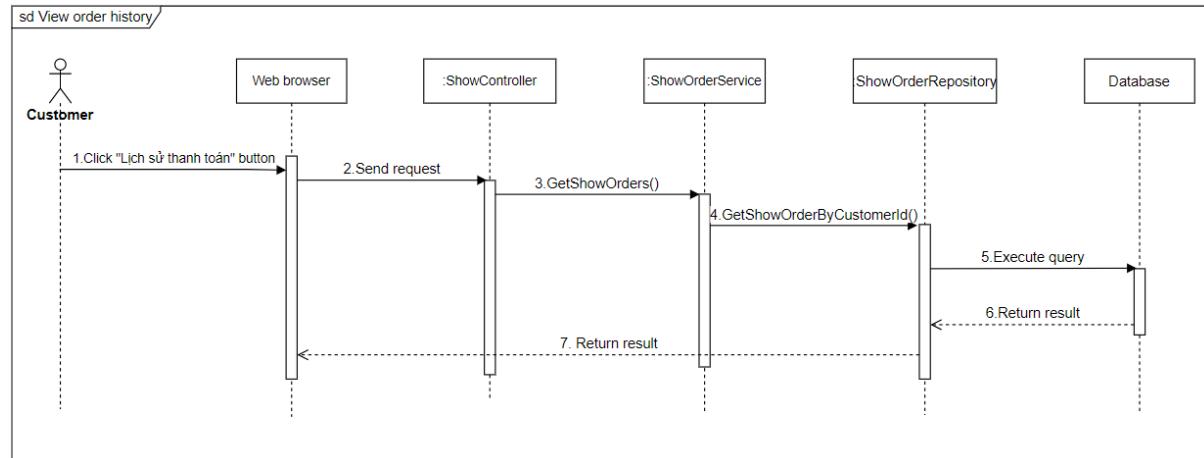


Figure 48. Sequence Diagram View order history

3.5 Create staff's account

3.5.1 Class Diagram Create staff's account

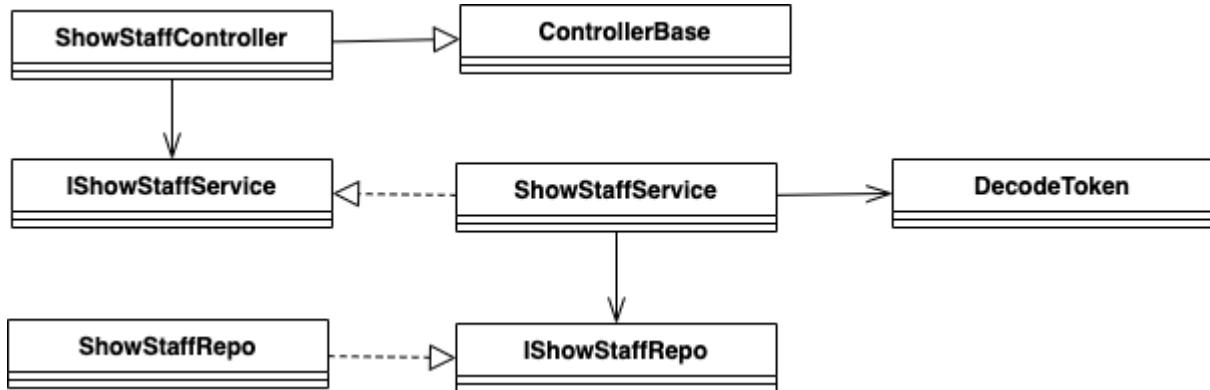


Figure 49. Class Diagram Create staff's account

3.5.2 Sequence Diagram Create staff's account

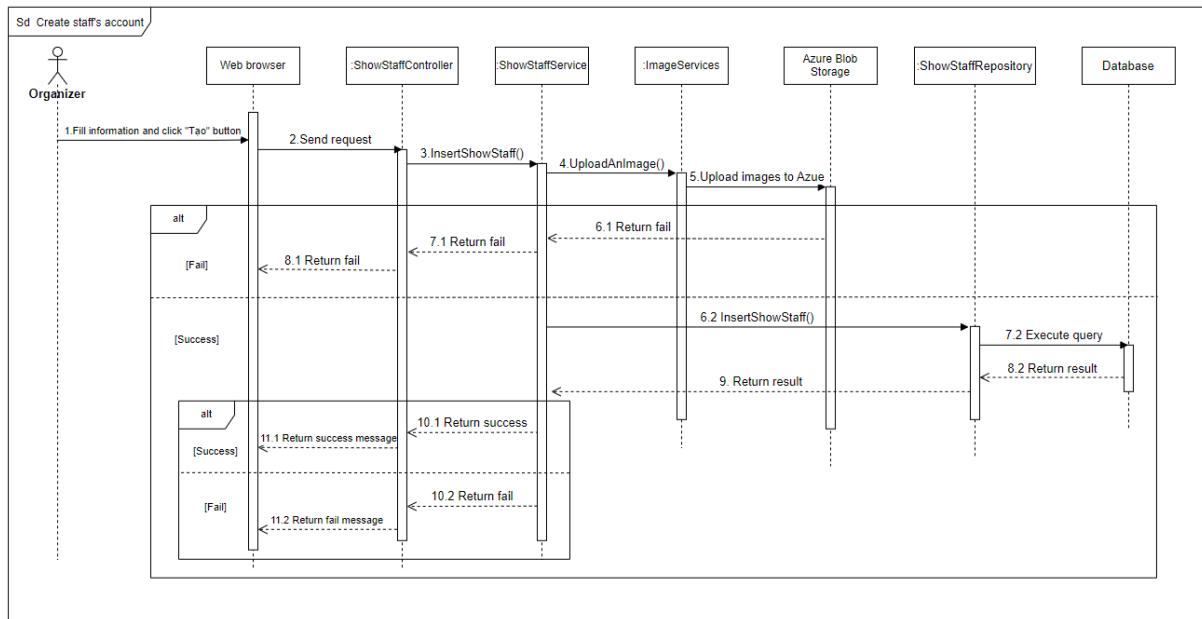


Figure 50.Sequence Diagram Create staff's account

V. Software Testing Documentation

1. Scope of Testing

We plan to define test cases in the main flow only.

2. Test Strategy

2.1 Testing Types

- Functional testing:

+ Objective: To test the functions of the application and ensure that the end result meets the business and user requirements.

+ Technique: Unit, Integration, System, and Acceptance testing.

+ Completion criteria:

- Unit testing: The testing of individual functional components.
- Integration testing: The testing performed in interfaces, interactions between components, and modules.
- System testing: The process of testing a system to verify that it meets specified requirements.
- Acceptance testing: The last phase of an application's functional testing before it is made available to the end user.

References: [Types of Software Testing](#)

2.2 Test Levels

Type of Tests	Test Level			
	Unit	Integration	System	Acceptance
Functional Testing	X	X	X	X
Non-Functional Testing	X	X	X	X

Table 47. Test Levels

2.3 Supporting Tools

Purpose	Tool	Vendor/In-house	Version
View logs of web application	Chrome DevTools	Chrome	107.0.5304.110
Backend IDE	Visual Studio 2022	Microsoft	17.1.32210.238
Web application IDE	Visual Studio Code	Microsoft	1.69.0.0

Mobile application IDE	Visual Studio Code	Microsoft	1.69.0.0
Communication	Google Meet, Messenger	Google, Facebook	

Table 48. Supporting Tool

3. Test Plan

3.1 Human Resources

Worker/Doer	Role	Specific Responsibilities/Comments
Huynh The Khoa	Tester	- Functional Testing - Non-Functional Testing
Trinh Le Cat Tuong	Tester	- Functional Testing - Non-Functional Testing
Tran Bach Duong	Tester	- Functional Testing - Non-Functional Testing
Dinh Thi Nhu Quynh	Tester	- Functional Testing - Non-Functional Testing

Table 49. Human Resources

3.2 Test Environment

Purpose	Tool	Provider	Version
Black-box testing	Chrome	Google	107.0.5304.110
White-box testing	Visual Studio Code	Microsoft	1.69.0.0
	Visual Studio 2022	Microsoft	17.1.32210.238
	Postman	Postman	

Table 50. Test Environment

3.3 Test Milestones

Milestone Task	Start Date	End Date
Functional Testing	25/11/2022	09/12/2022
Non-Functional Testing	25/11/2022	09/12/2022

Table 51. Test Milestones

4. Test Cases

- **Unit Test Cases:** [Report 5 Unit Test Case.xls](#)
- **Other Test Cases:** [Report 5 Test Case.xlsx](#)

5. Test Reports

5.1 Report Test Case

TEST STATISTICS

Project Name	<i>Artist Show Ticket Selling Platform</i>	Creator		
Project Code	<i>UltraTix</i>	Reviewer/Approvers		
Document Code	<i>UltraTix_Test Report_1.0</i>	Issue Date		<i>12/9/2022</i>
Notes	<i>N/A</i>			

No	Module code	Passed	Failed	Pending	N/A	Number of test cases
1	Guest	8	0	0	0	8
2	Member	18	0	0	0	18
3	Admin	13	0	0	0	13
4	Customer	40	0	0	0	40
5	Artist	8	0	0	0	8
6	Organizer	10	0	0	0	20
7	Staff	0	0	0	0	0
Sub total		39	0	0	0	39

Test coverage **100.00 %**
 Test successful coverage **100.00 %**

5.2 Report Unit Test

UNIT TEST REPORT

Project Name	<i><Project Name></i>	Creator	
Project Code	<i><Project Code></i>	Reviewer/Approvers	
Document Code	<i><Project Code> Test Report vx.x</i>	Issue Date	<i><Date when this test report is created></i>
Notes	<i><List modules included in this release> ex: Release 1 includes 2 modules: Module1 and Module2</i>		

No	Function code	Passed	Failed	Untested	N	A	B	Total Test Cases
1	Function1	12	2	1	11	3	1	15
2	Function2	12	3	0	12	2	1	15
3	Function3	12	2	1	12	2	1	15
Sub total		36	7	2	35	7	3	45

Test coverage **95,56 %**
 Test successful coverage **80,00 %**
 Normal case **77,78 %**
 Abnormal case **15,56 %**
 Boundary case **6,67 %**

VI. Release Package & User Guides

1. Deliverable Package

No.	Deliverable Item	Description
1	Project Backlog	Backblog
2	Source Codes	UltraTixSourceCode.zip
3	Database Script(s)	UltratixDB.sql
4	Final Report Document	UltraTix-Final-Report_Full
5	Test Cases Document	Report5_Test-Report.xlsx
8	Slide	Artist-Show-Ticket-Selling-Platform.pdf

2. Installation Guides

2.1 System Requirements

2.1.1 Hardware Requirements

2.1.1.1 Web Application

No.	Part/Component	Recommended
1	Memory	4GB of RAM or higher
2	Internet	The application required the internet to be used
3	Browser	Chrome (version 87 or higher), IE (version 11 or higher), or any browser that supports HTML5 and CSS3

Table 52. Web Application

2.1.1.2 Mobile Application

Operation System	Android 6 or higher
Memory	1GB of RAM or higher
Internet	The application required the internet to be used

Table 53. Mobile Application

2.1.2 Software Requirement

No.	Software	Recommended
1	Browser	Support Chrome
2	Connection	Wifi or 4G

Table 54. Software Requirement

2.2 Installation Instruction

Download hosting bundle .NET 6.0

Link download: <https://dotnet.microsoft.com/en-us/download/dotnet/6.0>

Download and install Visual Studio 17.1.3

Link download: <https://visualstudio.microsoft.com>

Download and install Microsoft SQL Server 2019

Link download: <https://www.microsoft.com/en-us/sql-server/sql-server-downloads>

3. User Manual

3.1 Overview

Artist Show Ticket Selling Platform is a music ticketing platform. The system to support ticket booking via artist link aims to help customers support the concert of their favorite artist and enjoy a percentage of that artist's discount. In addition, artists are entitled to both ticket sales commissions and give discounts to gratitude to fans.

Major Features:

- Guest:

- + View list of shows
- + Search a show
- + View a show
- + View list of posts

- Member:

- + Login
- + Update profile
- + Logout

- Customer:

- + Buy tickets
- + Checkout ticket order
- + View order history
- + Review the show
- + View list of artist posts
- + Interact with artist posts
- + Feedback the web

- Artist:

- + Manage artist's posts
- + Manage attendance shows
- + View transaction history

- Organizer:

- + Manage organizer's shows
- + Manage staff accounts
- + View transaction history

- Staff:

- + Manage created show

- Admin:

- + Manage accounts
- + Manage posts
- + Manage shows
- + Transfer revenue show and commission money
- + View transaction history

3.2 Member

3.2.1 Login - Web

The screenshot shows the homepage of the Amazing Show website. At the top, there is a navigation bar with links: TRANG CHỦ, SỰ KIỆN, DANH MỤC, BÀI VIẾT, and LIÊN HỆ. On the far right of the navigation bar is a red-bordered button labeled "Đăng nhập". Below the navigation bar, there is a large banner featuring a woman's portrait and text for an event: "PHẠM QUỲNH ANH" and "17:00 | 25-12 AMAZING Show". To the right of the banner are logos for "AMAZING SHOW", "AMAZING COFFEE", and "AMAZING LIMOUSINE". The main content area has a heading "ĐĂNG NHẬP" and four numbered steps: 1. Email hoặc Tên đăng nhập (with input field containing "trinhtuong98@gmail.com"), 2. Mật khẩu (with input field containing "*****"), 3. A checkbox for "Ghi nhớ đăng nhập" and a link "Quên mật khẩu?", and 4. A red-bordered "Đăng nhập" button. Below the login form is a link "Bạn chưa có tài khoản? Đăng ký".

Figure 51.Login - Web

Step	Description
1	Click “Đăng nhập” to login account
2	Fill in account information
3	Fill in password information
4	Confirm to login

Table 55. Step Login-Web

3.2.2 Login - Mobile



Figure 52. Login - Mobile

Step	Description
1	Fill in account information
2	Fill in password information
3	Click “Đăng nhập” to confirm to login

Table 56. Step Login - Mobile

3.2.3 Logout - Web



Figure 53. Logout - Web

Step	Description
1	Click on the account name
2	Click “Đăng xuất” to confirm to logout

Table 57.Step Logout - Web

3.2.4 Logout - Mobile

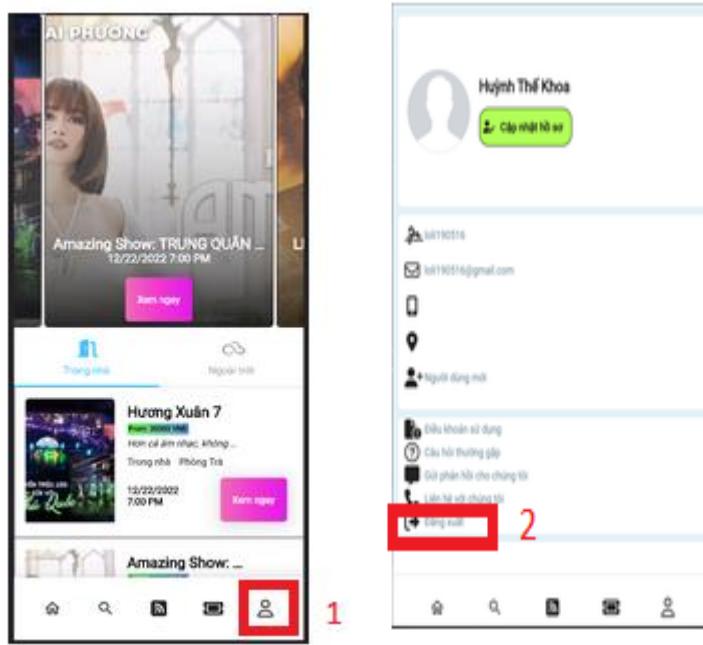


Figure 54.Logout - Mobile

Step	Description
1	Click on the account name
2	Click “Đăng xuất” to confirm to logout

Table 58. Step Logout - Mobile

3.3 Guest

3.3.1 Search show - Web

Figure 55. Search show - Web

Step	Description
1	Click “Sự kiện” tab on the top menu
2	Select filter to search a show

Table 59 Step Search show - Web

3.3.2 View a show - Mobile

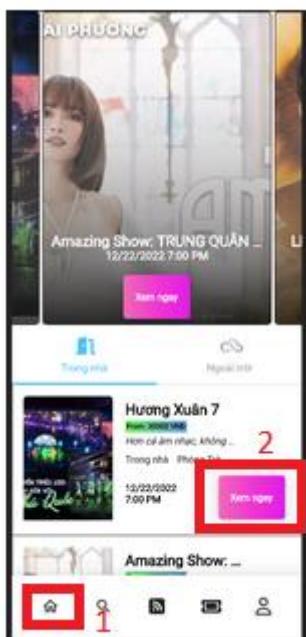


Figure 56.View a show - Mobile

Step	Description
1	Click icon home tab on the top menu
2	Click “Xem ngay” to view a show

Table 60.Step View a show - Mobile

3.3.3 View a show - Web



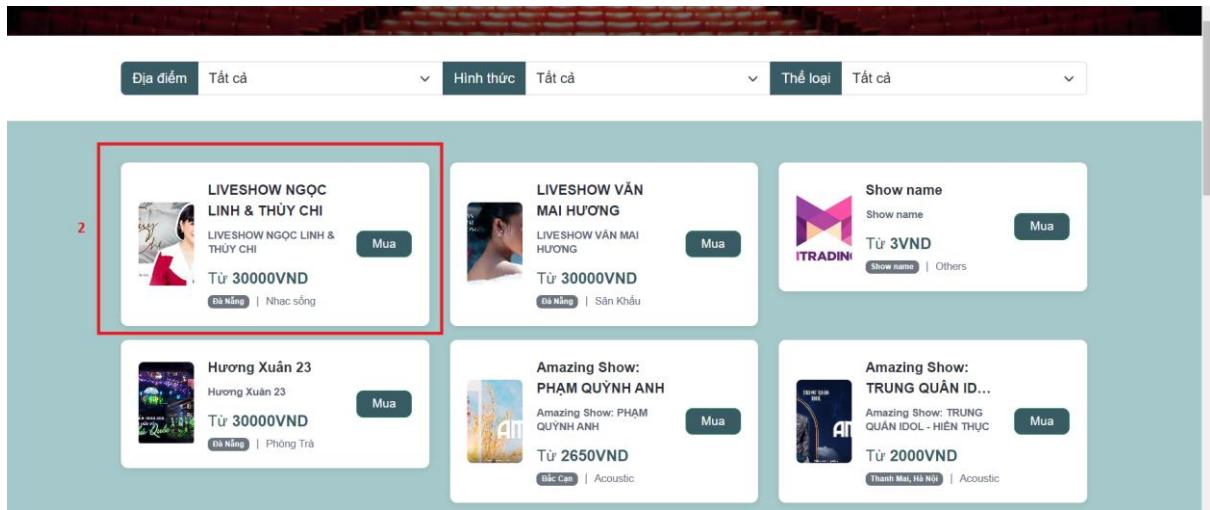


Figure 57. View a show – Web

Step	Description
1	Click “Sự kiện” tab on the top menu
2	Choose a show any to view

Table 61. Step View a show - Web

3.4 Customer

3.4.1 Interact a post - Web

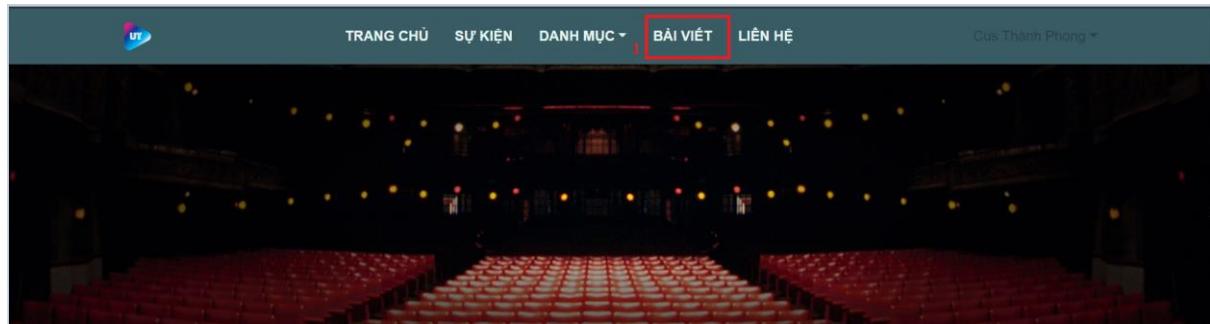


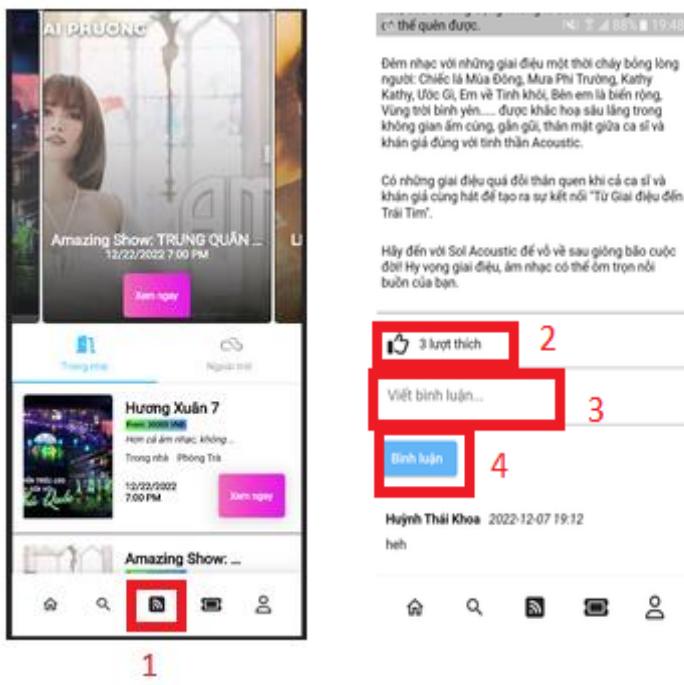
Figure 58. Interact a post - Web

Step	Description
1	Click “Bài Viết” tab on the top menu
2	Fill in comment information
3	Click “Post” to post comment

Table 62. Step Interact a post - Web

3.4.2 Interact a post - Mobile

Figure 59. Interact a post - Mobile

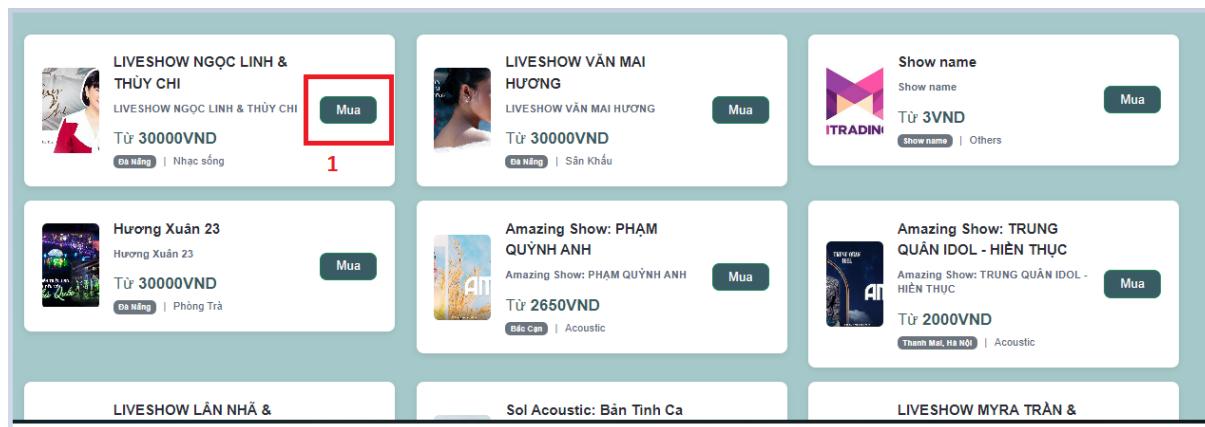


1

Step	Description
1	Click “Bài Viết” tab on the top menu
2	Click like
3	Fill in comment information
4	Click “Post” to post comment

Table 63. Step Interact a post - Mobile

3.4.2 Buy ticket normal - Web



LIVESHOW NGỌC LINH & THÙY CHI

Dà Nẵng | Nhạc sống

Hơn cả âm nhạc, không gian lãng mạn đậm chất thơ Đà Lạt bao trọn hình ảnh thung lũng Đà Lạt, được ngắm nhìn khoáng khắc hoàng hôn thơ mộng đến khi Đà Lạt về đêm siêu lãng mạn, được giao lưu với thần tượng một cách chân thật và gần gũi nhất trong không gian ấm áp và không khí se lạnh của Đà Lạt.

G THÀNH ĐÀ NẴNG
Xóm 3, Thanh Phước, Lai Chau, Đà Nẵng

Vui lòng chọn loại vé:

Mua vé **2**

3

Khuyến mãi đợt bán vé (5%)

Tên sự kiện	Loại vé	Giá vé	Số lượng	Tạm tính
LIVESHOW NGỌC LINH & THÙY CHI	Thường	30000 VND	- 2 +	28500 VND

4

Thông tin người nhận vé

Họ tên: Cus Thành Phong
Email: customer01@gmail.com
Điện thoại: 0866058578

5

Hình thức thanh toán

Thanh toán qua MoMo

6

Thông tin đặt vé

Khuyến mãi đợt bán vé (5%)

Loại vé	Số lượng
LIVESHOW NGỌC LINH & THÙY CHI (Thường)	2
30000 VND	28500 VND

7

Thanh toán

8

Thông tin đơn hàng

Nhà cung cấp: UltraTix

Mã đơn hàng: 5c893069-a16f-4b9a-b282-24301aea8026

Mô tả: test

Số tiền: 28.500đ

Quay vé

Quét mã QR để thanh toán

Sử dụng App MoMo hoặc ứng dụng camera hỗ trợ QR code để quét mã

Đơn hàng sẽ hết hạn sau: 09:57

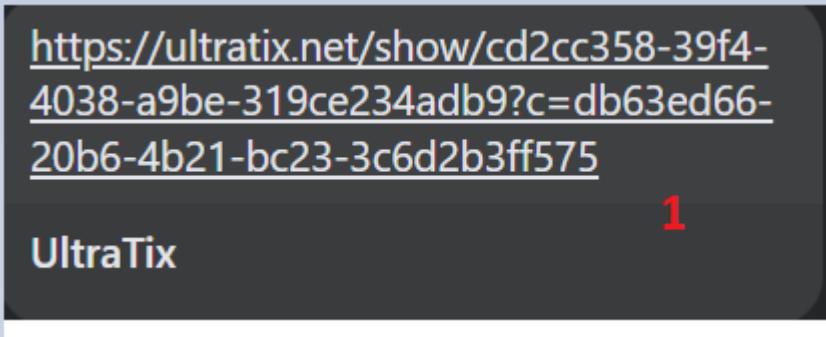
Gặp khó khăn khi thanh toán? Xem Hướng dẫn

Figure 60.Buy ticket normal - Web

Step	Description
1	Click “Mua” button on a show
2	Select ticket type
3	Click “Mua vé” button
4	Select the number of tickets
5	Confirm ticket receiver information
6	Confirm the form of payment
7	Confirm ticket number information
8	Scan the QR code to pay the order

Table 64. Step Buy ticket normal - Web

3.4.3 Buy ticket via artist's link - Web



<https://ultratix.net/show/cd2cc358-39f4-4038-a9be-319ce234adb9?c=db63ed66-20b6-4b21-bc23-3c6d2b3ff575>

1

UltraTix

Khuyến mãi đợt bán vé (10%)

Tên sự kiện	Loại vé	Giá vé	Số lượng	Tạm tính
Hương Xuân 23	Thương gia (-10%)	50000 VND	<input type="button" value="-"/> <input type="button" value="1"/> <input type="button" value="+"/>	38475 VND

Bạn đang mua vé thông qua Art Đàm Vĩnh Hưng được giảm (5%)

Hướng dẫn thanh toán bằng hình thức 'Quét Mã'

Tại những cửa hàng thanh toán MoMo bằng hình thức Quét Mã, thu ngân sẽ cung cấp 1 mã QR khi người dùng yêu cầu thanh toán MoMo. Bạn chỉ cần quét mã và nhập số tiền thanh toán để hoàn tất.

HƯỚNG DẪN THANH TOÁN BẰNG QUÉT MÃ

- Mở Ví MoMo, chọn "Quét Mã"
- Quét mã QR
- Nhập số tiền cần thanh toán
- Kiểm tra & Bấm "Xác nhận"

Tim điểm chấp nhận thanh toán Ví MoMo

Thông tin người nhận vé

5 Cus Thành Phong
customer01@gmail.com
0866058578

Hình thức thanh toán

6 Thanh toán qua MoMo

mo
mobile money

Thông tin đặt vé

7 Khuyến mãi đợt bán vé (10%)

Bạn đang mua vé thông qua Art Đàm Vĩnh Hưng được giảm (5%)

Loại vé	Số lượng
Hương Xuân 23 (Thương gia) 50000 VND (-10%)	1 38475 VND

Thanh toán

8

Thông tin đơn hàng

Nhà cung cấp
UltraTix

Mã đơn hàng
984c1d13-790e-446e-8803-8c506ad122b0

Mô tả
test

Số tiền
38.475đ

Quay về

Quét mã QR để thanh toán

9 Sử dụng App MoMo hoặc ứng dụng camera hỗ trợ QR code để quét mã

Đơn hàng sẽ hết hạn sau: 09:54

Gặp khó khăn khi thanh toán? [Xem Hướng dẫn](#)

Đơn hàng sẽ hết hạn sau: 09:54

Figure 61.Buy ticket via artist's link - Web

Step	Description
1	Access the artist's link
2	Click “Mua” button on a show

3	Select ticket type
4	Click “Mua vé” button
5	Select the number of tickets
6	Confirm ticket receiver information
7	Confirm the form of payment
8	Confirm ticket number information
9	Scan the QR code to pay the order

Table 65. Step Buy ticket via artist's link - Web

3.4.4 Buy ticket normal - Mobile

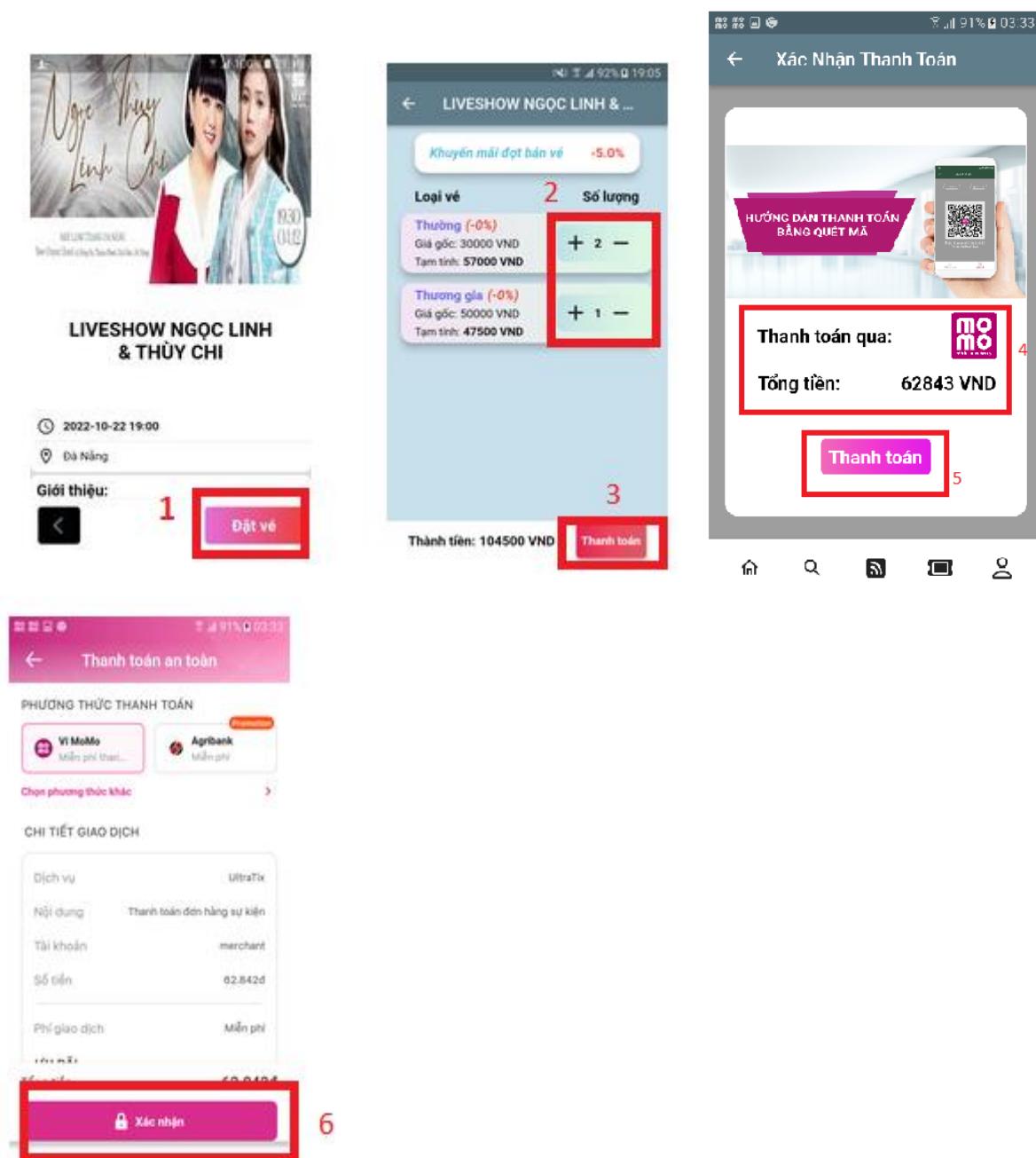


Figure 62.Buy ticket normal - Mobile

Step	Description
1	Click ‘Đặt vé’ button on a show
2	Select the number of tickets
3	Click ‘Thanh toán’ button

4	Confirm ticket number information
5	Confirm payment
6	Scan the QR code to pay the order

Table 66.Step Buy ticket normal - Mobile

3.4.3 Buy ticket via artist's link - Mobile

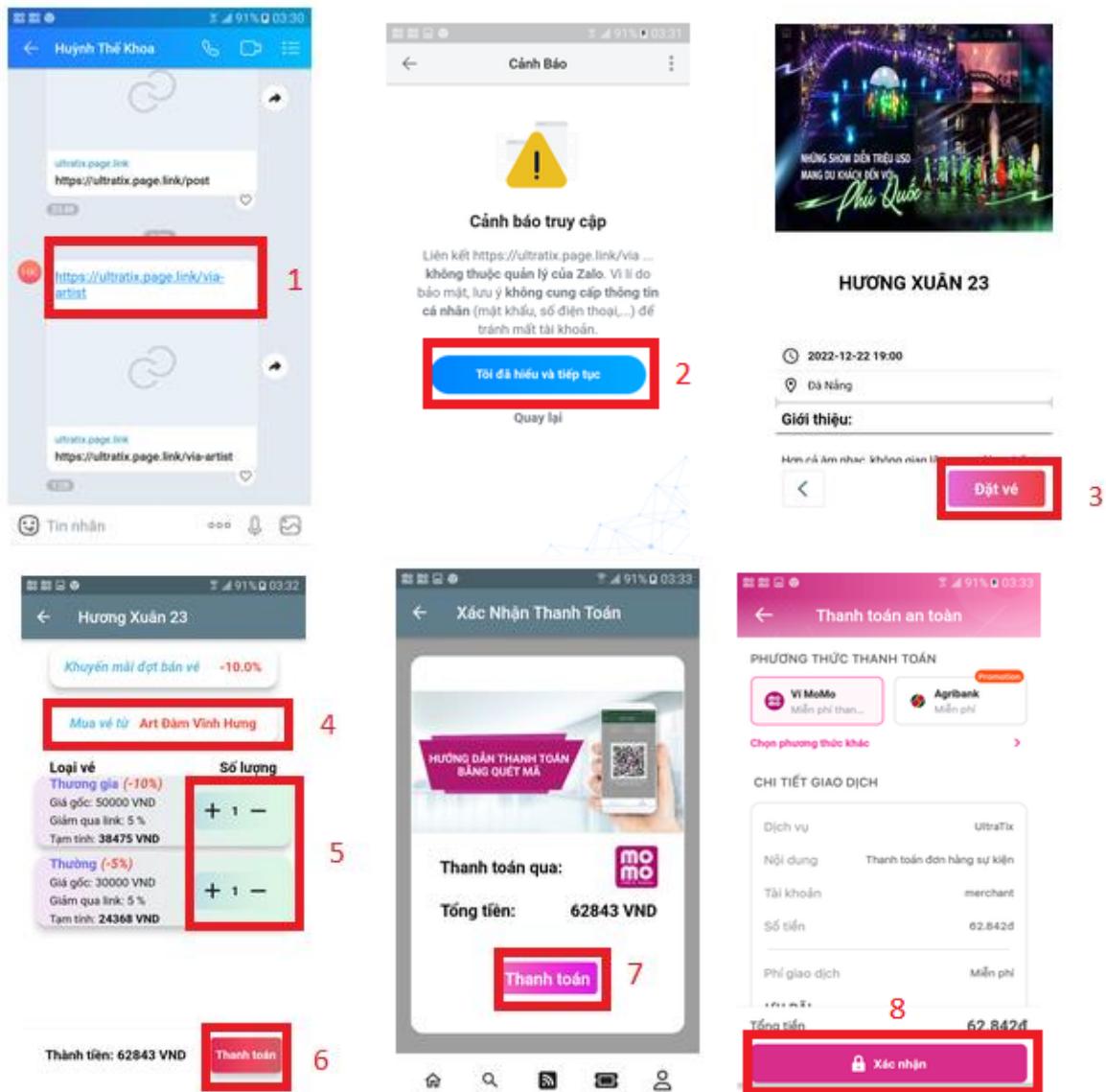


Figure 63.Buy ticket via artist's link - Mobile

Step	Description
1	Access the artist's link
2	Click “Tôi hiểu và muốn tiếp tục”

3	Click “Đặt vé” button on a show
4	Confirm discount of artist
5	Select the number of tickets
6	Click “Đặt vé” button
7	Confirm payment
8	Scan the QR code to pay the order and click “Xác nhận” to pay the order

Table 67. Step Buy ticket via artist's link - Mobile

3.4.4 View order history - Web

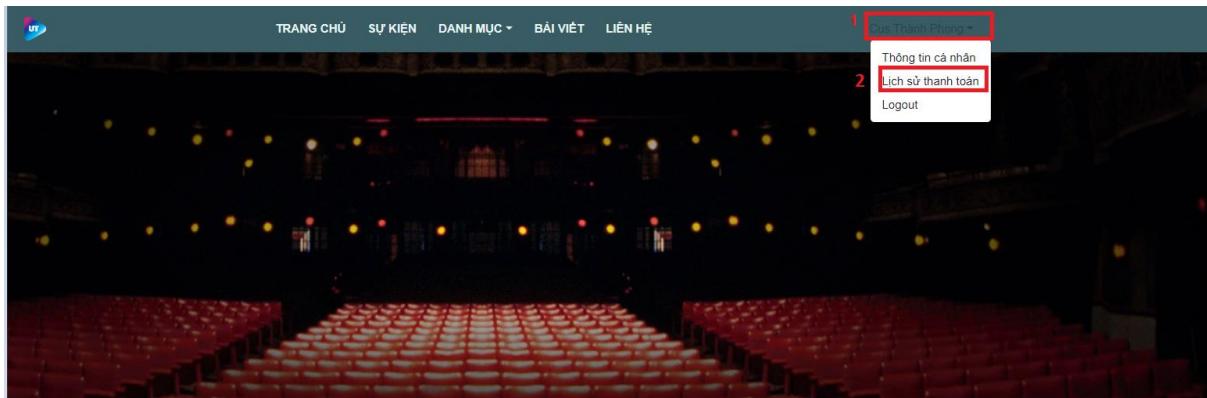


Figure 64. View order history - Web

Step	Description
1	Click on the account name
2	Click “Lịch sử thanh toán” to confirm to logout

Table 68. Step View order history - Web

3.4.5 View order history - Mobile

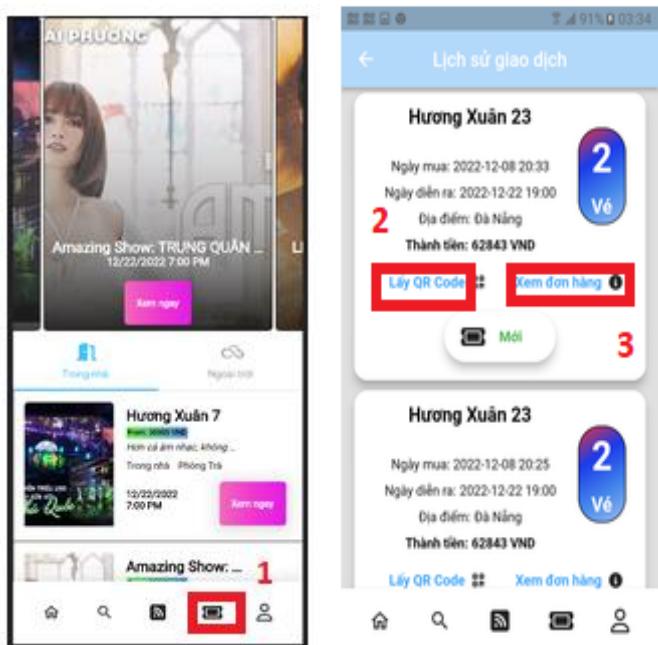


Figure 65. View order history - Mobile

Step	Description
1	Click on icon ticket on the bottom menu
2	Click “Lấy QR code” button to give QR code
3	Click “Xem đơn hàng” to view the detail order

Table 69. Step View order history - Mobile

3.4.6 Review the show - Web

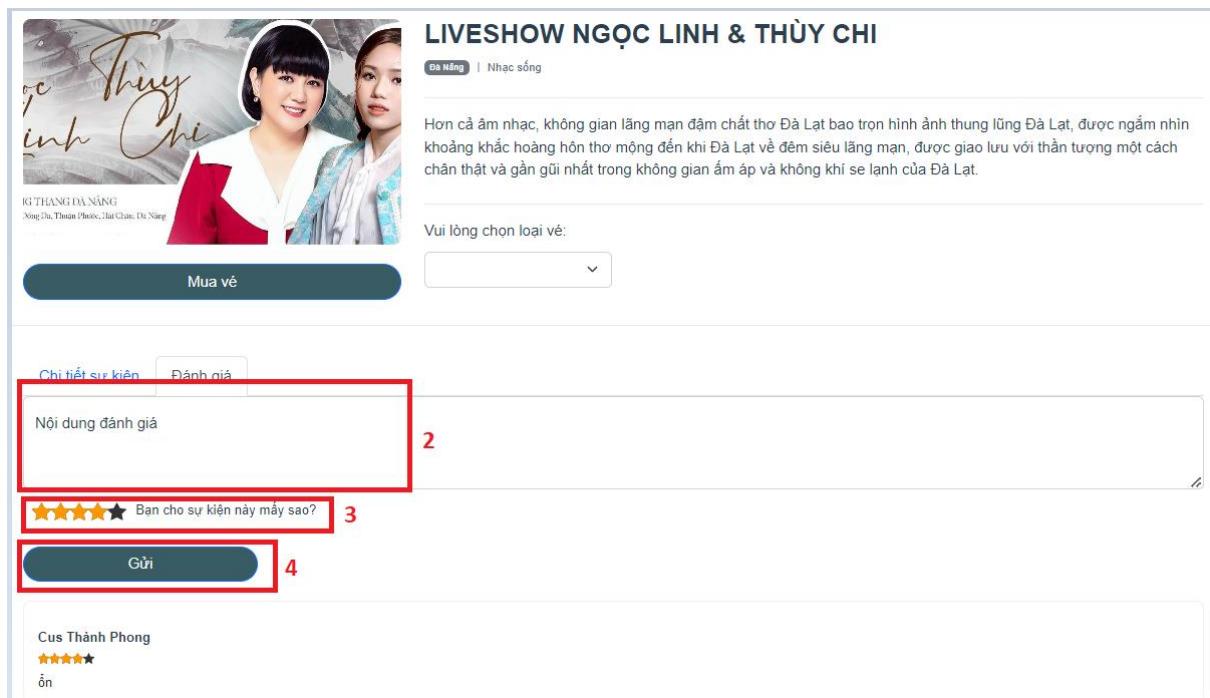


Figure 66. Review the show - Web

Step	Description
1	Click “Đánh giá” on the show detail page
2	Fill in the comment information
3	Select the rating
4	Click “Gửi” to post review show

Table 70. Review the show - Web

3.4.7 Review the show - Mobile

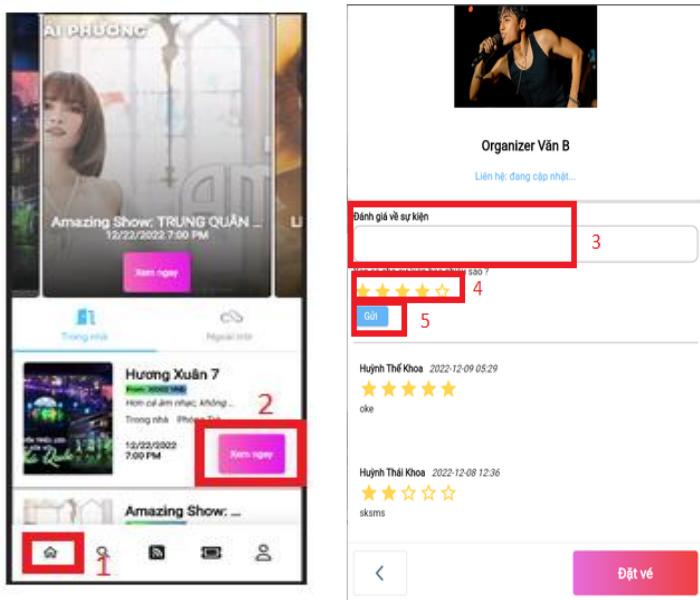


Figure 67. Review the show - Mobile

Step	Description
1	Click icon home tab on the top menu
2	Click “Xem ngay” to view a show
3	Fill in the comment information
4	Select the rating
5	Click “Gửi” to post review show

Table 71. Step Review the show - Mobile

3.4.8 Feedback the web



LIÊN HỆ VỚI CHÚNG TÔI

App Error

Email

Số điện thoại

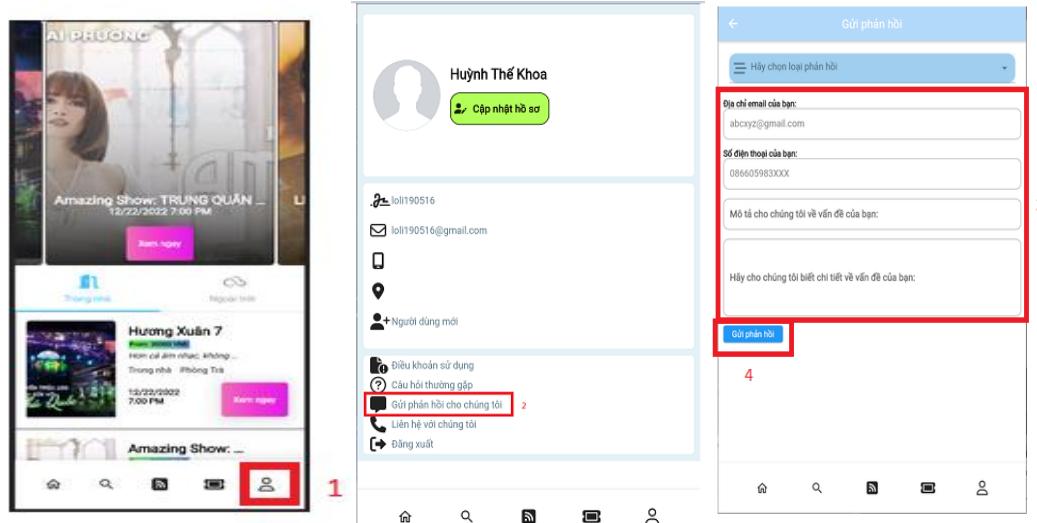
Tóm tắt đóng góp

Nội dung

Gửi

Step	Description
1	Click “Liên hệ” tab in the top menu
2	Fill in the information
3	Click “Gửi” button to send feedback the web

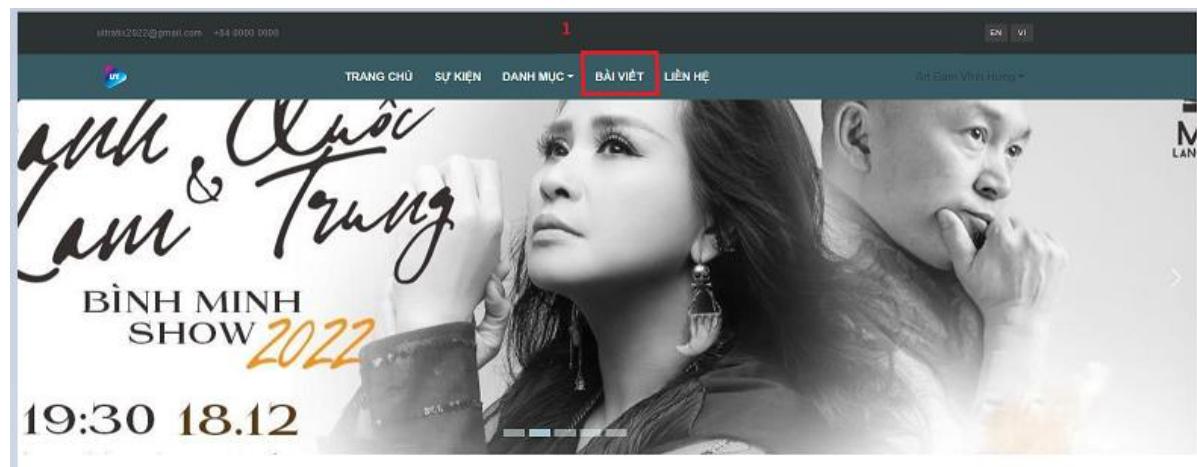
3.4.9 Feedback the app

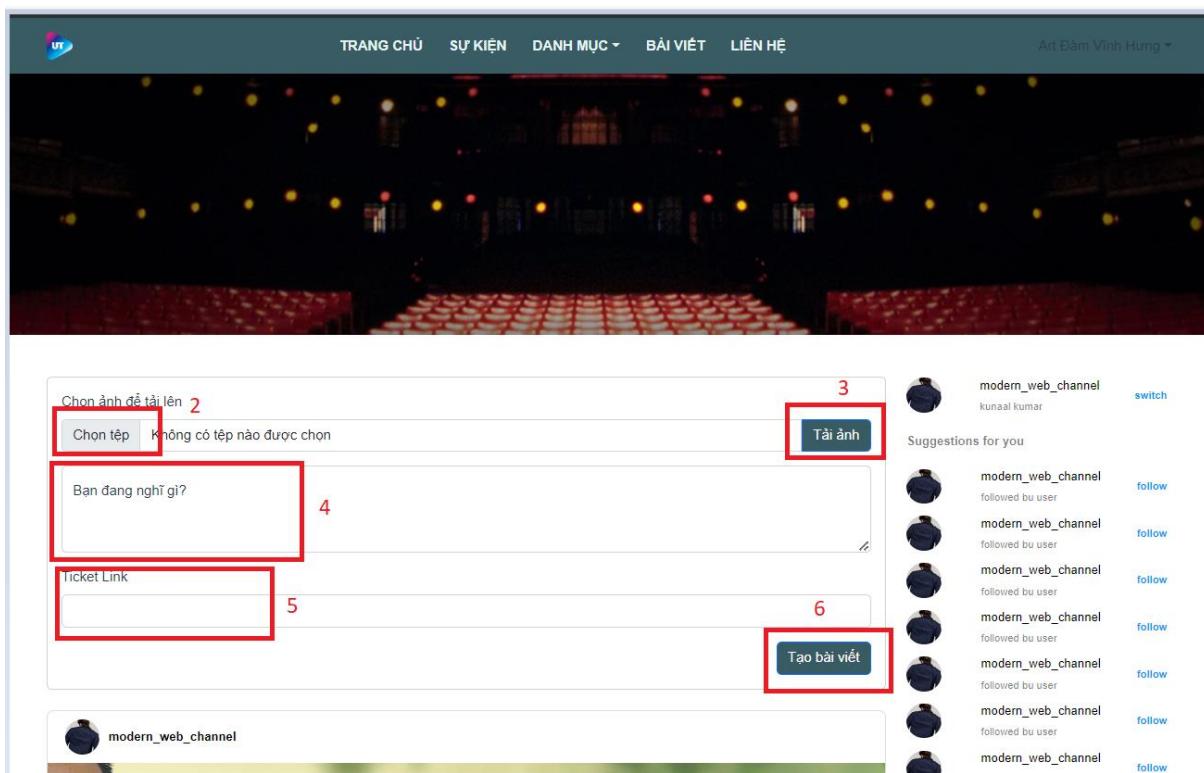


Step	Description
1	Click icon account tab in the top menu
2	Click “Gửi phản hồi cho chúng tôi” button
2	Fill in the information
3	Click “Gửi phản hồi” button to send feedback the web

3.5 Artist

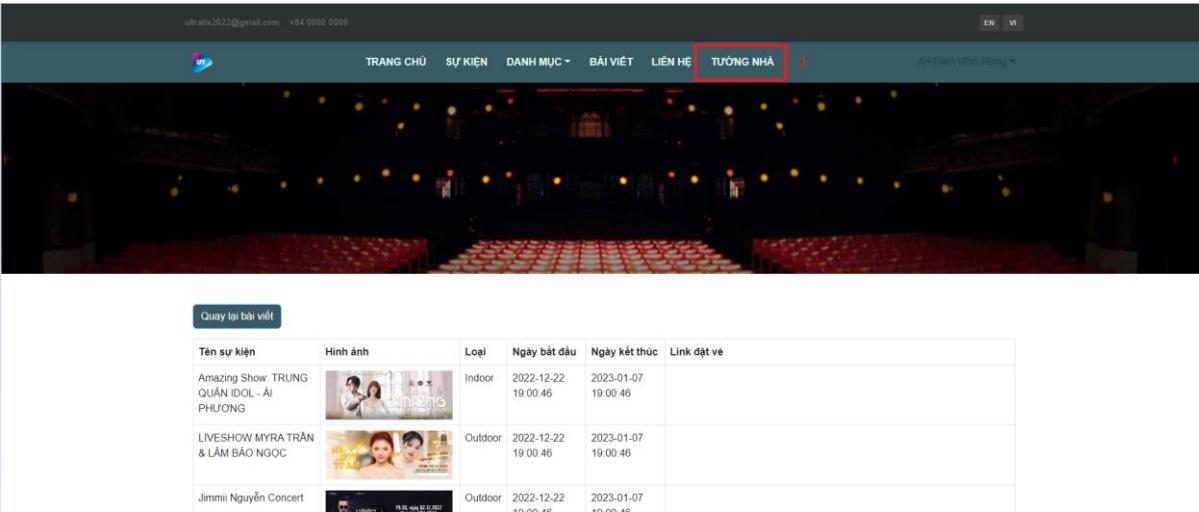
3.5.1 Create a post - Web





Step	Description
1	Click “Sự kiện” tab in the top menu
2	Click “Chọn tệp” to choose image
3	Click “Tải ảnh” to upload image
4	Fill in the information
5	Fill the artist's link
6	Click “Tạo bài viết” button to post the post

3.5.2 Get ticket link - Web



Tên sự kiện	Hình ảnh	Loại	Ngày bắt đầu	Ngày kết thúc	Link đặt vé
Amazing Show: TRUNG QUÂN IDOL - Ái PHƯƠNG		Indoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
LIVESHOW MYRA TRẦN & LÂM BÁO NGỌC		Outdoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
Jimmii Nguyễn Concert		Outdoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
Amazing Show: TRUNG QUÂN IDOL - Ái PHƯƠNG		Indoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
LIVESHOW MYRA TRẦN & LÂM BÁO NGỌC		Outdoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
Jimmii Nguyễn Concert		Outdoor	2022-12-22 19:00:46	2023-01-07 19:00:46	
Sol Acoustic: Bức Thư Tình Đầu Tiên		Indoor	2022-10-04 16:32:06	2022-10-04 16:32:06	
LIVESHOW BĂNG KIỀU		Outdoor	2022-11-20 16:01:47	2022-11-20 16:01:47	
[TC Multimedia] Music Show "Tay trái chỉ trắng"		Outdoor	2022-10-22 19:00:46	2022-10-22 19:00:46	
LIVESHOW KAI ĐỊNH		Outdoor	2022-10-22 19:00:46	2022-10-22 19:00:46	
Hương Xuân 23		Indoor	2022-12-22 19:00:46	2023-01-07 19:00:46	https://ultralix.net/show/cd2cc358-39f4-4038-a9be-319ce234adb9?c=db63ed66-20b6-4b21-bc23-3c6d2b3ff575
Sol Acoustic: Cùng Hòa Ca		Indoor	2022-10-04 16:32:06	2022-10-04 16:32:06	

Step	Description
1	Click “Tường nhà” tab in the top menu
2	Copy link

2

3.6 Staff - Create a show - Web

1

2

Show Name	Image	Show Type Name	Start Date	End Date
Mây ngày hè		Outdoor	2022-12-07T00:00:00	2022-12-31T00:00:00
Đêm mưa		Indoor	2022-12-06T00:00:00	2022-12-24T00:00:00
Mây gió Đà Lạt		Outdoor	2022-12-05T07:21:35.557	2022-12-05T07:21:35.557

3

4

Sale Stages:

5

6

Campaign:

7

8

Step	Description
1	Click “Show” on the navigation pane
2	Click “Thêm mới” to create a show
3	Fill in all valid information

4	Click “Submit” button to redirect to the next page
5	Fill in all valid information
6	Click “Submit” button to redirect to the next page
7	Fill in all valid information
8	Click “Submit” button to create a new show

3.7 Organizer

3.7.1 Approve show - Web

The screenshots illustrate the 'Approve show' process in the Organizer application:

- Screenshot 1:** Shows the main interface for managing show requests. The 'Show Request' tab is selected (1). A list of shows is displayed, with the first show, 'Mây lang thang', having its 'Approve Show' button highlighted (2).
- Screenshot 2:** Shows a detailed view of the 'Approve Show' dialog for the 'Mây lang thang' show. The 'Description' field is filled with 'App' (3), and the 'OK' button is highlighted (4).

Step	Description
1	Click “Show Request” on the navigation pane
2	Click “Chọn tệp” to choose image
3	Fill in the description information
4	Click “OK” button to approve a show

3.7.2 Create the staff's account - Web

The screenshots illustrate the process of creating a new staff account. The top screenshot shows the current list of staff members with their details. The bottom screenshot shows the form for adding a new staff member, with various fields and a dropdown for selecting the role.

Step	Description
1	Click “Show Request” on the navigation pane
2	Click “Thêm mới” button
3	Fill in the information
4	Select the role
5	Check “Is Active”
6	Click “Submit” button to create the staff's account