



COMSATS University, Islamabad Pakistan

Webinar Prime

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Bachelor of Science in Computer Science (2019-2023)

The candidate confirms that the work submitted is their own and appropriate credit has been given where reference has been made to the work of others.



COMSATS University, Islamabad Pakistan

Webinar Prime

**A project presented to
COMSATS University, Islamabad**

**In partial fulfillment
of the requirement for the degree of**

Bachelor of Science in Computer Science (2019-2023)

By

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Muhammad Umair

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Certificate of Approval

It is to certify that the final year project of BS (CS) Webinar Prime was developed by **Muhammad Umair (CIIT/FA19-BCS-057)** and **Waleed Ahmed (CIIT/FA19-BCS-086)** under the supervision of Mr. Qasim Malik and that in his opinion; it is fully adequate, in scope and quality for the degree of Bachelor of Science in Computer Science.

Executive Summary

Webinar Prime is a solution to the problems faced by organizers who want to host, manage, and market a webinar in a hassle-free manner. In this era of technology, people have become more familiar with webinars, and organizations are shifting towards technological solutions for events. However, current solutions for hosting webinars are either costly or offer limited free features, leading to a lack of good solutions for managing and analyzing events. Webinar Prime offers a simple and free solution to this problem by providing essential services for hosting a successful webinar. This web and mobile-based application provides a platform for organizing, advertising, marketing, and hosting virtual events. Users can sign up for free and easily avail all the necessary services for hosting, managing, and advertising an event. The app also offers live streaming services for hosting webinar sessions, and users can mark their favorite events and receive reminders to ensure they never miss an event of interest. Webinar Prime is a convenient solution for organizations, individuals, and companies alike.

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Muhammad Umair

Waleed Ahmed

Abbreviations

HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
WS	Web Socket
WSS	Web Socket Secure
SDK	Software Development Kit
JSON	JavaScript Object Notation
MVC	Model View Controller
AD	Activity Diagram
SD	Sequence Diagram
UI	User Interface
UX	User Experience
SI	Software Interface
CI	Communication Interface
UT	Unit Testing
FT	Functional Testing
IT	Integration Testing
BRT	Business Rules Testing

Table of Contents

1	Introduction.....	1
1.1	Vision Statement.....	1
1.2	Related System Analysis/Literature Review.....	1
1.3	Project Deliverables	2
1.4	System Limitations/Constraints	2
1.5	Tools and Technologies	2
1.6	Relevance to Course Modules.....	3
2	Problem Definition.....	4
2.1	Problem Statement.....	4
2.2	Problem Solution	4
2.3	Objectives of the Proposed System.....	5
2.4	Scope.....	5
2.5	Modules.....	6
2.5.1	Module 1: Account management	6
2.5.2	Module 2: Webinar Management.....	6
2.5.3	Module 3: Live Webinar Streaming.....	6
2.5.4	Module 4: Automated Email and Social Media Marketing	7
2.5.5	Module 5: Graphic Kit	7
2.5.6	Module 6: User Operations	7
2.5.7	Module 7: Chat.....	8
2.5.8	Module 8: Webinar History and Analysis.....	8
2.5.9	Module 9: AI Recommendation, Search and Filters	8
2.5.10	Module 10: Admin Panel	8
2.5.11	Module 11: AI Chatbot for Assistance.....	9
2.5.12	Module 12: Payments.....	9
3	Requirement Analysis	10
3.1	User classes and characteristics	10
3.2	Requirement Identifying Technique	10
3.2.1	Use Case Diagrams	10
3.2.2	Use Case Details	16
3.3	Functional Requirements	54
3.3.1	Functional Requirements of UC-1: Register.....	54
3.3.2	Functional Requirements of UC-2: Sign In.....	55
3.3.3	Functional Requirements of UC-3: Sign Out.....	55
3.3.4	Functional Requirements of UC-4: Turn On/Off Notification.....	56
3.3.5	Functional Requirements of UC-5: Forget Password.....	56
3.3.6	Functional Requirements of UC-6: Change Password.....	56
3.3.7	Functional Requirements of UC-7: Keep Signed In	57
3.3.8	Functional Requirements of UC-8: Delete Account	57
3.3.9	Functional Requirements of UC-9: Edit Account Details.....	58
3.3.10	Functional Requirements of UC-10: Create New Webinar.....	59
3.3.11	Functional Requirements of UC-11: View Webinar	59
3.3.12	Functional Requirements of UC-12: Edit Webinar	61
3.3.13	Functional Requirements of UC-13: Add/Remove Organizer/Guest.....	62
3.3.14	Functional Requirements of UC-14: Add/Remove Users.....	63

3.3.15	Functional Requirements of UC-15: Post Notifications.....	65
3.3.16	Functional Requirements of UC-16: Start Webinar Streaming.....	65
3.3.17	Functional Requirements of UC-17: Turn On/Off Camera.....	65
3.3.18	Functional Requirements of UC-18: Mute/Unmute Audio	67
3.3.19	Functional Requirements of UC-19: Switch Focus Between Speakers	68
3.3.20	Functional Requirements of UC-20: Screen Share	68
3.3.21	Functional Requirements of UC-21: Streaming Room Chat.....	69
3.3.22	Functional Requirements of UC-22: Ask a Question.....	70
3.3.23	Functional Requirements of UC-23: Kick User	71
3.3.24	Functional Requirements of UC-24: End Streaming	72
3.3.25	Functional Requirements of UC-25: Write Post	72
3.3.26	Functional Requirements of UC-26: Attach Banner	73
3.3.27	Functional Requirements of UC-27: Attach Link	73
3.3.28	Functional Requirements of UC-28: Choose Target Audience.....	74
3.3.29	Functional Requirements of UC-29: Email Marketing	75
3.3.30	Functional Requirements of UC-30: Social Media Marketing.....	75
3.3.31	Functional Requirements of UC-31: Search Banner Template.....	76
3.3.32	Functional Requirements of UC-32: Select Banner Template	76
3.3.33	Functional Requirements of UC-33: Add Images in Banner Template	77
3.3.34	Functional Requirements of UC-34: Input Details for Banner	77
3.3.35	Functional Requirements of UC-35: Generate Webinar Logo.....	78
3.3.36	Functional Requirements of UC-36: Generate Banner	79
3.3.37	Functional Requirements of UC-37: Save Banner	79
3.3.38	Functional Requirements of UC-38: View Webinars	80
3.3.39	Functional Requirements of UC-39: View Webinars Attendee List.....	80
3.3.40	Functional Requirements of UC-40: Save Webinar to Favorites	81
3.3.41	Functional Requirements of UC-41: Register for Webinar.....	82
3.3.42	Functional Requirements of UC-42: Join/Leave Webinar Session.....	82
3.3.43	Functional Requirements of UC-43: Follow Organizer	83
3.3.44	Functional Requirements of UC-44: View Organizer's Profile.....	84
3.3.45	Functional Requirements of UC-45: Chat with Others	85
3.3.46	Functional Requirements of UC-46: Rate Webinar	85
3.3.47	Functional Requirements of UC-47: Write Message	86
3.3.48	Functional Requirements of UC-48: Attach Files	87
3.3.49	Functional Requirements of UC-49: Mute/Unmute Chat Notifications.....	87
3.3.50	Functional Requirements of UC-50: Block User	89
3.3.51	Functional Requirements of UC-51: Search Conversation	89
3.3.52	Functional Requirements of UC-52: View Conversation	90
3.3.53	Functional Requirements of UC-53: Report User	91
3.3.54	Functional Requirements of UC-54: View Past Organized Webinar.....	92
3.3.55	Functional Requirements of UC-55: View Attendees of Past Organized Webinar	93
3.3.56	Functional Requirements of UC-56: View Revenue / Tickets Sold of Webinars	93
3.3.57	Functional Requirements of UC-57: View Revenue / Tickets Sold of One Webinar	94
3.3.58	Functional Requirements of UC-58: View Graphs	95
3.3.59	Functional Requirements of UC-59: View Recommended Webinars	96
3.3.60	Functional Requirements of UC-60: Search Webinars by Name.....	97
3.3.61	Functional Requirements of UC-61: Sort Searched Webinars by Rating	98
3.3.62	Functional Requirements of UC-62: Sort Searched Webinars by Date	99
3.3.63	Functional Requirements of UC-63: Sort Webinars by Price	100
3.3.64	Functional Requirements of UC-64: More filters	101
3.3.65	Functional Requirements of UC-65: View Reports	103
3.3.66	Functional Requirements of UC-66: Ban Users.....	103
3.3.67	Functional Requirements of UC-67: View Banned Users	104

3.3.68	Functional Requirements of UC-68: Remove Ban.....	105
3.3.69	Functional Requirements of UC-69: Delete Webinars.....	105
3.3.70	Functional Requirements of UC-70: Approve Users	106
3.3.71	Functional Requirements of UC-71: Approve Webinars	107
3.3.72	Functional Requirements of UC-72: Broadcast Message	107
3.3.73	Functional Requirements of UC-73: Write Message to Chatbot.....	109
3.3.74	Functional Requirements of UC-74: View Chatbot Responses	109
3.3.75	Functional Requirements of UC-75: Open Links.....	109
3.3.76	Functional Requirements of UC-76: Payment with Stripe.....	110
3.3.77	Functional Requirements of UC-77 Input Credit/Debit Card Details	111
3.3.78	Functional Requirements of UC-78: Save Card Details	111
3.3.79	Functional Requirements of UC-79: View Invoice.....	111
3.4	Non-Functional Requirements	112
3.4.1	Reliability.....	112
3.4.2	Usability	113
3.4.3	Performance	113
3.4.4	Security	113
3.4.5	Scalability.....	113
3.5	External Interface Requirements.....	113
3.5.1	User Interfaces Requirements	113
3.5.2	Software interfaces.....	114
3.5.3	Hardware interfaces	114
3.5.4	Communications interfaces.....	114
4	Design and Architecture	115
4.1	Architectural Design	115
4.1.1	Box and Line Diagram.....	115
4.1.2	Architecture Diagram.....	116
4.2	Design Models	116
4.2.1	Activity Diagram.....	117
4.2.2	Class Diagram	127
4.2.3	Sequence Diagram	129
4.3	Data Design.....	137
4.3.1	User Schema.....	137
4.3.2	Webinar Schema	138
4.3.3	Reports Schema.....	139
4.3.4	Notification Schema.....	140
4.3.5	Stream Room Schema	141
4.3.6	Category Schema	142
4.3.7	Conversation Schema.....	142
4.3.8	Message Schema	142
4.3.9	Review Schema	143
4.3.10	Webinar Member Schema	143
4.3.11	Payment Schema	144
4.3.12	Data Dictionary	144
4.4	Human Interface Design	148
4.4.1	Screen Images	148
4.4.2	Screen Objects and Actions.....	154
5	Implementation	155
5.1	Algorithm.....	155
5.2	External APIs/SDKs	155

5.3	User Interface.....	156
5.3.1	User Profile Screen	156
5.3.2	Webinar View	157
5.3.3	Home Screen	158
5.3.4	Create Webinar Screen:.....	159
5.3.5	Chat:.....	160
5.3.6	Webinar Streaming:	161
5.4	Deployment.....	162
6	Testing and Evaluation	163
6.1	Unit Testing	163
6.1.1	UT-01: Login as a Normal User with valid and invalid credentials.....	163
6.1.2	UT-02: Using Logout Feature to logout of the Application.....	163
6.1.3	UT-03: Using Signup Feature to sign up for the Application	163
6.1.4	UT-04: Reset Password through Email.....	164
6.1.5	UT-05: Using Create Webinar feature of the Application	165
6.1.6	UT-06: Using Edit Webinar feature of the Application	166
6.1.7	UT-07: Using View Webinar feature of application as normal user.....	168
6.1.8	UT-08: Register for Webinar	168
6.1.9	UT-09: Show Attendees List.....	168
6.1.10	UT-10: View Webinar as an organizer	169
6.1.11	UT-11: Edit Webinar as organizer or creator of webinar.....	169
6.1.12	UT-12: Post Notification.....	169
6.1.13	UT-13: Add Organizer to webinar as Creator	170
6.1.14	UT-14: Add Attendee to Webinar as Organizer or Creator	170
6.1.15	UT-15: Add Guest to Webinar as Organizer or Creator	170
6.1.16	UT-16: Start Webinar Stream as Creator	171
6.1.17	UT-17: End Webinar Stream as Creator	171
6.1.18	UT-18: Join Webinar Stream as Creator	171
6.1.19	UT-19: Join Webinar Stream as Organizer	171
6.1.20	UT-20: Join Webinar Stream as Guest.....	172
6.1.21	UT-21: Join Webinar Stream as Attendee.....	172
6.1.22	UT-22: Streaming Operations for Creator.....	172
6.1.23	UT-23: Streaming Operations for Organizer.....	172
6.1.24	UT-24: Streaming Operations for Attendee	173
6.1.25	UT-25: Streaming Operations for Guests.....	173
6.1.26	UT-26: Chat during Streaming Operations for Organizer.....	173
6.1.27	UT-27: Chat during Streaming Operations for Guests.....	174
6.1.28	UT-28: Chat during Streaming Operations for Attendee	174
6.1.29	UT-29: Ban User from Stream as Creator.....	175
6.1.30	UT-30: Marking Webinar as Favorite	175
6.1.31	UT-31: Invitations Operation for user.....	175
6.1.32	UT-32: Edit Profile	175
6.1.33	UT-33: Change Password.....	176
6.1.34	UT-34: Add New user to chat	176
6.1.35	UT-35: Search for User in current chat list	177
6.1.36	UT-36: Send Message	177
6.1.37	UT-37: Send Image in Chat	177
6.1.38	UT-38: Send File in Chat	177
6.1.39	UT-39: Block User from Chat.....	178
6.1.40	UT-40: Unblock User from Chat	178
6.1.41	UT-41: Leave Webinar Stream	178
6.1.42	UT-42: Rate Webinar	178

6.1.43	UT-43: View Analysis for Webinars created by Organizers.....	179
6.1.44	UT-44: View Payment Receipt	179
6.1.45	UT-45: Banner Image Attachment.....	179
6.1.46	UT-46: Add Target Audience Age.....	180
6.1.47	UT-47: Suggest Webinar events based on user's activities.....	180
6.1.48	UT-48: Search Webinars.....	180
6.1.49	UT-49: Sort by Date, Price or Duration	181
6.1.50	UT-50: Chatbot Responses.....	181
6.1.51	UT-51: Report Webinar	181
6.1.52	UT-52: Report User.....	182
6.1.53	UT-53: Report Chat.....	182
6.1.54	UT-54: Add Text while generating Banner.....	182
6.1.55	UT-55: Test Case for changing text color.....	182
6.1.56	UT-56: Test Case for adding image to Banner.....	183
6.1.57	UT-57: Test Case for changing image width	183
6.1.58	UT-58: Test Case for changing image border radius	183
6.1.59	UT-59: Test Case for changing image height	184
6.1.60	UT-60: Test Case for deleting text from banner	184
6.1.61	UT-61: Test Case for deleting image from Banner	184
6.1.62	UT-62: Test Vase for saving banner to local storage.....	184
6.1.63	UT-63: Test for View Reports from Admin Panel.....	185
6.1.64	UT-64: Test for Banning/Unbanning Users	185
6.1.65	UT-65: Delete Webinars using Admin Panel.....	185
6.1.66	UT-66: Approve Webinars using Admin Panel.....	185
6.1.67	UT-67: Broadcast Message using Admin Panel.....	186
6.1.68	UT-68: View Payment Receipt	186
6.2	Functional Testing	186
6.2.1	FT-01: Login with Different roles.....	186
6.2.2	FT-02: Webinar Management Tasks.....	187
6.2.3	FT-03: Webinar Streaming Tasks	188
6.2.4	FT-04: User Operations Testing.....	189
6.2.5	FT-05: Chat Operations.....	190
6.2.6	FT-06: History and Analysis of Webinars	192
6.2.7	FT-07: Webinar Search and Recommendation	192
6.2.8	FT-08: Functional Test for Graphic Kit	193
6.2.9	FT-09: Marketing Tasks.....	193
6.2.10	FT-10: Admin Panel.....	194
6.3	Business Rules Testing	195
6.3.1	BRT-01: User must be an Organizer to Create a Webinar.....	195
6.3.2	BRT-02: Only Users that have attended the webinar can rate it	195
6.4	Integration Testing	195
6.4.1	IT-01: Webinar Management	195
6.4.2	IT-02: Webinar Streaming	196
6.4.3	IT-03: Streaming Operations.....	196
6.4.4	IT-04: Webinar Operations	196
6.4.5	IT-05: Chat	197
6.4.6	IT-06: Webinar Analysis	197
6.4.7	IT-07: Admin Panel.....	198
6.4.8	IT-08: AI Recommendation, Search and Filters	198
7	Conclusion and Future Work	199
7.1	Conclusion	199
7.2	Future Work	199

8.	References.....	200
9.	Plagiarism Report.....	201

List of Figures

Figure 3.1: Use Case Diagram for Webinar Organizer (1/2).....	11
Figure 3.2: Use Case Diagram for Webinar Organizer (2/2).....	12
Figure 3.3: Use Case Diagram for User (1/2)	13
Figure 3.4: Use Case Diagram for User (2/2)	14
Figure 3.5: Use Case Diagram for Admin	15
Figure 3.6: Use Case Diagram for Guest Speaker	15
Figure 4.1: Box and Line Diagram of Webinar Prime.....	115
Figure 4.2: Architecture Design of Webinar Prime	116
Figure 4.3: Activity Diagram of Login Use Case	117
Figure 4.4: Activity Diagram of Create Webinar	118
Figure 4.5: Activity Diagram of Start Webinar Stream.....	119
Figure 4.6: Activity Diagram of Email Marketing	120
Figure 4.7: Activity Diagram of Generate Banner.....	121
Figure 4.8: Activity Diagram of Review Webinar.....	122
Figure 4.9: Activity Diagram of Send Message.....	123
Figure 4.10: Activity Diagram of Search Webinar	124
Figure 4.11: Activity Diagram of Ban User.....	125
Figure 4.12: Activity Diagram of Payment with Stripe	126
Figure 4.13: Class Diagram of Webinar Prime.....	127
Figure 4.14: Sequence Diagram of Register Use Case	129
Figure 4.15: Sequence Diagram of Create Webinar Use Case	130
Figure 4.16: Sequence Diagram of Start Webinar Stream Use Case.....	131
Figure 4.17: Sequence Diagram of Market Webinar Use Case	132
Figure 4.18: Sequence Diagram of Review Webinar Use Case	133
Figure 4.19: Sequence Diagram of Send Message	134
Figure 4.20: Sequence Diagram of Approve Request Use Case	135
Figure 4.21: Sequence Diagram of Payment Use Case	136
Figure 4.22: Screen Image of User Operations.....	148
Figure 4.23: Screen Image of Home	149
Figure 4.24: Screen Image of Live Webinar Streaming	150
Figure 4.25: Screen Image of Admin Panel.....	151
Figure 4.26: Screen Image of Graphic Kit.....	152
Figure 4.27: Screen Image of Webinar View (web)	153
Figure 5.1: UI of User Profile	156
Figure 5.2: UI of Webinar View	157
Figure 5.3: UI of Home Screen	158
Figure 5.4: UI of Create Webinar	159
Figure 5.5: UI of Chat	160
Figure 5.6: UI of Webinar Stream	161

List of Tables

Table 1.1 Related System Analysis with the Webinar Prime	1
Table 1.2: Tools and Technologies for Webinar Prime	2
Table 3.1: User classes and characteristic for Webinar Prime.....	10
Table 3.2: Textual Description of UC-1: Register.....	16
Table 3.3: Textual Description of UC-1.2: Sign In	16
Table 3.4: Textual Description of UC-1.2: Sign Out.....	17
Table 3.5: Textual Description of Turn on/off Notifications.....	17
Table 3.6: Textual Description of UC-1.6: Forgot Password	18
Table 3.7: Textual Description of UC-1.7: Change Password.....	18
Table 3.8: Textual Description of UC-1.8: Keep Signed In	19
Table 3.9: Textual Description of UC-1.9: Delete Account	19
Table 3.10: Textual Description of UC-1.10: Edit Account Details.....	20
Table 3.11: Textual Description of UC-2.1: Create New Webinar	20
Table 3.12: Textual Description of UC-2.2: View Webinar.....	21
Table 3.13: Textual Description of UC-2.3: Edit Webinar.....	22
Table 3.14: Textual Description of UC-2.4: Add/Remove Organizer/Guest	22
Table 3.15: Textual Description of UC-2.5: Add/Remove Users.....	23
Table 3.16: Textual Description of UC-2.6: Post Notifications	23
Table 3.17: Textual Description of UC-3.1: Start Webinar Streaming	24
Table 3.18: Textual Description of UC-3.2: Turn On/Off Camera	24
Table 3.19: Textual Description of UC-3.3: Mute/Unmute Audio.....	25
Table 3.20: Textual Description of UC-3.4: Switch Focus Between Speakers	25
Table 3.21: Textual Description of UC-3.5: Screen Share	26
Table 3.22: Textual Description of UC-3.6: Streaming Room Chat	26
Table 3.23: Textual Description of UC-3.7: Ask a Question	27
Table 3.24: Textual Description of UC-3.8: Kick User.....	27
Table 3.25: Textual Description of UC-3.9: End Streaming	28
Table 3.26: Textual Description of UC-4.1: Write Post	28
Table 3.27: Textual Description of UC-4.2: Attach Banner	29
Table 3.28: Textual Description of UC-4.3: Attach Link	29
Table 3.29: Textual Description of UC-4.4: Choose Target Audience	29
Table 3.30: Textual Description of UC-4.5: Email Marketing.....	30
Table 3.31: Textual Description of UC-4.6: Social Media Marketing	30
Table 3.32: Textual Description of UC-5.1: Search Banner Template.....	31
Table 3.33: Textual Description of UC-5.2: Select Banner Template.....	31
Table 3.34: Textual Description of UC-5.3: Add Images in Banner Template.....	32
Table 3.35: Textual Description of UC-5.4: Input Details for Banner	32
Table 3.36: Textual Description of UC-5.5: Generate Webinar Logo	33
Table 3.37: Textual Description of UC-5.6: Generate Banner	33
Table 3.38: Textual Description of UC-5.7: Save Banner.....	34
Table 3.39: Textual Description of UC-6.1: View Webinars	34
Table 3.40: Textual Description of UC-6.2: View Webinars Attendee List	35

Table 3.41: Textual Description of UC-6.3: Save Webinar to Favorites.....	35
Table 3.42: Textual Description of UC-6.4: Register for Webinar	36
Table 3.43: Textual Description of UC-6.5: Join/Leave Webinar Session.....	36
Table 3.44: Textual Description of UC-6.6: Follow Organizer.....	37
Table 3.45: Textual Description of UC-6.7: View Organizer's Profile.....	37
Table 3.46: Textual Description of UC-6.8: Chat with Others.....	37
Table 3.47: Textual Description of UC-6.9: Rate Webinar	38
Table 3.48: Textual Description of UC-7.1: Write Message	38
Table 3.49: Textual Description of UC-7.2: Attach Files.....	39
Table 3.50: Textual Description of UC-7.3: Mute/Unmute Chat Notifications	39
Table 3.51: Textual Description of UC-7.4: Block User	40
Table 3.52: Textual Description of UC-7.5: Search Conversation	40
Table 3.53: Textual Description of UC-7.6: View Conversation	41
Table 3.54: Textual Description of UC-7.7: Report User.....	41
Table 3.55: Textual Description of UC-8.1: View Past Organized Webinar	42
Table 3.56: Textual Description of UC-8.2: View Attendees of Past Organized Webinar	42
Table 3.57: Textual Description of UC-8.3: View Revenue/Tickets Sold of Webinars.....	43
Table 3.58: Textual Description of UC-8.4: View Revenue/Tickets Sold of One Webinar	43
Table 3.59: Textual Description of UC-8.5: View Graphs	44
Table 3.60: Textual Description of UC-9.1: View Recommended Webinars	44
Table 3.61: Textual Description of UC-9.2: Search Webinars by Name	45
Table 3.62: Textual Description of UC-9.3: Sort Searched Webinars by Rating.....	45
Table 3.63: Textual Description of UC-9.4: Sort Searched Webinars by Date	45
Table 3.64: Textual Description of UC-9.5: Sort Webinars by Price	46
Table 3.65: Textual Description of UC-9.6: More Filters	46
Table 3.66: Textual Description of UC-10.1: View Reports	47
Table 3.67: Textual Description of UC-10.2: Ban Users.....	47
Table 3.68: Textual Description of UC-10.3: View Banned Users	48
Table 3.69: Textual Description of UC-10.4: Remove Ban	48
Table 3.70: Textual Description of UC-10.5: Delete Webinars	49
Table 3.71: Textual Description of UC-71: Approve Users	49
Table 3.72: Textual Description of UC-72: Approve Webinars.....	50
Table 3.73: Textual Description of UC-10.7: Broadcast Message	50
Table 3.74: Textual Description of UC-11.1: Write Message to Chatbot	51
Table 3.75: Textual Description of UC-11.2: View Chatbot Responses	51
Table 3.76: Textual Description of UC-11.3: Open Links	52
Table 3.77: Textual Description of UC-12.1: Payment with Stripe	52
Table 3.78: Textual Description of UC-12.2: Input Credit/Debit Card Details.....	53
Table 3.79: Textual Description of UC-12.3: Save Card Details	53
Table 3.80: Textual Description of UC-12.4: View Invoice	54
Table 4.1: Data Dictionary of Major Data	144
Table 5.1: Singular Value Decomposition (SVD) Algorithm	155
Table 5.2: Details of APIs and SDKs used in Webinar Prime.....	155

1 Introduction

Webinar prime is a web and mobile based application that will allow students and faculty of CUI to organize, advertise, market, and host free virtual events. Users could simply sign up on app and avail all the webinar hosting advertising and management facilities for free. There are many events held in CUI on daily basis, which are advertised either on WhatsApp groups or CUI social media pages. Most of the people miss those events if they miss the advertisement on their news feed. So, it is very difficult to make sure that all the interested people are notified about the event. Webinar prime solves this problem as it is a one stop shop for both hosting and advertising events. Users of webinar Prime could simply mark an event as their favorite and are reminded a few hours before the event so that the users never miss an event of their interest. User could also simply join from their cellphone on just one click without any difficulty. Webinar prime provides all necessary features for hosting or marketing a webinar as well. It could also be used by companies to hold online orientations of newly hired remote employees.

1.1 Vision Statement

For those organizers who want to host, manage, and market a webinar, all in one place, Webinar Prime is the solution. Webinar Prime is a web and mobile-based application that offers all the necessary features needed to manage, host, or market a virtual event. Unlike other applications which have complex UI and are also costly, webinar prime offers simple UI and all the services needed to host a virtual event for free and it also offers a live streaming service for hosting webinars sessions.

1.2 Related System Analysis/Literature Review

Table 1.1 shows the related system analysis with the Webinar Prime.

Table 1.1 Related System Analysis with the Webinar Prime

Application Name	Weakness	Webinar Prime Solution
Whova[1]	<ul style="list-style-type: none">Fee charged per ticket purchaseNo recommendation system or event suggestions	<ul style="list-style-type: none">No fee charged on ticket purchasesAI based Recommendation System and suggestions for user
Eventee[2]	<ul style="list-style-type: none">Pay for search filtersCan only organize one event per year for free	<ul style="list-style-type: none">Free search and AI recommendation systemFree webinar organizing

GoToWebinar[3]	<ul style="list-style-type: none"> High Cost to use marketing and hosting services 	<ul style="list-style-type: none"> Free event management, hosting, and automated marketing services.
Eventbrite[4]	<ul style="list-style-type: none"> No Event streaming and chat service Fee charge per ticket purchase 	<ul style="list-style-type: none"> Event streaming and chat service provided. No fee charged per ticket purchase
Bigmaker[5]	<ul style="list-style-type: none"> No Graphic Kit for Logos and Banner Generation High Cost 	<ul style="list-style-type: none"> Graphic Kit for Logo and Banner Generation for Webinars Free to use

1.3 Project Deliverables

Following are the project deliverables for Webinar Prime.

- Scope Document
- SRS Document
- SDS Document
- Final Report Document
- Presentation
- Source Code

1.4 System Limitations/Constraints

Following are the System Limitations/Constraints of Webinar Prime.

LI-1: A good internet connection will be required for better audio and video streaming quality.

LI-2: Only two platforms i.e: Web and Smart phone are supported. This application will not run on other platforms such as Windows, Linux, Ubuntu, and others.

LI-3: Polling could not be created during streaming in this application.

1.5 Tools and Technologies

Table 1.2 enlists the tools and technologies that will be used for Webinar Prime.

Table 1.2: Tools and Technologies for Webinar Prime

Tools	Tools	Version	Rationale
	VS Code	2022	IDE
	MongoDB	2022	Database
	Firebase	9.6.10	Database

And Technologies	Figma	CSC 6	Design Work
	Git and Github	3.4.1	Version Control
	MS Word	2016	Documentation
	MS PowerPoint	2016	Presentation
	Technology	Version	Rationale
	React JS	18.0.0	Web Front-end Development
	Flutter	2.17.0	Mobile Front-end Development
	Node JS	17.8.0	Back-end Development
	Express JS	4.17.2	Back-end Development (Restful APIs)
	Socket IO	4	Realtime Communication
	Tailwind	3.0	CSS Styling Library
	JavaScript/TypeScript	ES2015	Programming Language
	JSX		JavaScript Syntax extension
	CSS	CSS 3	Styling of Web application
	Dart	2.16	Programming Language

1.6 Relevance to Course Modules

We will use Object Oriented Programming, Data Structures and Algorithms and Software Engineering concepts in this project. Concepts learned in Database Systems will be used in managing database. Concepts learned in Web Technologies, Artificial Intelligence, Mobile Application Development, Web Technologies II courses will be used in building this application. DevOps concepts will be used for continuous development, continuous delivery, and production of the application.

2 Problem Definition

2.1 Problem Statement

Events at CUI and other organizations are held on a regular basis. Since the covid, people have become very much familiar with the webinars and the world is shifting towards technological solution for most of the things and events is one of those things. People who organize webinars mostly used social media for its marketing advertisement as it is free and then for hosting and event, they either use google meet for conferencing or zoom app which also have certain limitations as meeting time for zoom free version is limited. Most of the events of CUI are advertised on their social medial platforms such as WhatsApp or Instagram and because of that organizers lose a lot of audience, and many people fail to join events that they are interested in. Similarly, for organizing a virtual event people use WhatsApp groups to manage people and then send a google meet link for joining the event which is also very hectic for users. Organizers have difficulty managing and analyzing events because of the lack of good solutions. There are many webinar solutions out there, but they are either paid, or offer a limited number of free features. There is also a major privacy concern in using these available solutions. So, Webinar Prime will overcome these problems for virtual event organizing, webinar management and marketing as well. Webinar Prime offers all the essential services needed for hosting a successful webinar.

2.2 Problem Solution

Webinar Prime will provide all services needed for marketing, management and hosting a webinar free of cost. Webinar Prime will provide organizing of successful virtual events which have become a focus of many organizations after Covid. Organizers will simply create a virtual event, which will appear on the news feed of other interested users. It will also automate social media and email marketing techniques for organizers, so they don't have to spend time on sending messages and posting updates on social media themselves to get the audience and our built-in chat services will make communication easier for all users. Our automated marketing services will help the reach maximum number of interested users for a virtual event, so they do not miss anything. It also will have an AI based communication friendly chat bot to provide support to its users. To overcome the issue of missing an event due to busy schedule, Users will be able mark an event as their favorite and are reminded through push notification before the start of session, our recommendation AI will suggest best webinars that user might want to join. It will also provide all the webinar stats such as number of people interested, number of people who attended the webinar, average age of attendees etc. which will allow organizers to withdraw valuable information from these analytics and further improve their webinars in future. It also solves the major privacy concerns as all the everything will be managed on our server, which will prevent outside

intervention. Webinar prime will offer all these services for free to all its CUI members and other organizations.

2.3 Objectives of the Proposed System

Following are the objectives of Webinar Prime.

BO-1: To provide free services to CUI members to host a successful webinar.

BO-2: Better management and hosting of webinars.

BO-3: Improved streaming quality of webinars/virtual events.

BO-4: User-friendly UI, enhanced UX and easily usable application.

2.4 Scope

Webinar Prime is a web and mobile application designed for hosting, managing, and marketing webinars. It has 3 types of users i.e.: Admin, Webinar Organizer and User. Admins will have control over the complete application, they will be able to view and manage reports, ban users from application, approve webinar organizers, change profile type of users and broadcast messages. Webinar Organizers will be able to create a webinar event, edit details of their webinars, add/remove users and add guest speakers. Guest Speakers are users that are selected by organizers. Webinar Organizers will be able to edit details, add users, approve users, remove users from webinar, add schedules and post notifications. Webinar Organizers and Guests can also contact each other through private message feature. Webinar Organizers will be able to start webinar streaming session and in live streaming session they will be able to interact with other users by live video feed from camera, voice input, chat and screen sharing features. Video and Screen sharing features will only be available to webinar organizers and guests. Webinar Organizers will be able to see the analysis and history of their previous webinars. They will be able to see users that attended webinar, revenue generated from webinars and other analysis. They will also be able to see analysis in graphical representation.

Users will be able to join webinar events and purchase tickets for paid webinars. They will be able to join streaming sessions as attendees and they will have option to interact with organizers, guests, and other users with room chat. They will be able to ask questions from organizers and guests. Users will be able search for different webinars, receive notifications, save webinars to favorites, and share them on social media. Users will also be able to rate and review webinar organizers after attending webinar session. The app will also have an AI based recommendation system to recommend webinars to users that they might be interested in based on their previous activity.

Webinar Organizers will also be able to market their webinar for the intended audience on our application. They will be able to generate webinar banners from provided templates and share webinar links on social media accounts. They will be able to provide information about target audiences like age group and our app will do email marketing for them automatically. The app will also provide features of automated social media marketing like Facebook marketing, where

organizers will be able to post about their webinar event with a click of a single button. Smart AI chatbot will help users in answering their questions, quick access to different parts of the application and support. Users will also be able to report a problem, contact us for help and support and read our privacy policy, terms and conditions, guidelines, and FAQs.

2.5 Modules

Following are the modules of Webinar Prime.

2.5.1 Module 1: Account management

The system will have two main types of users. Webinar Organizer and Users. This module will handle user signup, login, and profile related features.

FE-1: Register for a new account.

FE-2: Login into the account.

FE-3: Turn On/Off Notifications.

FE-4: Reset Password.

FE-5: Change Password

FE-6: Edit Account Details

FE-7: Delete Account

2.5.2 Module 2: Webinar Management

Webinar Organizers will be able to create, view and edit webinars and they can add guest speakers or organizers for the webinar. This module will handle all management activities of a webinar.

FE-1: Create a new Webinar.

FE-2: View Webinar description.

FE-3: Edit Webinar details.

FE-4: Add Guest Speaker(s) or Organizer(s). (Organizer)

FE-5: Manually Add or Remove Users.

FE-6: Post Notifications

FE-7: Add Webinar Event Schedules

FE-8: Approve Join Requests

2.5.3 Module 3: Live Webinar Streaming

This module will deal with all the streaming functions of a webinar such as using camera, voice input, screen sharing, etc. Managers will be able to kick out users and transfer stream to guests or other managers and users will be able to send messages, ask questions and report problems.

FE-1: Start Streaming Session

- FE-2:** Turn on/off Live Camera Stream
- FE-3:** Mute/Unmute Voice
- FE-4:** Screen Share
- FE-5:** Switch Focus between Speakers
- FE-6:** Ask a Question
- FE-7:** Streaming Room Chat
- FE-8:** Report a Problem
- FE-9:** Kick Out User from Stream
- FE-10:** End Streaming Session

2.5.4 Module 4: Automated Email and Social Media Marketing

Webinar Organizers will be able to choose the target audience and our app will automatically market the webinar event for them to the target audience. We will automate the process of marketing the webinar event on social media platform.

- FE-1:** Add Marketing Message
- FE-2:** Insert Webinar Event Banner
- FE-3:** Choose Target Audience (like student semesters/interests)
- FE-4:** Email Marketing
- FE-5:** Social Media Marketing

2.5.5 Module 5: Graphic Kit

This module will allow Webinar Organizers to quickly generate a banner and logos that they can use for marketing, so they don't have to hire a designer or use another app for logos and banners.

- FE-1:** Input Webinar Details
- FE-3:** Select Template
- FE-4:** Generate Webinar Logo
- FE-5:** Generate Webinar Banner
- FE-6:** Save Banner or Logo

2.5.6 Module 6: User Operations

Users will be able to join webinars as attendees, and users will be able to save webinar to favorites, send message to organizers. They will be able to share webinars to friends on social media.

- FE-1:** View Webinars
- FE-2:** View Attendee List
- FE-3:** Save Webinar to Favorites
- FE-4:** Purchase Ticket
- FE-5:** Register for Webinar

FE-6: Join / Leave Webinar Session

FE-7: Follow Organizer

FE-8: View Organizer Profile

FE-9: Chat with Users

FE-10: Rate Webinar Session

2.5.7 Module 7: Chat

Chat module will allow users to communicate with others.

FE-1: Write Message

FE-2: Attach Files

FE-3: Mute/Unmute Notifications

FE-4: Block User

FE-5: Search Conversations

FE-6: View Conversations

FE-7: Report User

2.5.8 Module 8: Webinar History and Analysis

Webinar Managers will be able to see the history and analysis of their organized webinar sessions.

Graphical Representation will help them to quickly analyze the revenue and community.

FE-1: View Past Organized Webinars

FE-2: View Community/Attendees of Past Webinars

FE-3: View Tickets sold/Revenue generated of all Webinars

FE-4: View Tickets sold/Revenue generated of a particular Webinar

FE-5: Graphical Analysis

2.5.9 Module 9: AI Recommendation, Search and Filters

This module will recommend webinar to users with AI. Users will be able to search for a specific webinar by applying different filters.

FE-1: AI Webinar Recommendation

FE-2: Search Webinars

FE-3: Sort by Date, Price, or Rating

FE-4: Apply More Filters

2.5.10 Module 10: Admin Panel

This module is for super-admin or super-user. Superuser will be able to view reports, broadcast messages and approve users. They will have complete control over all types of users and webinars.

- FE-1:** View Reports
- FE-2:** Ban/Unban Users
- FE-3:** Delete Webinars
- FE-4:** Approve Users
- FE-5:** Approve Webinars
- FE-6:** Broadcast Messages

2.5.11 Module 11: AI Chatbot for Assistance

This module will provide quick and smart assistance to the users.

- FE-1:** Respond to Messages
- FE-2:** View Messages
- FE-3:** Frequently Asked Questions
- FE-4:** Answer User's queries

2.5.12 Module 12: Payments

This module will manage payments like payment with cards, view invoice, etc.

- FE-1:** Payment with Stripe
- FE-2:** Input Card Details
- FE-3:** Save Card Details
- FE-4:** View Invoice

3 Requirement Analysis

3.1 User classes and characteristics

Table 3.1 shows user classes and characteristics for webinar prime.

Table 3.1: User classes and characteristic for Webinar Prime

User class	Description
Webinar Organizer	Webinar Organizer hosts, manages, and markets webinars. Organizers will be approved by admins, and they can create, edit, and delete webinars. They can start hosting live streaming sessions for webinars. A webinar can have one or more webinar organizers. Webinar Organizer can add guests or more organizers to webinar event.
User	User views, searches, explores, and joins webinars. A user can be a guest or organizer for specific webinars. Webinar Organizers can make user an organizer or guest, otherwise they will just be attendees of a webinar.
Admin	Admin can view and manage reports, approve, or ban users. Webinar Organizers will be approved by the admin. They can also broadcast messages to all other app users.
Guest	A guest is a user with more controls in live streaming sessions. They can act as one the hosts in the livestream and have control over video, audio, screensharing and responding to questions.

3.2 Requirement Identifying Technique

3.2.1 Use Case Diagrams

Figure 3.1 shows use case diagram for webinar organizer.

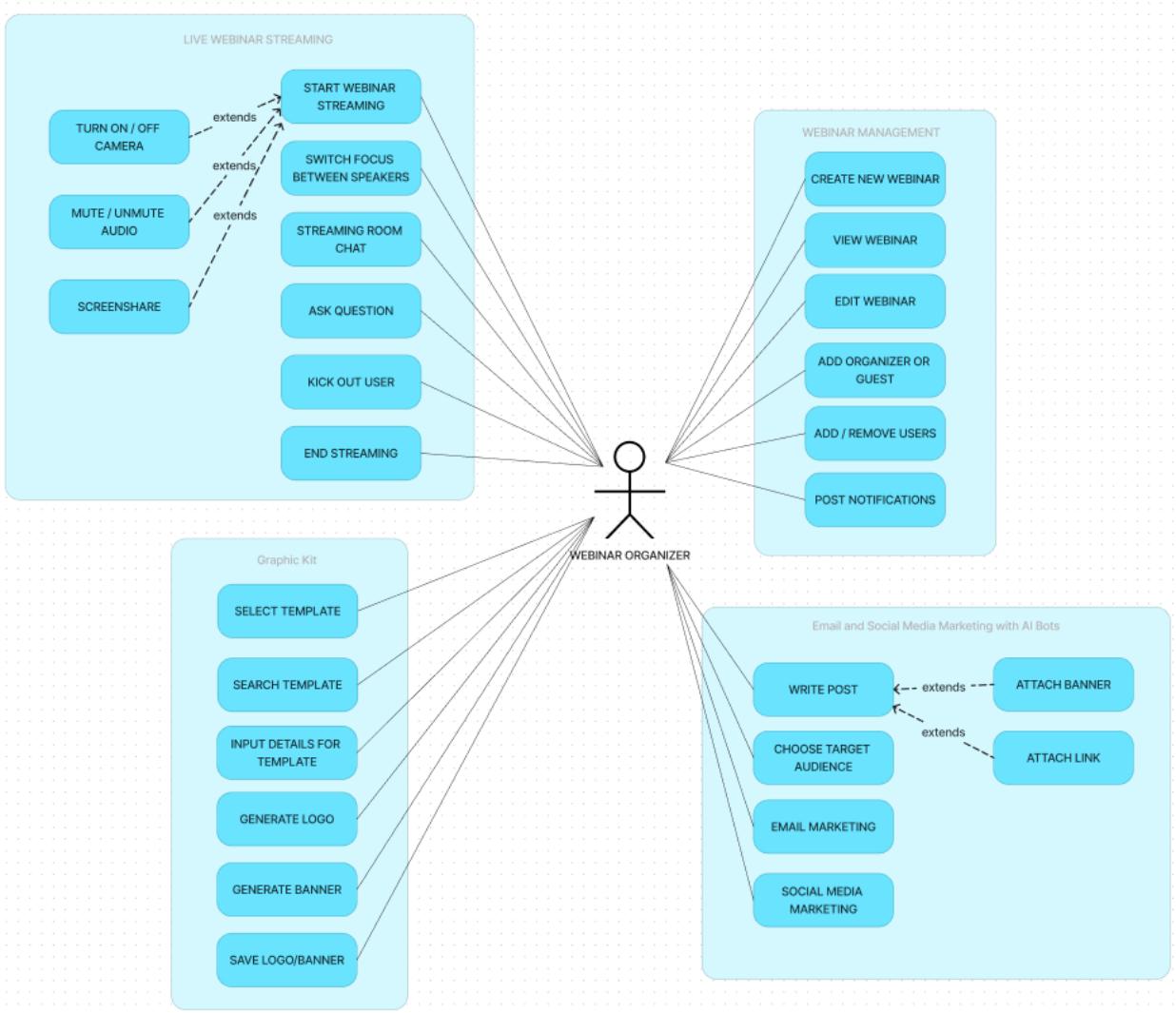


Figure 3.1: Use Case Diagram for Webinar Organizer (1/2)

Figure 3.2 shows use case diagram for webinar organizer.

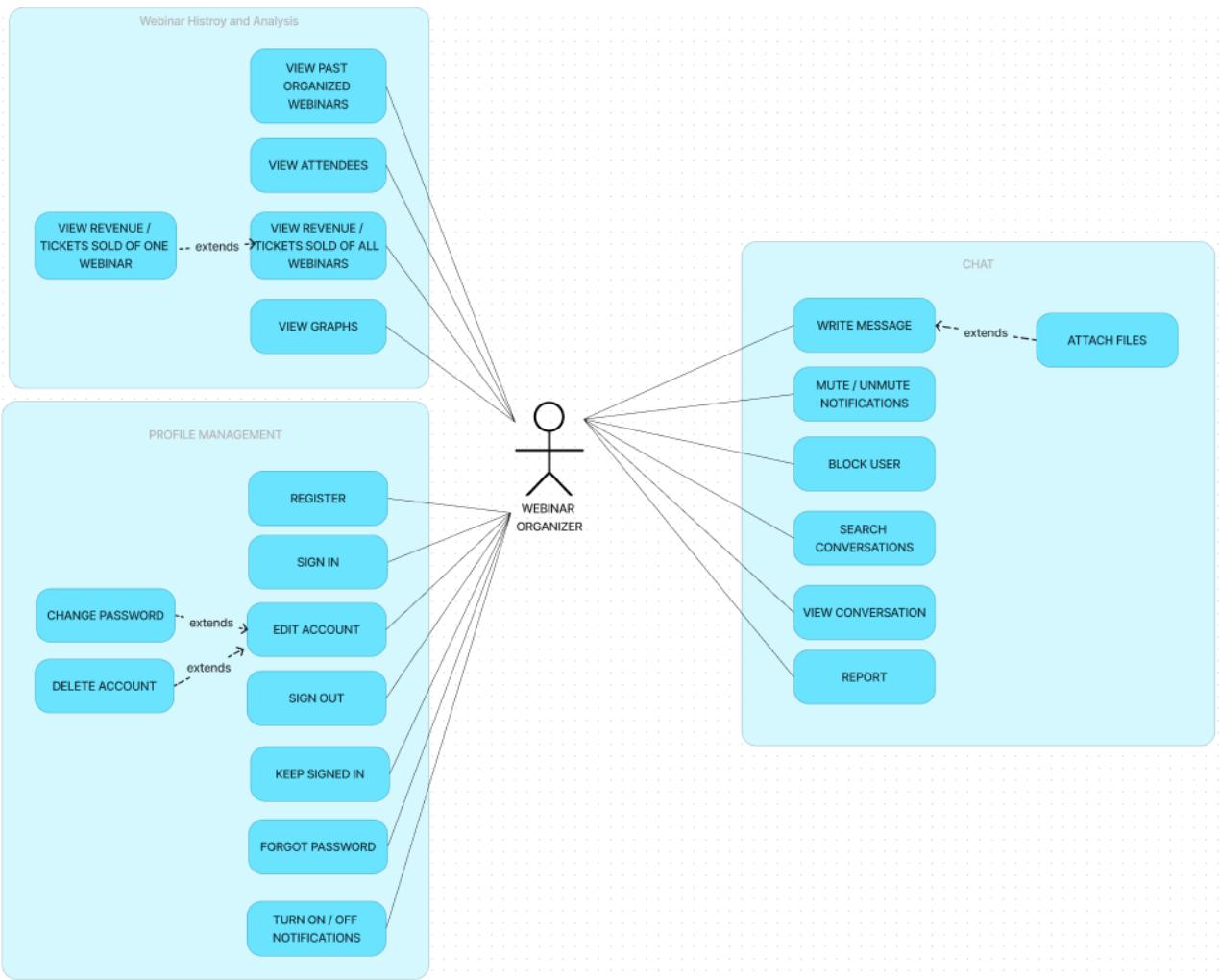


Figure 3.2: Use Case Diagram for Webinar Organizer (2/2)

Figure 3.3 shows use case diagram for user.

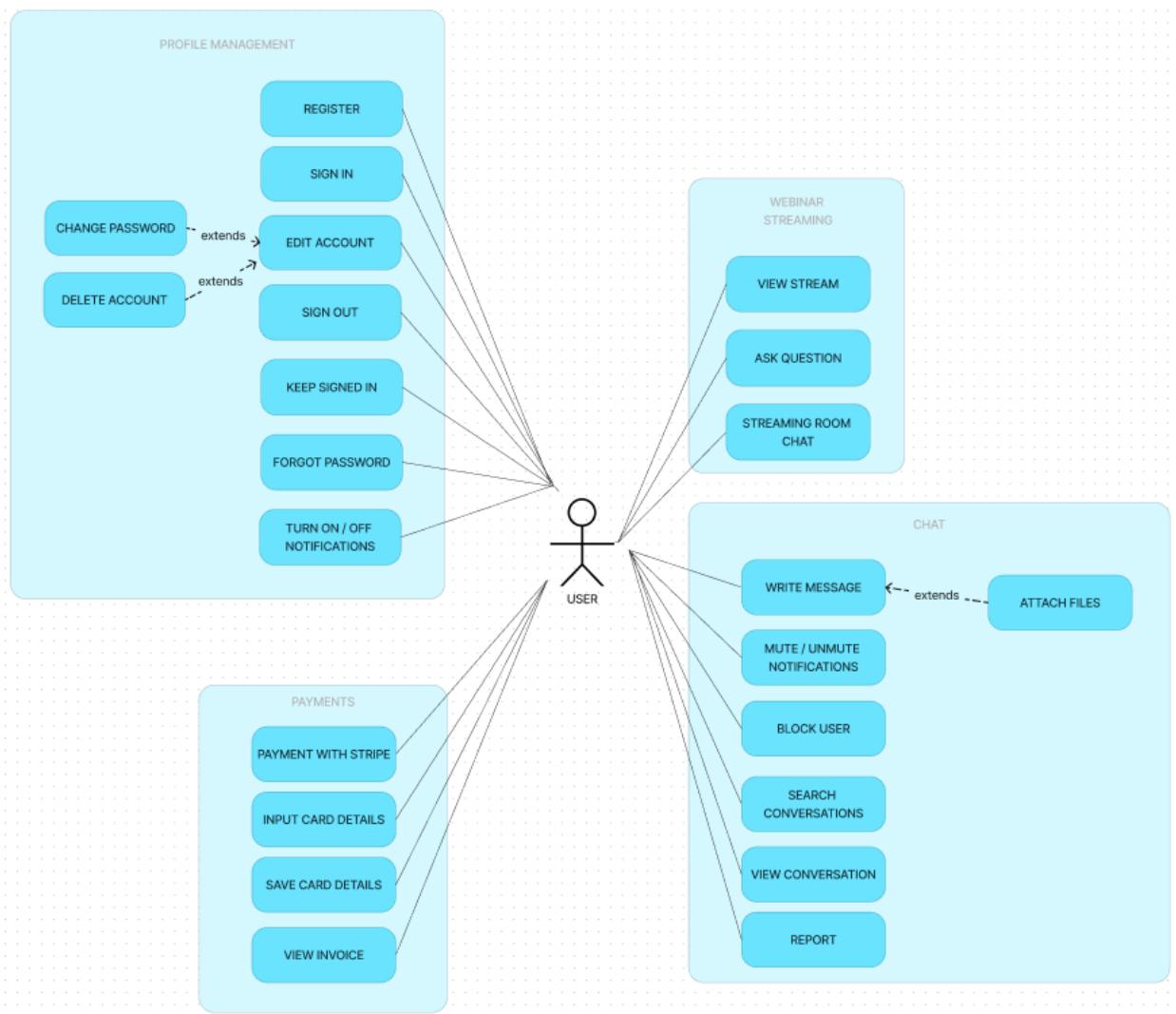


Figure 3.3: Use Case Diagram for User (1/2)

Figure 3.4 shows use case diagram for user.

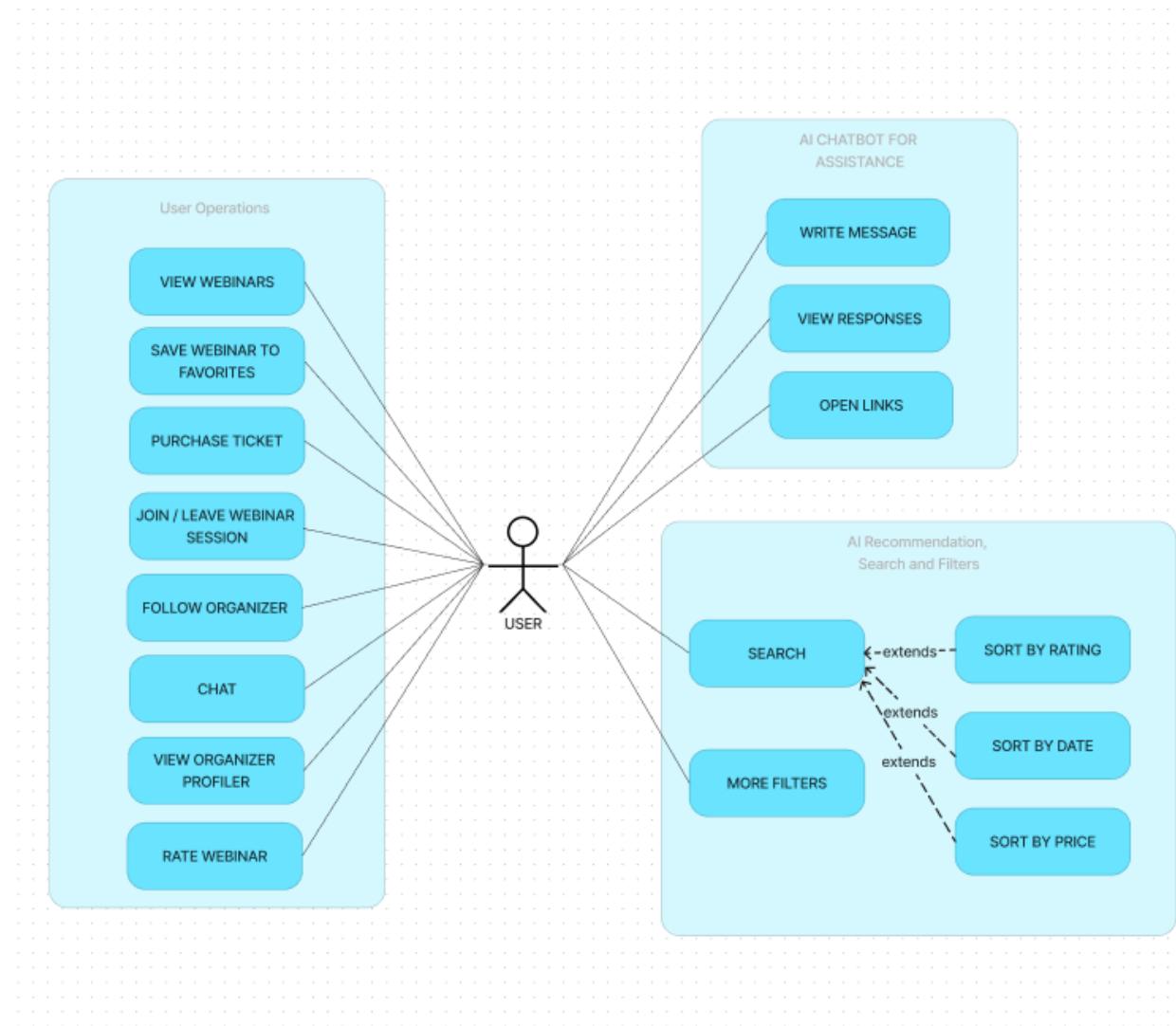


Figure 3.4: Use Case Diagram for User (2/2)

Figure 3.5 shows use case diagram for admin.

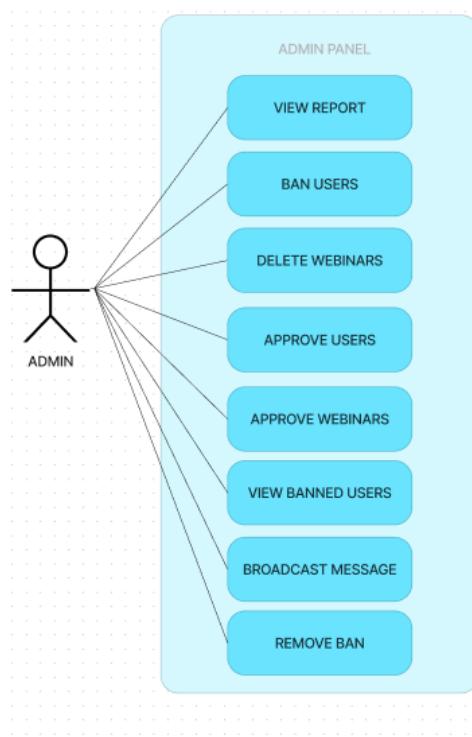


Figure 3.5: Use Case Diagram for Admin

Figure 3.6 shows use case diagram for guest speaker.

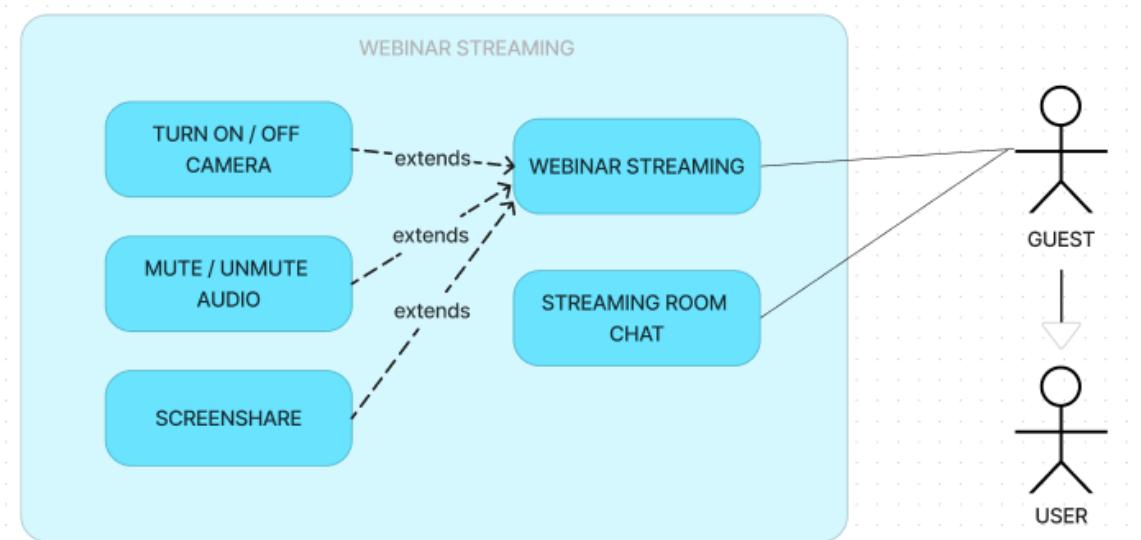


Figure 3.6: Use Case Diagram for Guest Speaker

3.2.2 Use Case Details

3.2.2.1 UC-1: Register

Table 3.2 below provides details about registration use case.

Table 3.2: Textual Description of UC-1: Register

Actors:	Organizers, Users
Description:	User and Organizers will be able to register for an account by providing correct email and password
Trigger:	Click on Register button
Preconditions:	PRE-1. User is not already registered.
Postconditions:	POST-1. User gets registered POST-2. User will be taken to Login page
Normal Flow:	1. Open the application 2. Go to Sign Up Page. 3. Provide Registration Details 4. Click on Register Button.
Alternative Flows:	N/A
Exceptions:	1. User provides invalid name 2. User provides invalid email address 3. User provides invalid password
Business Rules	N/A
Assumptions:	1. Captcha verification has been completed

3.2.2.2 UC-2: Sign In

Table 3.3 below provides details about sign in use case of the application.

Table 3.3: Textual Description of UC-1.2: Sign In

Actors:	Admin, Organizers, normal Users
Description:	Users will be able to Sign into their accounts
Trigger:	Click on Sign in button
Preconditions:	PRE-1. User already has an account.
Postconditions:	POST-1. User gets Signed In.
Normal Flow:	1. Open the website / mobile app 2. Go to Login Page 3. Enter User Credentials. 4. Click on Sign in button.
Alternative Flows:	N/A
Exceptions:	1. Incorrect Credentials provided.
Business Rules	N/A

Assumptions:	1. User's account exists.
---------------------	---------------------------

3.2.2.3 UC-3: Sign Out

Table 3.4 below provides details about how a user can logout of the application.

Table 3.4: Textual Description of UC-1.2: Sign Out

Actors:	Admin, organizers, normal users
Description:	Users will be able to sign out
Trigger:	Click on Sign out Button Icon.
Preconditions:	PRE-1. User is already signed in.
Postconditions:	POST-1. User gets signed out
Normal Flow:	2. Click on profile icon in Navigation bar 3. Click on Sign out button
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	1. User has signed in

3.2.2.4 UC-4: Turn On/Off Notification

Table 3.5 below gives details about how user can turn on/off notifications.

Table 3.5: Textual Description of Turn on/off Notifications

Actors:	Admin, organizers, users
Description:	Users will be able to turn on/off notifications
Trigger:	Click on turn on/off notification button
Preconditions:	PRE-1. User is already signed in.
Postconditions:	POST-1. Notifications will be turned off
Normal Flow:	1. Open the website / mobile app. 2. Go to settings section 3. Click turn on/off notifications
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	1. User already has signed in

3.2.2.5 UC-5: Forget Password

Table 3.6 below provides the details about the forgot password use case.

Table 3.6: Textual Description of UC-1.6: Forgot Password

Actors:	Admin, organizer, users.
Description:	In case, user has forgotten the password, he will be able to recover his/her password by clicking on forget password. An email will be sent to his account through which he can reset hi password.
Trigger:	Click forget password button
Preconditions:	PRE-1. User already has an account
Postconditions:	POST-1. An email will be sent to user. POST-2. User will be able to recover his account through email
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website / mobile 2. Click on forget password. 3. Enter account email. 4. A mail will be sent to user's email account. 5. User will be able to recover his/her password through the email through the provided link 6. User will provide new password for the account
Alternative Flows:	N/A
Exceptions:	1. User do not have any account
Business Rules	N/A
Assumptions:	1. User already has an account

3.2.2.6 UC-6: Change Password

Table 3.7 below covers details about change password use case.

Table 3.7: Textual Description of UC-1.7: Change Password

Actors:	Admin, organizer, users.
Description:	This will allow user to change his/her account password.
Trigger:	Click Change password
Preconditions:	PRE-1 User has already an account PRE-2 User is Signed In.
Postconditions:	POST-1 Users' password will be updated.
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website/ mobile app 2. Click on Profile Icon from Navigation 3. Click on Settings 4. Click on Change password 5. Provide current password and then enter new password. 6. Click on Confirm Change Password

Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. User enters wrong current password 2. User enters invalid new password
Business Rules	N/A
Assumptions:	1. User already have an account

3.2.2.7 UC-7: Keep Signed In

Table 3.8 below provides details about keep me signed in use case of the application.

Table 3.8: Textual Description of UC-1.8: Keep Signed In

Actors:	Admin, organizer, users.
Description:	Users will check mark keep signed in. This will allow users to stay singed in even if he/she closes the app.
Trigger:	Click on keep signed in button.
Preconditions:	PRE-1. User is not already signed in.
Postconditions:	POST-1. User will be kept signed in
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website / mobile app 2. Fill required fields for sign in 3. Check mark keep signed in 4. Click on Sign in.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	1. Correct Sign in credentials are provided

3.2.2.8 UC-8: Delete Account

Table 3.9 below provides details about the delete account use case of the application.

Table 3.9: Textual Description of UC-1.9: Delete Account

Actors:	Organizers, users
Description:	Users can delete their account from the application.
Trigger:	Delete Account Button
Preconditions:	PRE-1: User is already signed in
Postconditions:	POST-1: User account will be deleted.

	POST-2: User will be logged out of the application.
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website/ mobile app 2. Click on Profile Icon on Navigation. 3. Click on Settings 4. Click on Delete account. 5. Enter password and confirm.
Alternative Flows:	N/A
Exceptions:	1. User provides wrong current password
Business Rules	N/A
Assumptions:	N/A

3.2.2.9 UC-9: Edit Account Details

Table 3.10 below covers details regarding edit account details use case of the application.

Table 3.10: Textual Description of UC-1.10: Edit Account Details

Actors:	Organizer, users.
Description:	This will allow user to edit and update his account information such as username and other such details.
Trigger:	Edit Account Button.
Preconditions:	PRE-1. User has already signed In
Postconditions:	POST-1. Account details will be updated.
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website/ mobile app 2. Click on profile icon in navigation. 3. Click on Settings 4. Click on Edit account 5. Edit account details that user wants to change. 6. Provide the password 7. Click on Update.
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. Wrong Password Provided 2. User is admin
Business Rules	BR-1: Admins cannot edit their account settings.
Assumptions:	<ol style="list-style-type: none"> 1. User already has an account 2. User is not admin.

3.2.2.10 UC-10: Create New Webinar

Table 3.11 below provides about how a user can create a new webinar on the application.

Table 3.11: Textual Description of UC-2.1: Create New Webinar

Actors:	Organizer
Description:	Organizer will create a new webinar by providing all the necessary details.
Trigger:	Create new Webinar.
Preconditions:	PRE-1. User is Signed in. PRE-1. User is of type Organizer.
Postconditions:	POST-1. A new webinar will be created.
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website/ mobile app 2. Click on Webinar Management tab. 3. Click on Create new webinar. 4. Provide all necessary details which includes title, description, schedule, links, images and date. 5. Click on create.
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. One or more details provided are invalid 2. Not all necessary details provided
Business Rules	BR-1: User must be an Organizer in order to create a webinar.
Assumptions:	1. All necessary details needed are provided correctly.

3.2.2.11 UC-11: View Webinar

Table 3.12 below covers details on how user can view details of the webinar.

Table 3.12: Textual Description of UC-2.2: View Webinar

Actors:	Organizer, user, admin.
Description:	Users and organizers could view the webinar details such as description, timing, title etc.
Trigger:	Click on Webinar.
Preconditions:	PRE-1. User is Already logged in.
Postconditions:	POST-1. Webinar details will be displayed.
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website/ mobile app 2. On home page many webinars will appear with title 3. Click on webinar title 4. Webinar details will be displayed.
Alternative Flows:	<ol style="list-style-type: none"> 1. Search for Webinar 2. Click on Webinar 3. Webinar details will be displayed
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.12 UC-12: Edit Webinar

Table 3.13 below covers details about how a user can edit the already created webinar on the application.

Table 3.13: Textual Description of UC-2.3: Edit Webinar

Actors:	Organizer
Description:	Webinar organizer could edit the details of the webinar.
Trigger:	Click on Edit webinar.
Preconditions:	PRE-1. User is Already logged in.
Postconditions:	POST-1. Webinar details will be edited and updated.
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website/ mobile app 2. On home page many webinars will appear with title 3. Click on a webinar 4. Click on Edit button icon 5. Edit webinar details 6. Click on update button 7. Click confirm.
Alternative Flows:	<ol style="list-style-type: none"> 1. Search for a webinar 2. Select a webinar from search results 3. Click on edit button icon to edit details 4. Edit Details that needs to be changed 5. Click on update button 6. Click on Confirm.
Exceptions:	User is not the organizer
Business Rules	BR-1: Only Organizers can edit webinars BR-2: The webinar must be created by the same organizer that is signed in
Assumptions:	User is organizer.

3.2.2.13 UC-13: Add/Remove Organizer/Guest

Table 3.14 provide details about how an organizer can add/remove another guest and organizer from the webinar.

Table 3.14: Textual Description of UC-2.4: Add/Remove Organizer/Guest

Actors:	Organizer
Description:	Organizer of the meeting could add or remove another organizer or guest
Trigger:	Click on the add icon
Preconditions:	PRE-1. User is signed in and is organizer of the webinar.
Postconditions:	POST-1. New Organizer or guest will be added or removed
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website// mobile app 2. Go to webinar details. 3. Go to Organizers and Guests

	4. Search for user 4. Add or remove user as new organizer or guest.
Alternative Flows:	N/A
Exceptions:	User to be added doesn't exist
Business Rules	BR-1: Only Organizer of the webinar can add or remove Organizers/Guests
Assumptions:	1. Webinar already created.

3.2.2.14 UC-14: Add/Remove Users

Table 3.15 provide details about how an organizer can add/remove other users (attendees) and organizer from the webinar.

Table 3.15: Textual Description of UC-2.5: Add/Remove Users

Actors:	Organizer
Description:	Organizer could add or remove users from the webinar
Trigger:	Click on the add or remove user
Preconditions:	N/A
Postconditions:	POST-1. User will be added to the webinar POST-2. User will be removed from the webinar
Normal Flow:	1. Go to webinar page 2. Click on attendees 3. Search for user 4. click on add if you want to add user or delete if user is to be removed.
Alternative Flows:	N/A
Exceptions:	1. User not found
Business Rules	BR-1: Only Organizer of that webinar can add/remove users into the webinar
Assumptions:	N/A

3.2.2.15 UC-15: Post Notifications

Table 3.16 below provide details about how an organizer can post small custom notification regarding the webinar.

Table 3.16: Textual Description of UC-2.6: Post Notifications

Actors:	Organizer
Description:	The organizer of the webinar could create a small notification regarding the webinar that will be posted in webinar thread.
Trigger:	Click on Post Notification.
Preconditions:	PRE-1. User is the organizer of the webinar.
Postconditions:	POST-1 Notification will be posted
Normal Flow:	1. Go to the specific webinar page 2. Click on Notifications

	<ol style="list-style-type: none"> 3. Click on Post new notification 4. Enter Notification Text 5. Click on Post
Alternative Flows:	N/A
Exceptions:	1. Notification Text is left empty
Business Rules	BR-1: Only Organizer of the webinar can post notifications
Assumptions:	1. User is Organizer of the webinar

3.2.2.16 UC-16: Start Webinar Streaming

Table 3.17 below provides details about how a user can start the webinar streaming

Table 3.17: Textual Description of UC-3.1: Start Webinar Streaming

Actors:	Organizer
Description:	Organizer will start the webinar streaming.
Trigger:	Click on start webinar session.
Preconditions:	PRE-1. User is the organizer of the webinar
Postconditions:	POST-1. Webinar streaming session will be started
Normal Flow:	<ol style="list-style-type: none"> 1. Go to the webinar page you are organizing 2. Click on start webinar streaming session
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Organizers of the webinar can start the streaming session
Assumptions:	1. User is Organizer of the webinar.

3.2.2.17 UC-17: Turn On/Off Camera

Table 3.18 provides details about how a user can turn on/off a camera.

Table 3.18: Textual Description of UC-3.2: Turn On/Off Camera

Actors:	Organizer, Guests
Description:	Users can turn off and, on their camera,
Trigger:	Click on camera icon
Preconditions:	PRE-1. User has joined the webinar. PRE-2 Camera access has been allowed by user.
Postconditions:	POST-1. Camera will be turned on/off.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on camera icon during the streaming session 2. The camera will be turned on/off
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. Camera access not allowed 2. Camera on device not detected

Business Rules	BR-1: Organizers can turn on/off their camera BR-2: Guests can turn on/off their camera
Assumptions:	1. User is Organizer 2. User is Guest of webinar

3.2.2.18 UC-18: Mute/Unmute Audio

Table 3.19 provides details about how a user can Mute/unmute a camera.

Table 3.19: Textual Description of UC-3.3: Mute/Unmute Audio

Actors:	Primary Actor: Organizer, Guest
Description:	Users can Mute/Unmute audio
Trigger:	Click on Speaker Icon.
Preconditions:	PRE-1. User has joined the webinar.
Postconditions:	POST-1. Audio will be muted/unmuted.
Normal Flow:	1. Click on speaker icon in streaming 2. Audio will be muted/unmuted
Alternative Flows:	N/A
Exceptions:	1. Microphone not detected 2. Microphone access not allowed
Business Rules	BR-1: Organizers can unmute/mute audio BR-2: Guests can mute/unmute audio in webinar streaming session
Assumptions:	1. User is Organizer or Guest

3.2.2.19 UC-19: Switch Focus Between Speakers

Table 3.20 provides details about how user can switch focus between in the speakers present the webinar.

Table 3.20: Textual Description of UC-3.4: Switch Focus Between Speakers

Actors:	Primary Actor: Organizers
Description:	Organizers can switch focus between speakers and bring any speaker to front of the live stream or move back.
Trigger:	Click on Bring to Front Button
Preconditions:	PRE-1. User has joined the webinar streaming.
Postconditions:	POST-1. Speaker will be brought to focus.
Normal Flow:	1. Select Speaker 2. Click Bring to Front Button.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.20 UC-20: Screen Share

Table 3.21 provides details about how a user can share his/her screen.

Table 3.21: Textual Description of UC-3.5: Screen Share

Actors:	Primary Actor: Organizers, Guest
Description:	Organizers and guest on the meeting will have option to share or represent their system screen in in the webinar.
Trigger:	Click on share screen Icon
Preconditions:	PRE-1. User has joined the webinar streaming.
Postconditions:	POST-1. Screen sharing will start.
Normal Flow:	<ol style="list-style-type: none"> 3. Click on screen share option 4. Select the screen that user wants to share
Alternative Flows:	N/A
Exceptions:	1. Screen sharing not allowed by the operating environment
Business Rules	BR-1: Organizers can share their screen during live streaming session BR-2: Guests can share their screen during live streaming session
Assumptions:	1. User sharing screen is the Organizer or guest.

3.2.2.21 UC-21: Streaming Room Chat

Table 3.22 provides details about how a user can stream room chat while attending the webinar.

Table 3.22: Textual Description of UC-3.6: Streaming Room Chat

Actors:	Primary Actor: Organizers, users.
Description:	Users (attendees, guests) and organizer will be chat in streaming room.
Trigger:	Click on chat icon
Preconditions:	<ol style="list-style-type: none"> PRE-1: Webinar Streaming has started PRE-2: User has joined the webinar
Postconditions:	POST-1: Users can chat in the streaming session
Normal Flow:	<ol style="list-style-type: none"> 1. Join the webinar being stremed 3. Click on chat icon 4. Type message you want to send 5. Message will be broadcasted to everyone in the live streaming session.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.22 UC-22: Ask a Question

Table 3.23 provides details about how a user can ask a question during live streaming of webinar.

Table 3.23: Textual Description of UC-3.7: Ask a Question

Actors:	Users (attendees)
Description:	Users (attendees) will ask questions during live stream of the webinar.
Trigger:	Click on Ask a question button.
Preconditions:	PRE-1: Webinar Streaming has started. PRE-2: User has joined the webinar
Postconditions:	POST-1: Users has asked a question
Normal Flow:	<ol style="list-style-type: none"> 1. Join the webinar being streamed. 2. Click on Ask a question 3. Type your question 4. Click ask.
Alternative Flows:	N/A
Exceptions:	1. Organizer has disabled the questioning
Business Rules	N/A
Assumptions:	1. Questions are enabled by the organizer.

3.2.2.23 UC-23: Kick User

Table 3.24 provides details about how an organizer can kick user (attendee) out of webinar.

Table 3.24: Textual Description of UC-3.8: Kick User

Actors:	Organizer
Description:	Organizer of the meeting can kick the users out of the meeting
Trigger:	Click on remove from meeting
Preconditions:	PRE-1: User (attendee or guest) is present in the webinar
Postconditions:	POST-1: User (attendee or guest) has been kicked out of the webinar
Normal Flow:	<ol style="list-style-type: none"> 1. Click on users Icon. 2. This will show list of users present in the webinar. 3. Click on user and then select kick user option 4. User will be kicked out from the meeting
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Organizers can kick users out of the streaming session
Assumptions:	N/A

3.2.2.24 UC-24: End Streaming

Table 3.25 provides details about how an organizer can end streaming of the webinar.

Table 3.25: Textual Description of UC-3.9: End Streaming

Actors:	Organizer
Description:	Organizer will end webinar streaming
Trigger:	Click on the End stream button
Preconditions:	PRE-1. Webinar is streaming
Postconditions:	POST-1. Webinar streaming will end.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on options in live streaming session. 2. Click end Stream button. 3. The stream will be ended.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	Only Organizer can end streaming session
Assumptions:	N/A

3.2.2.25 UC-25: Write Post

Table 3.26 provides details about how a user can write a post about the webinar.

Table 3.26: Textual Description of UC-4.1: Write Post

Actors:	Organizer
Description:	This will allow organizer to write post related to webinar which will be marketed.
Trigger:	Click on write icon
Preconditions:	N/A
Postconditions:	POST-1. Post will be created related to webinar.
Normal Flow:	<ol style="list-style-type: none"> 1. Go to marketing section 2. Select webinar from your organized webinars 3. Click on create post icon 4. Fill in post details 4. Click on market for email or social media
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Organizers of the webinar will be able to write post to market their webinars
Assumptions:	1. Webinar to be marketed exists

3.2.2.26 UC-26: Attach Banner

Table 3.27 provides details about how an organizer can attach banner in the webinar post.

Table 3.27: Textual Description of UC-4.2: Attach Banner

Actors:	Organizer
Description:	Organizer of the webinar can also attach the banner into the post.
Trigger:	Click on attach icon
Preconditions:	N/A
Postconditions:	POST-1. Banner will be attached with the post
Normal Flow:	<ol style="list-style-type: none"> 1. Create Marketing Post. 2. Select attachment icon 3. Attach banner. 4. Press ok
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Organizers can attach post for webinar marketing
Assumptions:	<ol style="list-style-type: none"> 1. Webinar to be marketed exists

3.2.2.27 UC-27: Attach Link

Table 3.28 provides details about how a user can attach link into the post.

Table 3.28: Textual Description of UC-4.3: Attach Link

Actors:	Organizer.
Description:	Organizer of the webinar can also attach the link into the post.
Trigger:	Click on attach icon
Preconditions:	PRE-1: Marketing Post is created
Postconditions:	POST-1: Link will be attached with the post.
Normal Flow:	<ol style="list-style-type: none"> 1. Create Marketing Post for a webinar 2. Click on Attach link 3. Click ok.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Organizers of the webinar can attach the link to the marketing post
Assumptions:	<ol style="list-style-type: none"> 1. Webinar to be marketed exists

3.2.2.28 UC-28: Choose Target Audience

Table 3.29 provides details about how an organizer can choose targeted audience for marketing.

Table 3.29: Textual Description of UC-4.4: Choose Target Audience

Actors:	Organizer
Description:	Organizer of the webinar can choose the audience for marketing
Trigger:	Select audience button

Preconditions:	PRE-1 Marketing Post is created
Postconditions:	POST-1. Selected audience will be targeted for marketing.
Normal Flow:	<ol style="list-style-type: none"> 1. Create marketing post 2. Select audience 3. Fill in the audience details such as age, interest, semesters. 4. Click confirm.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Organizers of the webinar can perform this action
Assumptions:	N/A

3.2.2.29 UC-29: Email Marketing

Table 3.30 provides details about how a user can email marketing for webinar marketing.

Table 3.30: Textual Description of UC-4.5: Email Marketing

Actors:	Organizer
Description:	Organizer will be able to advertise the webinar via email marketing
Trigger:	Click email marketing button
Preconditions:	PRE-1. Marketing Post is created
Postconditions:	POST-1. Email marketing will be used for the respective webinar.
Normal Flow:	<ol style="list-style-type: none"> 1. Go to marketing section 2. Click on use email marketing 3. Fill in the details or select the webinar to be marketed. 4. Choose Target Audience 5. Click Ok
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Organizer of the webinar can market webinar with email marketing
Assumptions:	1. Webinar to be marketed exists

3.2.2.30 UC-30: Social Media Marketing

Table 3.31 provides details about how a user can social media marketing.

Table 3.31: Textual Description of UC-4.6: Social Media Marketing

Actors:	Organizer.
Description:	This will allow organizers to market their webinar using social media marketing techniques
Trigger:	Click on use Social Media Marketing

Preconditions:	PRE-1. Marketing Post is created
Postconditions:	POST-1. Webinar will be advertised on available social media platform
Normal Flow:	<ol style="list-style-type: none"> 1. Go to Marketing Section 2. Click on Social Media Marketing 3. Select from available platforms 4. Fill in the webinar details or select webinar to be marketed 5. Click on Market Webinar
Alternative Flows:	N/A
Exceptions:	1. One or more details are invalid
Business Rules	BR-1: Only Organizers of the can market webinar to social media
Assumptions:	N/A

3.2.2.31 UC-31: Search Banner Template

Table 3.32 provides details about how a user can search for a specific banner template.

Table 3.32: Textual Description of UC-5.1: Search Banner Template

Actors:	Organizer
Description:	User could search for banner template.
Trigger:	Type into search field.
Preconditions:	N/A
Postconditions:	POST-1. Banner will be searched
Normal Flow:	<ol style="list-style-type: none"> 1. Go to Banner Generator Section 2. Click on search templates tab 3. Type in the name for template 4. Select from the list of templates
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Organizers can search banner templates
Assumptions:	N/A

3.2.2.32 UC-32: Select Banner Template

Table 3.33 provides details about how a user can select a banner template.

Table 3.33: Textual Description of UC-5.2: Select Banner Template

Actors:	Organizer
Description:	This will allow organizer to select template for banner generation.
Trigger:	Select Banner Box.
Preconditions:	N/A
Postconditions:	POST-1. Template will be selected for the banner.

Normal Flow:	1. List of templates will be displayed in banner generator section. 2. Select template of choice.
Alternative Flows:	1. Go to Banner Generator Section 2. Search for a Template 3. Click on Template to select it for banner
Exceptions:	N/A
Business Rules	BR-1: Only Organizers can select template for banner generation
Assumptions:	N/A

3.2.2.33 UC-33: Add Images in Banner Template

Table 3.34 provides details about how a user add images to a banner template.

Table 3.34: Textual Description of UC-5.3: Add Images in Banner Template

Actors:	Organizer.
Description:	This will allow user attach logo of webinar in the banner generation
Trigger:	Click on attach logo button/ icon.
Preconditions:	PRE-1: Banner Template is selected
Postconditions:	POST-1. Logo will be attached to the banner
Normal Flow:	1. Click on attach logo icon on banner template. 2. Browse and confirm logo. 3. Click ok.
Alternative Flows:	N/A
Exceptions:	1. Logo size no appropriate. 2. Logo file type invalid
Business Rules	N/A
Assumptions:	N/A

3.2.2.34 UC-34: Input Details for Banner

Table 3.35 provides details about how a user can provide banner input details.

Table 3.35: Textual Description of UC-5.4: Input Details for Banner

Actors:	Organizer
Description:	Banner details will be added by the organizer when creating banner
Trigger:	Click add button
Preconditions:	PRE-1. Banner Template is selected
Postconditions:	POST-1. Custom details related to banner of webinar will be added into the banner
Normal Flow:	1. Select banner 2. Fill details related to banner such as title description etc. 3. Click on add button.

Alternative Flows:	<ol style="list-style-type: none"> 1. Select banner 2. Click in automatically fill in details from webinar 3. Search and select webinar 4. Details will be filled automatically
Exceptions:	1. One or more details provided are invalid
Business Rules	N/A
Assumptions:	Correct details are provided, and necessary fields are all filled.

3.2.2.35 UC-35: Generate Webinar Logo

Table 3.36 provides details about how a user can generate logo for his webinar.

Table 3.36: Textual Description of UC-5.5: Generate Webinar Logo

Actors:	Organizer
Description:	Logo for a webinar will be generated by the organizer.
Trigger:	Click on generate button
Preconditions:	N/A
Postconditions:	POST-1. Webinar Logo will be generated
Normal Flow:	<ol style="list-style-type: none"> 1. Click on Graphics Kit tab. 2. Go to logo generator. 3. Select Logo Template. 4. Input Webinar Title/Name. 5. Generate Logo
Alternative Flows:	N/A
Exceptions:	1. Logo Title/Name Left Empty

3.2.2.36 UC-36: Generate Banner

Table 3.37 provides details about how a user can generate banner.

Table 3.37: Textual Description of UC-5.6: Generate Banner

Actors:	Organizer
Description:	Banner will be generated with all the details provided by the organizer.
Trigger:	Click on generate button
Preconditions:	PRE-1. Banner details provided
Postconditions:	POST-1. Banner will be generated
Normal Flow:	<ol style="list-style-type: none"> 1. Click on banners tab. 2. Select the banner template. 3. Add all the information needed to make the banner. 4. Click on generate banner button.
Alternative Flows:	N/A
Exceptions:	1. Details provided are not correct.

Business Rules	N/A
Assumptions:	Correct details are provided, and necessary fields are all filled.

3.2.2.37 UC-37: Save Banner

Table 3.38 provides details about how a user can save banner.

Table 3.38: Textual Description of UC-5.7: Save Banner

Actors:	Organizer
Description:	Organizer can save the banner/logo generated for advertisement and other purpose.
Trigger:	Click on Save Button
Preconditions:	PRE-1. Banner/Logo has been generated.
Postconditions:	POST-1. Banner will be saved.
Normal Flow:	<ol style="list-style-type: none"> 1. Generate Banner or Logo 2. Banner/Logo will be viewed 3. Click Save Button
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.38 UC-38: View Webinars

Table 3.39 provides details about how a user can view webinars being organized on the app.

Table 3.39: Textual Description of UC-6.1: View Webinars

Actors:	Users
Description:	This will allow users to view webinars that are being organized by different organizers.
Trigger:	Webinar Feed
Preconditions:	PRE-1. User is already logged in.
Postconditions:	POST-1. User can view webinars.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on home tab. 2. User will be viewed list of all new webinar. 3. Select webinar. 4. All the details related to that webinar will be available.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.39 UC-39: View Webinars Attendee List

Table 3.40 provides details about how a user can view list of people attending the webinar.

Table 3.40: Textual Description of UC-6.2: View Webinars Attendee List

Actors:	Users
Description:	This will allow users to view webinars that are being organized by different organizers.
Trigger:	Webinar Feed
Preconditions:	PRE-1. User is already logged in.
Postconditions:	POST-1. User can view webinars.
Normal Flow:	<ul style="list-style-type: none"> 5. Click on home tab. 6. User will be viewed list of all new webinar. 7. Select webinar. 8. All the details related to that webinar will be available.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.40 UC-40: Save Webinar to Favorites

Table 3.41 provides details about how a user can save webinar to its favorites.

Table 3.41: Textual Description of UC-6.3: Save Webinar to Favorites

Actors:	User
Description:	This will allow users to save webinars as their favorites that are being organized by different organizers.
Trigger:	Favorite bookmark.
Preconditions:	PRE-1. User is already logged in.
Postconditions:	POST-1. User can save webinars to favorites.
Normal Flow:	<ul style="list-style-type: none"> 1. Click on home tab. 2. User will be viewed list of all new webinar. 3. Select webinar. 4. All the details related to that webinar will be available. 5. Click on favorite icon
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.41 UC-41: Register for Webinar

Table 3.42 provides details about how a user can register for the webinar.

Table 3.42: Textual Description of UC-6.4: Register for Webinar

Actors:	User (attendees)
Description:	This will allow users (attendees) to register for webinars.
Trigger:	Attending Button
Preconditions:	PRE-1. User is already logged in.
Postconditions:	POST-1. Webinar will be registered for the user.
Normal Flow:	<ol style="list-style-type: none"> Click on home tab. User will be viewed list of all new webinar. Select webinar. All the details related to that webinar will be available. Click on get ticket button if its not free, else click on attending button
Alternative Flows:	<ol style="list-style-type: none"> Search for a webinar View the webinar Click on Get Ticket Button if it's not free, else click on attending button
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.42 UC-42: Join/Leave Webinar Session

Table 3.43 provides details about how a user join or leave a webinar session.

Table 3.43: Textual Description of UC-6.5: Join/Leave Webinar Session

Actors:	User, Guest, Organizer
Description:	Users can leave and join the webinar session.
Trigger:	Join / leave button
Preconditions:	<ol style="list-style-type: none"> PRE-1. User is already logged in. PRE-2. User has been added to the webinar PRE-3. Webinar session has been started by organizer
Postconditions:	POST-1. User has joined or left the live webinar session
Normal Flow:	<ol style="list-style-type: none"> Go to enrolled webinars page Webinar details will become visible. Click on join session User will join the streaming Click on leave button if you want to leave.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	1. Webinar Streaming is started

3.2.2.43 UC-43: Follow Organizer

Table 3.44 provides details about how a user can follow organizer on the app.

Table 3.44: Textual Description of UC-6.6: Follow Organizer

Actors:	User, Organizer, Admin
Description:	User_can follow organizers
Trigger:	Follow Button
Preconditions:	PRE-1. User is already logged in.
Postconditions:	POST-1. User starts following the organizer.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on organizer profile. 2. Click on follow button.
Alternative Flows:	N/A
Exceptions:	Organizer is already being followed.
Business Rules	N/A
Assumptions:	User has not followed the organizer yet.

3.2.2.44 UC-44: View Organizer's Profile

Table 3.45 provides details about how a user view profile of some organizer.

Table 3.45: Textual Description of UC-6.7: View Organizer's Profile

Actors:	Organizer, User, Admin
Description:	To allow user to view organizer's profile.
Trigger:	Organizer name or organizer circular avatar.
Preconditions:	PRE-1. User is already logged in.
Postconditions:	POST-1. Organizer profile will be viewed.
Normal Flow:	<ol style="list-style-type: none"> 1. Open homepage. 2. Click on webinar 3. Click on organizer profile.
Alternative Flows:	<ol style="list-style-type: none"> 1. From any webinar page 2. Click on Organizer 3. View organizer's profile.
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.45 UC-45: Chat with Others

Table 3.46 provides details about how a user can chat with other users.

Table 3.46: Textual Description of UC-6.8: Chat with Others

Actors:	Organizer, Users
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Description:	Users can chat with other users.
Trigger:	Click message button.
Preconditions:	PRE-1. User is already logged in.
Postconditions:	POST-1. User can send each other messages.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on users chat tab 2. Click user. 3. Chat box will be opened 4. Type message.
Alternative Flows:	<ol style="list-style-type: none"> 1. Open homepage 2. Search for user. 3. Click user profile. 4. Click on message icon 5. Chat box will be opened 6. Type message.
Exceptions:	N/A
Business Rules	N/A
Assumptions:	1. User has not blocked the other user

3.2.2.46 UC-46: Rate Webinar

Table 3.47 provides details about how a user rate an attended webinar.

Table 3.47: Textual Description of UC-6.9: Rate Webinar

Actors:	User (attendees)
Description:	This will allow user to rate the webinar that have attended.
Trigger:	Click Rate Button
Preconditions:	PRE-1. User is already logged in. PRE-2. User has attended the webinar.
Postconditions:	POST-1. Rating will be posted.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on webinar you have attended. 2. Rate webinar. 3. Write review. 4. Click on ok.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	Only Users that have attended the webinar can rate it
Assumptions:	User has attended the webinar.

3.2.2.47 UC-47: Write Message

Table 3.48 provides details about how a user can write message to another user.

Table 3.48: Textual Description of UC-7.1: Write Message

Actors:	Organizers, Users
Description:	This will allow users to communicate with each other.
Trigger:	Click on send message Button.
Preconditions:	PRE-1. Users are already Logged in.
Postconditions:	POST-1. User can chat with one another
Normal Flow:	<ol style="list-style-type: none"> 1. Click on chat icon. 2. Click on Username tile you want to chat with 3. Type message. 4. Click send.
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. Message is left empty
Business Rules	N/A
Assumptions:	N/A

3.2.2.48 UC-48: Attach Files

Table 3.49nprovides details about how a user can attach files in chat.

Table 3.49: Textual Description of UC-7.2: Attach Files

Actors:	Organizer, normal users.
Description:	Users can attach files in the chat
Trigger:	Click on attach file icon
Preconditions:	PRE-1. User is logged in. PRE-2. User is on chat tab
Postconditions:	POST-1. Successful message will be displayed on uploading the attachment.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on clipper icon 2. Select the file. 3. Click ok 4. File will be attached
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. File format not supported 2. File size too large
Business Rules	N/A
Assumptions:	<ol style="list-style-type: none"> 1. File format is supported

3.2.2.49 UC-49: Mute/Unmute Chat Notifications

Table 3.50 provides details about how a user can mute/unmute chat notifications.

Table 3.50: Textual Description of UC-7.3: Mute/Unmute Chat Notifications

Actors:	Primary Actor: Organizers, Users
Description:	Users will be allowed to mute or unmute their chat notifications.

Trigger:	Toggle button for chat notifications.
Preconditions:	PRE-1. User is already logged in
Postconditions:	POST-1. Chat notification will be changed.
Normal Flow:	<ol style="list-style-type: none"> 1. Go to user chat 2. Select click on chat settings. 3. click Toggle button for chat notifications.
Alternative Flows:	<ol style="list-style-type: none"> 1. Go to chat section 2. Click on mute/unmute all toggle for chat notifications
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.50 UC-50: Block User

Table 3.51 provides details about how a user can block other users.

Table 3.51: Textual Description of UC-7.4: Block User

Actors:	Organizer, Users.
Description:	Users can block each other.
Trigger:	Click on block user option.
Preconditions:	PRE-1. User is on chat page.
Postconditions:	POST-1. User will be blocked.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on chat tab 2. right click on user you want to block. 3. a small menu will pop up 4. click block user. 5. User will be blocked.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.51 UC-51: Search Conversation

Table 3.52 provides details about how a user can search for a conversation in chat tab.

Table 3.52: Textual Description of UC-7.5: Search Conversation

Actors:	Organizers, Users
Description:	User can search for conversation in the chat list.
Trigger:	Click on search button.
Preconditions:	PRE-1. User is already logged in.
Postconditions:	POST-1. Searched Conversation will appear.

Normal Flow:	1. click on chat tab 2. Click on Search icon on top. 3. Enter chat title 4. click search
Alternative Flows:	N/A
Exceptions:	No such chat exists
Business Rules	N/A
Assumptions:	N/A

3.2.2.52 UC-52: View Conversation

Table 3.53 provides details about how a user view his conversations in chat list.

Table 3.53: Textual Description of UC-7.6: View Conversation

Actors:	Organizers, Users.
Description:	User can view conversations in the chat list.
Trigger:	Click on conversation tile in chat list.
Preconditions:	PRE-1. User is already logged in.
Postconditions:	POST-1. Conversation will be viewed.
Normal Flow:	1. click on Chats tab 2. Click on conversation tile that you want to view 3. Conversation will be viewed.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.53 UC-53: Report User

Table 3.54 provides details about how a user can report other user.

Table 3.54: Textual Description of UC-7.7: Report User

Actors:	Organizer, normal users.
Description:	Users can report other users.
Trigger:	Click on report user option
Preconditions:	PRE-1. User is already logged in
Postconditions:	POST-1. User will be reported to the admin
Normal Flow:	1. Right click on user you want to report. 2. Click on report user. 3. Select reason for reporting user. 4. Click ok

Alternative Flows:	1. Right click on user you want to report. 2. Click on report user. 3. Input Reason for reporting user. 4. Click confirm
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.54 UC-54: View Past Organized Webinar

Table 3.55 provides details about how a user can view the webinars he has organized in past.

Table 3.55: Textual Description of UC-8.1: View Past Organized Webinar

Actors:	Primary Actor: Organizer
Description:	Organizer can view the details of the webinars organized in the past.
Trigger:	Click on view webinars history.
Preconditions:	PRE-1. Webinar has been hosted successfully.
Postconditions:	POST-1. History of past webinars will be viewed
Normal Flow:	1. Click on webinars history. 2. List of past organized webinar will be displayed 3. Click on webinar you want to see history of.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Organizers can view the past organized webinars history
Assumptions:	N/A

3.2.2.55 UC-55: View Attendees of Past Organized Webinar

Table 3.56 provides details about how an organizer can view list of attendees who attended his webinars in past.

Table 3.56: Textual Description of UC-8.2: View Attendees of Past Organized Webinar

Actors:	Organizer.
Description:	Organizer can view the list of attendees that attended the specific webinar.
Trigger:	View attendees.
Preconditions:	PRE-1. User is already logged in. PRE-2. Webinar has been hosted successfully.
Postconditions:	POST-1. List of attendees that attended the webinar will be visible.
Normal Flow:	1. Click on webinars history. 2. List of past organized webinar will be displayed 3. Click on webinar you want to see list of attendees. 4. Click on people icon.

	5. List of attendees will be displayed.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.56 UC-56: View Revenue / Tickets Sold of Webinars

Table 3.57 provides details about how a user view total revenue generated from the webinars hosted.

Table 3.57: Textual Description of UC-8.3: View Revenue/Tickets Sold of Webinars

Actors:	Organizer
Description:	Organizer can view the total revenue generated from the webinars hosted.
Trigger:	View revenue Button.
Preconditions:	N/A
Postconditions:	POST-1. Revenue details tickets sold for all webinars will be viewed.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on webinar history tab. 2. Click on view webinar revenue stats.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.57 UC-57: View Revenue / Tickets Sold of One Webinar

Table 3.58 provides details about how a user view total revenue generated from a specific webinar hosted.

Table 3.58: Textual Description of UC-8.4: View Revenue/Tickets Sold of One Webinar

Actors:	Organizer
Description:	Organizer can view the stats of the tickets sold and revenue generated for one webinar.
Trigger:	View revenue Button.
Preconditions:	PRE-1. Webinar has been hosted successfully.
Postconditions:	POST-1. Revenue details related to the specific webinar will be viewed.
Normal Flow:	<ol style="list-style-type: none"> 3. Click on webinar history tab. 4. Click on webinar you want to view revenue details of. 5. Click on view webinar revenue stats.
Alternative Flows:	N/A

Exceptions:	N/A
Business Rules	N/A
Assumptions:	Webinar was not free.

3.2.2.58 UC-58: View Graphs

Table 3.59 provides details about how a user can view stats of webinar using graphs.

Table 3.59: Textual Description of UC-8.5: View Graphs

Actors:	Primary Actor: Organizer
Description:	Organizer can view stats of the past webinar in the form of graphs.
Trigger:	Click on History and Analysis Ta.
Preconditions:	N/A
Postconditions:	POST-1. Stats of webinar will be showed in graphical form.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on webinar history tab. 2. Graphs for revenue, attendees and tickets sold of all webinars will be displayed to organizer
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.59 UC-59: View Recommended Webinars

Table 3.60 provides details about how a user can view a webinar in his recommendations.

Table 3.60: Textual Description of UC-9.1: View Recommended Webinars

Actors:	User
Description:	The webinars will be recommended to the users based on their interest and previously attended webinar.
Trigger:	View Recommended Section
Preconditions:	PRE-1. User has already logged in.
Postconditions:	POST-1. Recommended webinars will be shown to user.
Normal Flow:	<ol style="list-style-type: none"> 1. Open the website / mobile app 2. Click on Search and Filters 3. Recommended webinars will be shown.
Alternative Flows:	<ol style="list-style-type: none"> 1. Open the website / mobile app 2. Go to Home 3. Recommended Webinars will be displayed on Home
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.60 UC-60: Search Webinars by Name

Table 3.61 provides details about how a user can search for a webinar by name.

Table 3.61: Textual Description of UC-9.2: Search Webinars by Name

Actors:	All Users
Description:	Users can search for the webinars by name.
Trigger:	Check box search by name.
Preconditions:	PRE-1. User has already logged in.
Postconditions:	POST-1. Webinars will be searched by name.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on home tab. 2. Click on search text field. 3. Enter webinar title. 4. Click Search.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.61 UC-61: Sort Searched Webinars by Rating

Table 3.62 provides details about how a user can sort the webinars by rating.

Table 3.62: Textual Description of UC-9.3: Sort Searched Webinars by Rating

Actors:	All Users
Description:	Users can sort the webinars by rating.
Trigger:	Check box sort by rating
Preconditions:	PRE-1. User has already logged in.
Postconditions:	POST-1. Webinars will be sorted by rating.
Normal Flow:	<ol style="list-style-type: none"> 1. Search for webinar 2. Check the sort by rating icon on Search results 3. Sort from low to high or by high to low
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.62 UC-62: Sort Searched Webinars by Date

Table 3.63 provides details about how a user can sort the webinars by date.

Table 3.63: Textual Description of UC-9.4: Sort Searched Webinars by Date

Actors:	All Users
Description:	Users can sort the webinars by date.
Trigger:	Check box sort by date.
Preconditions:	PRE-1. User has already logged in.
Postconditions:	POST-1. Searched Webinars will be sorted by date.
Normal Flow:	<ol style="list-style-type: none"> 1. Search for webinar 2. Check the sort by date icon on Search results 3. Sort from nearest date or by farthest date
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.63 UC-63: Sort Webinars by Price

Table 3.64 provides details about how a user can sort the webinars by price.

Table 3.64: Textual Description of UC-9.5: Sort Webinars by Price

Actors:	All Users
Description:	Users can sort webinars by price.
Trigger:	Check box sort by price.
Preconditions:	N/A
Postconditions:	POST-1. Webinars will be sorted by price.
Normal Flow:	<ol style="list-style-type: none"> 1. Search for webinar 2. Check the sort by price icon on Search results 3. Sort from highest price or by lowest price
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.64 UC-64: More filters

Table 3.65 provides details about how a user can apply filters while searching.

Table 3.65: Textual Description of UC-9.6: More Filters

Actors:	All Users
Description:	User will be able to apply advanced filters to search for webinars
Trigger:	Click on more filter icon.
Preconditions:	N/A
Postconditions:	POST-1. More filtering options will be visible

Normal Flow:	<ol style="list-style-type: none"> 1. Click on home tab. 2. Click on more filter's icon near search field. 3. More filters will be visible
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.65 UC-65: View Reports

Table 3.66 provides details about how admin can view report stuff from the app.

Table 3.66: Textual Description of UC-10.1: View Reports

Actors:	Primary Actor: Admin
Description:	Admin can view the reports on the app and take some action against them.
Trigger:	View reports button.
Preconditions:	PRE-1. Admin is already logged in.
Postconditions:	N/A
Normal Flow:	<ol style="list-style-type: none"> 1. Go to Admin Panel 2. Click on reports tab. 3. Click on view reports.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only Admins can view the reports of the users
Assumptions:	N/A

3.2.2.66 UC-66: Ban Users

Table 3.67 provides details about how admin can ban users from the app.

Table 3.67: Textual Description of UC-10.2: Ban Users

Actors:	Primary Actor: Admin
Description:	Admin can ban users on the app and take some action against them.
Trigger:	Ban user button.
Preconditions:	PRE-1. Admin is already logged in.
Postconditions:	POST-1. User will be banned from the application.
Normal Flow:	<ol style="list-style-type: none"> 1. Go to admin panel 2. Go to Accounts Tab 3. Search user by name or by email 4. Select User 5. Click on ban user option.

Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	BR-1: Only admins have privilege to ban the users from the application
Assumptions:	N/A

3.2.2.67 UC-67: View Banned Users

Table 3.68 provides details about how a user can view banned users.

Table 3.68: Textual Description of UC-10.3: View Banned Users

Actors:	Primary Actor: Admin
Description:	Admins can view banned users.
Trigger:	View Banned Users Button
Preconditions:	PRE-1. Admin is already logged in.
Postconditions:	POST-1. Admin can view banned.
Normal Flow:	<ol style="list-style-type: none"> 1. Go to Admin Panel 2. Click on Accounts 3. Click on banned users 4. List of Banned Users will be displayed.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.68 UC-68: Remove Ban

Table 3.69 provides details about how admin can remove ban from a user.

Table 3.69: Textual Description of UC-10.4: Remove Ban

Actors:	Admin
Description:	Admins can remove user ban.
Trigger:	Unban Button Icon
Preconditions:	N/A
Postconditions:	POST-1. User is unbanned.
Normal Flow:	<ol style="list-style-type: none"> 1. Go to Admin Panel 2. Click on Accounts tab 3. Click on banned users 4. List of Banned Users will be displayed. 5. Click on Unban Icon

Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	User is banned

3.2.2.69 UC-69: Delete Webinars

Table 3.70 provides details about how an admin can delete webinar from the app.

Table 3.70: Textual Description of UC-10.5: Delete Webinars

Actors:	Primary Actor: Admin
Description:	Admin can also delete webinars directly from the admin panel.
Trigger:	Delete button.
Preconditions:	N/A
Postconditions:	POST-1. Webinar will be deleted
Normal Flow:	<ol style="list-style-type: none"> 1. Go to Admin Panel 2. Click on webinars tab 3. List of webinars will be displayed. 4. Click on delete webinar button next to webinar title you want to delete.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.70 UC-70: Approve Users

Table 3.71 provides details about how admin can approve user who applied for organizer account.

Table 3.71: Textual Description of UC-71: Approve Users

Actors:	Primary Actor: Admin
Description:	Admin will approve users who want to be organizers in the application.
Trigger:	Approve user button.
Preconditions:	PRE-1. Admin is already logged in.
Postconditions:	POST-1. User will be approved.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on requests tab. 2. List of users waiting for approval will be displayed. 3. Click on username. 4. Check details. 5. Click approve.

Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	User is not already approved.

3.2.2.71 UC-71: Approve Webinars

Table 3.72 provides details about how admin can approve user who applied for organizer account.

Table 3.72: Textual Description of UC-72: Approve Webinars

Actors:	Primary Actor: Admin
Description:	Admin will approve webinars requested by the organizers
Trigger:	Approve user button.
Preconditions:	PRE-1. Admin is already logged in.
Postconditions:	POST-1. Webinar will be approved.
Normal Flow:	<ol style="list-style-type: none"> 6. Click on requests tab. 7. List of webinars waiting for approval will be displayed. 8. Click on webinar name. 9. Check details. 10. Click approve.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	Webinar is not already approved.

3.2.2.72 UC-72: Broadcast Message

Table 3.73 provides details about how admin can broadcast message to all users of the application.

Table 3.73: Textual Description of UC-10.7: Broadcast Message

Actors:	Admin
Description:	Admin can broadcast a message to all users at once from the admin panel
Trigger:	Broadcast Message button
Preconditions:	N/A
Postconditions:	POST-1. A message will be broadcasted by admin to all the current users.
Normal Flow:	<ol style="list-style-type: none"> 1. Go to Admin Panel. 2. Click on Broadcast Message Button. 3. Type a Message 4. Click Broadcast.

Alternative Flows:	N/A
Exceptions:	1. Message field is empty.
Business Rules	N/A
Assumptions:	N/A

3.2.2.73 UC-73: Write Message to Chatbot

Table 3.74 provides details about how a user can write message to chatbot.

Table 3.74: Textual Description of UC-11.1: Write Message to Chatbot

Actors:	All Users
Description:	Users can chat with AI conversational chat bot get assistance.
Trigger:	Click on Chatbot Icon.
Preconditions:	N/A
Postconditions:	POST-1. User will get assistance from ai chat bot.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on home tab. 2. Click on chat bot icon. 3. Write Message. 4. Click send
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.74 UC-74: View Chatbot Responses

Table 3.75 provides details about how a user can view chatbot response.

Table 3.75: Textual Description of UC-11.2: View Chatbot Responses

Actors:	All Users
Description:	User can view the responses generated by the chat bot.
Trigger:	Send Message to Chatbot
Preconditions:	N/A
Postconditions:	POST-1. Chatbot response can be viewed
Normal Flow:	<ol style="list-style-type: none"> 1. Click on home tab. 2. Click on chat bot icon. 3. Start conversation with chatbot 4. Responses messages will be displayed.
Alternative Flows:	N/A
Exceptions:	N/A

Business Rules	N/A
Assumptions:	N/A

3.2.2.75 UC-75: Open Links

Table 3.76 provides details about how a user can open links generated by chatbot.

Table 3.76: Textual Description of UC-11.3: Open Links

Actors:	All Users
Description:	User will be open to link that are suggested by chatbot for support
Trigger:	Click on link.
Preconditions:	N/A
Postconditions:	POST-1. Link will be opened.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on home tab. 2. Click on chat bot icon. 3. Click on link suggested by chat bot.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.76 UC-76: Payment with Stripe

Table 3.77 provides details about how a user can make payment using stripe.

Table 3.77: Textual Description of UC-12.1: Payment with Stripe

Actors:	User
Description:	Users of the app will pay for webinars via stripe payment gateway.
Trigger:	Click on pay button
Preconditions:	N/A
Postconditions:	POST-1. Payment via stripe will be done
Normal Flow:	<ol style="list-style-type: none"> 1. Click on webinar details 2. Click on get ticket button 3. Fill in Card details or load saved card 4. Confirm Payment with Stripe 5. Authenticate Payment with Code sent in message.
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. Stripe not available in the region 2. Card is blocked or did not work
Business Rules	N/A
Assumptions:	Stripe is enabled for the specific region.

3.2.2.77 UC-77: Input Credit/Debit Card Details

Table 3.78 provides details about how a user can provide card details for payment.

Table 3.78: Textual Description of UC-12.2: Input Credit/Debit Card Details

Actors:	User
Description:	Users of the app will be able to enter credit/debit card details for payment purposes.
Trigger:	Payment with Stripe
Preconditions:	N/A
Postconditions:	POST-1. All input details related to the card will be provided and request will be made for payment or details can be saved for later use.
Normal Flow:	<ol style="list-style-type: none"> Click on get ticket button for any paid webinar. Select payment method stripe. Provide card details and fill all necessary fields. Click proceed.
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> Stripe not available in the region Invalid Details are provided.
Business Rules	N/A
Assumptions:	N/A

3.2.2.78 UC-78: Save Card Details

Table 3.79 provides details about how a user can save card details.

Table 3.79: Textual Description of UC-12.3: Save Card Details

Actors:	User
Description:	Users of the app will pay for webinars by providing all input details of the card and save them for later payments.
Trigger:	Click on save button
Preconditions:	PRE-1: Correct Card details are provided and confirmed
Postconditions:	POST-1. All input details related to the card will be provided and details will be saved to make late payments easier.
Normal Flow:	<ol style="list-style-type: none"> During any payment input card details Provide card details and fill all necessary fields. Click save for later.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rules	N/A
Assumptions:	N/A

3.2.2.79 UC-79: View Invoice

Table 3.80 provides details about how a user can view invoice for the payment he has made.

Table 3.80: Textual Description of UC-12.4: View Invoice

Actors:	Users
Description:	Users can view the invoice of the payment they have made for the webinar.
Trigger:	Click on view invoice button
Preconditions:	PRE-1. A successful Payment was made
Postconditions:	POST-1. Invoice can be viewed or saved by the user.
Normal Flow:	<ol style="list-style-type: none"> 1. Click on get ticket button for any webinar 2. Provide payment details 3. Select pay 4. Payment successful screen will open 5. Click on view invoice 6. Click on save invoice to save it on your system
Alternative Flows:	N/A
Exceptions:	Payment not successful
Business Rules	N/A
Assumptions:	Payment has been made successfully

3.3 Functional Requirements

Following are the functional requirements of Webinar Prime.

3.3.1 Functional Requirements of UC-1: Register

3.3.1.1 FR-1: Validate Registration

Identifier	FR-1
Title	validate registration
Requirement	Once the user has entered email and password, his registration will be validated at the backend.
Source	Organizer, normal user.
Rationale	Registration will be validated.
Business Rule	None
Dependencies	
Priority	High

3.3.1.2 FR-2: Register User

Identifier	FR-2
Title	Register user
Requirement	The user will click on register button
Source	Organizer, normal user.
Rationale	User will be registered
Business Rule	None
Dependencies	
Priority	High

3.3.2 Functional Requirements of UC-2: Sign In

3.3.2.1 FR-3: Login User

Identifier	FR-3
Title	Login user.
Requirement	User will press the login button that will check user credential and then login user into the application.
Source	Admin, organizer, normal user.
Rationale	User will login.
Business Rule	None
Dependencies	
Priority	Low

3.3.3 Functional Requirements of UC-3: Sign Out

3.3.3.1 FR-4: Sign Out

Identifier	FR-4
Title	Sign out
Requirement	User will be logged out of the app
Source	Admin, organizer, normal user
Rationale	To log out user.
Business Rule	
Dependencies	FR-3

Priority	High
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3.3.4 Functional Requirements of UC-4: Turn On/Off Notification

3.3.4.1 FR-5: Turn On/Off Notification

Identifier	FR-5
Title	Turn on/off notification.
Requirement	User can turn on notification for the application.
Source	Organizer, normal user.
Rationale	Allow users to turn on notification.
Business Rule	None
Dependencies	None
Priority	High

3.3.5 Functional Requirements of UC-5: Forget Password

3.3.5.1 FR-6: Forgot Password

Identifier	FR-6
Title	Forgot Password
Requirement	The user will click on the forgot password button and will be redirected to the help page. Where he can reset his password.
Source	Organizer, admin, normal user.
Rationale	User can reset his password.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.6 Functional Requirements of UC-6: Change Password

3.3.6.1 FR-7: Change Password

Identifier	FR-7
Title	Change Password

Requirement	The user will click on the change password button, and he can enter his old password and new password to change it
Source	Organizer, admin, normal user.
Rationale	User can change his password.
Business Rule	None
Dependencies	FR-3
Priority	Medium

3.3.7 Functional Requirements of UC-7: Keep Signed In

3.3.7.1 FR-8: Keep Signed In

Identifier	FR-8
Title	keep signed in
Requirement	The user will click on the check box to stay signed in.
Source	Organizer, normal user
Rationale	User will stay signed in once logged in even ho closes the application.
Business Rule	None
Dependencies	None
Priority	Low

3.3.8 Functional Requirements of UC-8: Delete Account

3.3.8.1 FR-9: Delete Account

Identifier	FR-9
Title	Delete account
Requirement	The user will click on delete account button and enter password.
Source	Organizer, normal user
Rationale	User account will be deleted.
Business Rule	None
Dependencies	FR-3, FR-1
Priority	Low

3.3.9 Functional Requirements of UC-9: Edit Account Details

3.3.9.1 FR-10: Change Username

Identifier	FR-10
Title	Change username
Requirement	Users can change their username under edit account details section.
Source	Organizer, normal user
Rationale	Username will be changed
Business Rule	None
Dependencies	FR-3
Priority	Medium

3.3.9.2 FR-11: Upload Picture

Identifier	FR-11
Title	Upload picture
Requirement	User can upload the new profile picture to replace the old
Source	Organizer, normal user.
Rationale	Profile picture will be replaced.
Business Rule	None
Dependencies	FR-3
Priority	Medium

3.3.9.3 FR-12: Update Details

Identifier	FR-1.10.3 FR-12
Title	Update details
Requirement	User can update the details of the account after some changes by click on update button
Source	Admin, Organizer, normal user.
Rationale	Account details will be updated.
Business Rule	None
Dependencies	FR-3
Priority	Low

3.3.10 Functional Requirements of UC-10: Create New Webinar

3.3.10.1 FR-13: Create New Webinar

Identifier	FR-13
Title	Create New Webinar
Requirement	Organizers can create a new webinar. organizer provides all the necessary details such as webinar title, description timings etc. and new webinar will be created.
Source	Organizer
Rationale	To allow organizer to create the webinars.
Business Rule	None
Dependencies	None
Priority	High

3.3.10.2 FR-14: Browse and Add Images

Identifier	FR-14
Title	Browse and Add Images
Requirement	Organizer can also add images from the device into the webinar.
Source	Organizer
Rationale	To allow organizer to add images into the webinar.
Business Rule	None
Dependencies	FR-2.1.1
Priority	High

3.3.11 Functional Requirements of UC-11: View Webinar

3.3.11.1 FR-15: View Webinar Details

Identifier	FR-15
Title	View Webinar Details

Requirement	User can view the details of the webinar such just by clicking on webinar tile.
Source	Normal users (attendee)
Rationale	Webinar details will be displayed.
Business Rule	None
Dependencies	None
Priority	Low

3.3.11.2 FR-16: View Webinar Schedule

Identifier	FR-16
Title	View Webinar Schedule
Requirement	User can view the schedule of the webinar such by clicking on webinar tile.
Source	Normal users (attendee)
Rationale	Webinar schedule will be displayed.
Business Rule	None
Dependencies	None
Priority	Low

3.3.11.3 FR-17: View Webinar Organizers and Speakers

Identifier	FR-17
Title	View Webinar Organizers and Speakers
Requirement	User can view the organizers and speakers of the webinar in details section of the webinar.
Source	Normal users (attendee)
Rationale	Webinar organizer and speaker's details will be displayed.
Business Rule	None
Dependencies	None
Priority	Low

3.3.11.4 FR-18: View Webinar Date

Identifier	FR-18
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Title	View Webinar Date
Requirement	User can view the date of the webinar on which it will be held.
Source	Normal users (attendee)
Rationale	Webinar date will be displayed.
Business Rule	None
Dependencies	None
Priority	Low

3.3.11.5 FR-19: Go to Webinar Links

Identifier	FR-19
Title	Go to Webinar Links
Requirement	User can visit the different link added by the organizer in webinar details.
Source	Normal users (attendee)
Rationale	Webinar links will be opened.
Business Rule	None
Dependencies	None
Priority	Low

3.3.12 Functional Requirements of UC-12: Edit Webinar

3.3.12.1 FR-20: Edit Webinar Details.

Identifier	FR-20
Title	Edit Webinar Details.
Requirement	Organizer of the webinar can edit details of the webinar.
Source	Organizer
Rationale	The details of webinar will be edited.
Business Rule	None
Dependencies	None
Priority	Low

3.3.13 Functional Requirements of UC-13: Add/Remove Organizer/Guest

3.3.13.1 FR-21: Search for User

Identifier	FR-21
Title	Search for User
Requirement	Organizer can search for the user which is to be added or removed from the webinar's users list.
Source	Organizer
Rationale	Searched user will be displayed if found.
Business Rule	None
Dependencies	None
Priority	Low

3.3.13.2 FR-22: Add as Organizer

Identifier	FR-22
Title	Add as Organizer
Requirement	Organizer can also add other organizer into the webinar for assistance.
Source	Organizer
Rationale	New organizer will be added to webinar.
Business Rule	None
Dependencies	None
Priority	Low

3.3.13.3 FR-23: Add as Guest

Identifier	FR-2.4.3 FR-23
Title	Add as Guest
Requirement	Organizer of the webinar can add some users as guest to the webinar.
Source	Organizer
Rationale	User will be added to the webinar as a guest.
Business Rule	None
Dependencies	None

Priority	Low
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3.3.13.4 FR-24: Remove Organizer

Identifier	FR-24
Title	Remove Organizer
Requirement	Organizer of the webinar can remove the already added organizer from the organizer list.
Source	Organizer
Rationale	organizer will be removed from webinar's organizer list.
Business Rule	None
Dependencies	FR-22
Priority	Low

3.3.13.5 FR-25: Remove Guest

Identifier	FR-25
Title	Remove Guest
Requirement	Organizer of the webinar can remove the already added guest from the guest list.
Source	Organizer
Rationale	Guest will be removed from webinar's guest list.
Business Rule	None
Dependencies	FR-23
Priority	Low

3.3.14 Functional Requirements of UC-14: Add/Remove Users

3.3.14.1 FR-26: Search for User

Identifier	FR-26
Title	Search for User
Requirement	Organizer can search for the user which is to be added or removed from the webinar's users list.

Source	Organizer
Rationale	Searched user will be displayed if found.
Business Rule	None
Dependencies	None
Priority	Low

3.3.14.2 FR-27: Add User to Webinar

Identifier	FR-27
Title	Add user to webinar
Requirement	Organizer of the webinar can add some user to the webinar.
Source	Organizer
Rationale	User will be added to the webinar.
Business Rule	None
Dependencies	None
Priority	Low

3.3.14.3 FR-28: Remove User from Webinar

Identifier	FR-28
Title	Remove User from Webinar
Requirement	Organizer of the webinar can remove the already added user from the user's list.
Source	Organizer
Rationale	User will be removed from user list.
Business Rule	None
Dependencies	FR-27
Priority	Low

3.3.15 Functional Requirements of UC-15: Post Notifications

3.3.15.1 FR-29: Post Notification Message

Identifier	FR-29
Title	Post message
Requirement	Organizer can post the message once it is typed by clicking the post button. This message will be sent to all the added users of the webinar.
Source	Organizer
Rationale	Notification message will be posted.
Business Rule	None
Dependencies	None
Priority	Low

3.3.16 Functional Requirements of UC-16: Start Webinar Streaming

3.3.16.1 FR-30: Start Stream

Identifier	FR-30
Title	Start Stream
Requirement	Organizer can start the streaming of the webinar so that other can join in.
Source	Organizer
Rationale	Streaming will be started.
Business Rule	None
Dependencies	None
Priority	Low

3.3.17 Functional Requirements of UC-17: Turn On/Off Camera

3.3.17.1 FR-31: Give Permission to Access Camera

Identifier	FR-31
Title	Give Permission to Access Camera

Requirement	Users must give access to the application to allow camera usage. Otherwise, video sharing feature won't work
Source	Organizer, normal users.
Rationale	Camera of the device will be given access.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.17.2 FR-32: Turn on Camera

Identifier	FR-32
Title	Turn On Camera
Requirement	Users can turn on the camera if they want to share the video calling.
Source	Organizer, guest.
Rationale	Camera will be turned on.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.17.3 FR-33: Turn Off Camera

Identifier	FR-33
Title	Turn Off Camera
Requirement	Users can turn off the camera if they don't want to share the video calling.
Source	Organizer, guest.
Rationale	Camera will be turned off.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.18 Functional Requirements of UC-18: Mute/Unmute Audio

3.3.18.1 FR-34: Give Permission to Access Microphone

Identifier	FR-34
Title	Give Permission to Access Microphone
Requirement	Users will have to give access to microphone if they want to use mic.
Source	Organizer, guest, normal user
Rationale	Access to the mic will be given.
Business Rule	None
Dependencies	None
Priority	High

3.3.18.2 FR-35: Mute Audio

Identifier	FR-35
Title	Mute Audio
Requirement	Users can also mute the audio if they don't want to participate in the webinar.
Source	Organizer, guest, normal user
Rationale	Audio of the user will be muted.
Business Rule	None
Dependencies	FR-34
Priority	Medium

3.3.18.3 FR-36: Unmute Audio

Identifier	FR-36
Title	Unmute Audio
Requirement	Users can also Unmute the audio if they want to participate in the webinar.
Source	Organizer, guest, normal user
Rationale	Audio of the user will be Unmuted.
Business Rule	None
Dependencies	None

Priority	Medium
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3.3.19 Functional Requirements of UC-19: Switch Focus Between Speakers

3.3.19.1 FR-37: Switch Focus Between Speakers

Identifier	FR-37
Title	Switch Focus Between Speakers
Requirement	Organizer can also change the focus on speakers
Source	Organizer
Rationale	To give control to the organizer of highlighting speakers in the meeting.
Business Rule	None
Dependencies	FR-3.4.1
Priority	High

3.3.20 Functional Requirements of UC-20: Screen Share

3.3.20.1 FR-38: Turn on Screenshare

Identifier	FR-38
Title	Turn on Screenshare
Requirement	User can also share the screen of their device if they want to share something. Other users will be shown the shared screen on their devices.
Source	Organizer, guest.
Rationale	Screen will be shared.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.20.2 FR-39: Select Screen to Share

Identifier	FR-39
Title	Select Screen to Share

Requirement	User can select the screen tab which they want to share from their device. They can also share the whole screen as well.
Source	Organizer, guest.
Rationale	Specific screen tab will be shared.
Business Rule	None
Dependencies	FR-38
Priority	Medium

3.3.20.3 FR-40: Cancel Screenshare

Identifier	FR-40
Title	Cancel Screenshare
Requirement	User can also stop the screen sharing by clicking on the cancel screen share. This will end the screen sharing.
Source	Organizer, guest.
Rationale	Screen sharing will be ended.
Business Rule	None
Dependencies	FR-38
Priority	High

3.3.21 Functional Requirements of UC-21: Streaming Room Chat

3.3.21.1 FR-41: Open Room Chat

Identifier	FR-41
Title	Open Room Chat
Requirement	User can also open the room chat along with streaming.
Source	Organizer, guest, normal user
Rationale	Room chat will be opened.
Business Rule	None
Dependencies	None
Priority	Low

3.3.21.2 FR-42: Send Message in Room Chat

Identifier	FR-42
Title	Send Message
Requirement	User can send the message into the room chat. message will be visible to all other users in the chat.
Source	Organizer, guest, normal user
Rationale	Message will be sent
Business Rule	None
Dependencies	None
Priority	High

3.3.21.3 FR-43: Hide Room Chat

Identifier	FR-43
Title	Hide Room Chat
Requirement	User can also hide the room chat by minimizing it.
Source	Organizer, guest, normal user
Rationale	Room chat will be hidden.
Business Rule	None
Dependencies	FR-41
Priority	High

3.3.22 Functional Requirements of UC-22: Ask a Question

3.3.22.1 FR-44: Post Question

Identifier	FR-44
Title	Post Question
Requirement	After writing a question user can post it in ask question section. The question will be visible to all other participants.
Source	Organizer, guest, normal user
Rationale	Question will be posted by the user.
Business Rule	None
Dependencies	None

Priority	High
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3.3.22.2 FR-45: View Questions of Other Users

Identifier	FR-45
Title	View Questions of Other Users
Requirement	Users can also view the questions posted by other users.
Source	Organizer, guest, normal user
Rationale	Questions posted by other users will be visible
Business Rule	None
Dependencies	None
Priority	High

3.3.22.3 FR-46: View Answers

Identifier	FR-46
Title	View Answers
Requirement	Users can view the answers to the posted questions in the questions section.
Source	Team Member
Rationale	Answers to the questions will be displayed.
Business Rule	None
Dependencies	None
Priority	High

3.3.23 Functional Requirements of UC-23: Kick User

3.3.23.1 FR-47: Remove User from Stream

Identifier	FR-47
Title	Remove User from Stream
Requirement	the organizer of the webinar can also remove users from the stream.
Source	Organizer

Rationale	This is needed to allow organizer to have control of the webinar so that he can remove those participants that are creating problem or some other reasons as well.
Business Rule	None
Dependencies	None
Priority	High

3.3.24 Functional Requirements of UC-24: End Streaming

3.3.24.1 FR-48: End Stream

Identifier	FR-48
Title	End Stream
Requirement	Organizer can end the stream. Once the stream is ended the meeting will be closed and everyone will be removed from meeting.
Source	Organizer.
Rationale	After the webinar is completed, organizer can end the stream.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.25 Functional Requirements of UC-25: Write Post

3.3.25.1 FR-49: Write Post Message

Identifier	FR-49
Title	Write Post Message
Requirement	Organizer of the webinar can write a post message. Once he post that message, it will be shared with all the participants.
Source	Organizer
Rationale	To allow organizer to post something about seminar and share with other users
Business Rule	None

Dependencies	None
Priority	High

3.3.26 Functional Requirements of UC-26: Attach Banner

3.3.26.1 FR-50: Choose and Attach Banner Image

Identifier	FR-50
Title	Choose and Attach Banner Image
Requirement	As organizer can share the webinar banner on different platforms. It can also choose the banner and it will be attached to the webinar.
Source	Organizer
Rationale	To allow user to add image into the banner to make it more attractive.
Business Rule	None
Dependencies	None
Priority	High

3.3.27 Functional Requirements of UC-27: Attach Link

3.3.27.1 FR-51: Attach link of the Webinar

Identifier	FR-51
Title	Attach link of the webinar
Requirement	As organizer can attach webinar link to banner
Source	Organizer
Rationale	To allow user to add link into the banner
Business Rule	None
Dependencies	None
Priority	High

3.3.28 Functional Requirements of UC-28: Choose Target Audience

3.3.28.1 FR-52: Choose Audience Student Semesters

Identifier	FR-52
Title	Choose Audience Student Semesters
Requirement	For marketing purpose, organizer can choose the semester of the audience so that the maximum number of related and interested user can be reached using ai marketing.
Source	Organizer
Rationale	To allow organizer to target the audience of the specific semester.
Business Rule	None
Dependencies	None
Priority	High

3.3.28.2 FR-53: Choose Audience Age

Identifier	FR-53
Title	Choose Audience Age
Requirement	For marketing purpose, organizer can choose the age of the audience so that the maximum number of related and interested user can be reached using ai marketing.
Source	Organizer
Rationale	To allow organizer to target the audience of the specific age.
Business Rule	None
Dependencies	None
Priority	High

3.3.28.3 FR-54: Choose Audience Interest

Identifier	FR-54
Title	Choose Audience Interest
Requirement	For marketing purpose, organizer can choose the audience of specific interest so that the maximum number of related and interested user can be reached using ai marketing.
Source	Organizer

Rationale	To allow organizer to target the audience of the specific interest.
Business Rule	None
Dependencies	None
Priority	High

3.3.29 Functional Requirements of UC-29: Email Marketing

3.3.29.1 FR-55: Market your Webinar through Email

Identifier	FR-55
Title	Market your Webinar through Email
Requirement	this will allow organizer to market the webinar using email marketing.
Source	Organizer
Rationale	Users of interest related to the webinar will be sent a custom email with all the details on their email address so that they notified about the webinar of their interest even if they miss the webinar on the new feed.
Business Rule	None
Dependencies	None
Priority	High

3.3.30 Functional Requirements of UC-30: Social Media Marketing

3.3.30.1 FR-56: Market your Webinar to social media

Identifier	FR-56
Title	Market your Webinar to social media
Requirement	this will allow organizer to market the webinar using social media marketing.
Source	Organizer
Rationale	This will allow organizer to reach the audience on social media even if they are not on the application.
Business Rule	None
Dependencies	None
Priority	High

3.3.30.2 FR-57: Select Social Media Account

Identifier	FR-57
Title	Select Social Media Account
Requirement	Organizer can once select the social media account so that he doesn't has to select every time when using social media marketing. The account will be attached to webinar prime account of the organizer.
Source	Organizer.
Rationale	Social media account is selected which is to be used for social media marketing.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.31 Functional Requirements of UC-31: Search Banner Template

3.3.31.1 FR-58: Search Templates for Logo/Banners

Identifier	FR-58
Title	Search Templates for Logo/Banners
Requirement	User can enter the template name in search box and press search. The results of the found template will be displayed
Source	Organizer
Rationale	To view the results of the search templates.
Business Rule	None
Dependencies	None
Priority	High

3.3.32 Functional Requirements of UC-32: Select Banner Template

3.3.32.1 FR-59: Select Template from available Logo/Banner Templates

Identifier	FR-59
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Title	Select Template from available Logo/Banner Templates
Requirement	User can select the banner template from the templates available.
Source	Organizer
Rationale	To allow organizer to select the template for banner/logo generation from the list of available templates
Business Rule	None
Dependencies	FR-58
Priority	High

3.3.33 Functional Requirements of UC-33: Add Images in Banner Template

3.3.33.1 FR-60: Add Images in Banner Template

Identifier	FR-60
Title	Add Images in Banner Template
Requirement	User can add images in banner template
Source	Organizer
Rationale	To allow organizers to add images in banner template for banner generation
Business Rule	None
Dependencies	FR-59
Priority	High

3.3.34 Functional Requirements of UC-34: Input Details for Banner

3.3.34.1 FR-61: Enter Details for Banner Template

Identifier	FR-61
Title	Enter details for Banner Template
Requirement	User can enter the details of the webinar. The details will be added to banner template.
Source	Organizer.
Rationale	to add details of the webinar on the banner to make it more attractive.
Business Rule	N/A

Dependencies	N/A
Priority	Medium

3.3.34.2 FR-62: Automatically Fill Details of Webinar

Identifier	FR-62
Title	Automatically Fill Details of Webinar
Requirement	It is hectic for user to fill the details of the webinar one by one into the banner. So automatically filling details will help in this.
Source	Organizer
Rationale	To allow users to fill the details directly into the banner.
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.34.3 FR-63 Edit Details in Banner Template

Identifier	FR-63
Title	Edit Details in Banner Template
Requirement	Organizer can also edit the details of the webinar in the banner.
Source	Organizer
Rationale	To allow organizer to edit details of the webinar they have added.
Business Rule	None
Dependencies	FR-61
Priority	Medium

3.3.35 Functional Requirements of UC-35: Generate Webinar Logo

3.3.35.1 FR-64: Generate Webinar Logo

Identifier	FR-64
Title	Generate Webinar Logo
Requirement	User can generate the logo for the webinar.
Source	Organizer.

Rationale	To all organizer to generate webinar logo.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.36 Functional Requirements of UC-36: Generate Banner

3.3.36.1 FR-65: Generated Webinar Banner

Identifier	FR-65
Title	Generate Webinar Banner
Requirement	Organizer can generate Banner for webinar
Source	Organizer.
Rationale	To allow organizer to generate webinar banner
Business Rule	N/A
Dependencies	None
Priority	High

3.3.37 Functional Requirements of UC-37: Save Banner

3.3.37.1 FR-66: Save Banner/Logo to Device

Identifier	FR-66
Title	Save Banner/Logo to device
Requirement	After viewing the banner/logo organizer can also save the banner to the device.
Source	Team Member
Rationale	To allow organizer to save banner/logo to the device which he can then use for advertisement.
Business Rule	None
Dependencies	FR-65
Priority	High

3.3.38 Functional Requirements of UC-38: View Webinars

3.3.38.1 FR-67: View Webinars

Identifier	FR-67
Title	View Webinars
Requirement	User can view the webinars of different types that are being organized by different organizers.
Source	Normal users (attendees)
Rationale	To allow users to view the webinars.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.38.2 FR-68: View Popular Webinars

Identifier	FR-68
Title	View Popular Webinars
Requirement	User can view the popular webinars of different types that are being organized by different organizers.
Source	Normal users (attendees)
Rationale	To allow users to view the popular webinars.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.39 Functional Requirements of UC-39: View Webinars Attendee List

3.3.39.1 FR-69: View Webinar Attendees List

Identifier	FR-69
Title	View Webinar Attendees List
Requirement	Organizer can view the list of webinar attendees
Source	Users.

Rationale	To allow users to mark webinars as their favorites.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.40 Functional Requirements of UC-40: Save Webinar to Favorites

3.3.40.1 FR-70: Save to Favorites

Identifier	FR-70
Title	Save to Favorites
Requirement	Users can save the webinar as their favorites so that he can later view it in his favorites tab.
Source	Normal users (attendees)
Rationale	To allow users to mark webinars as their favorites.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.40.2 FR-71: View Favorites

Identifier	FR-71
Title	View Favorites
Requirement	Once user has marked a webinar as his favorite, he can later view it in his favorites tab.
Source	Normal users (attendees)
Rationale	To allow users to view those webinars he marked as favorites.
Business Rule	None
Dependencies	FR-70
Priority	Medium

3.3.41 Functional Requirements of UC-41: Register for Webinar

3.3.41.1 FR-72: Register for Webinar

Identifier	FR-72
Title	Register For Webinar
Requirement	User can register for webinars by providing necessary details.
Source	Normal users (attendees)
Rationale	To allow users to register for webinars.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.42 Functional Requirements of UC-42: Join/Leave Webinar Session

3.3.42.1 FR-73: Select Webinar

Identifier	FR-73
Title	Select Webinar
Requirement	Users can select the webinar they want to join.
Source	Normal users (attendees)
Rationale	To allow users to select webinar which they want to attend.
Business Rule	None
Dependencies	None
Priority	High

3.3.42.2 FR-74: Join Webinar Session

Identifier	FR-74
Title	Join Webinar Session
Requirement	Users can join the selected webinars.
Source	Normal users (attendees)
Rationale	To allow users to join the selected webinar.
Business Rule	None

Dependencies	FR-72
Priority	High

3.3.42.3 FR-75: Leave Webinar Session

Identifier	FR-75
Title	Leave Webinar Session
Requirement	Users can leave the joined webinars.
Source	Normal users (attendees)
Rationale	To allow users to leave webinar.
Business Rule	None
Dependencies	FR-74
Priority	High

3.3.43 Functional Requirements of UC-43: Follow Organizer

3.3.43.1 FR-76: Follow Organizer

Identifier	FR-76
Title	Follow Organizer
Requirement	Users can also follow organizer so that they get an update if that organizer is organizing some other event.
Source	Normal users (attendees)
Rationale	To enable users to follow organizer.
Business Rule	None
Dependencies	None
Priority	High

3.3.43.2 FR-77: Unfollow Organizer

Identifier	FR-77
Title	Unfollow Organizer
Requirement	Users can also unfollow organizer they are already following.
Source	Normal users (attendees)

Rationale	To enable users to unfollow organizer.
Business Rule	None
Dependencies	None
Priority	High

3.3.44 Functional Requirements of UC-44: View Organizer's Profile

3.3.44.1 FR-78: View Organizer's Profile

Identifier	FR-78
Title	View Organizer's Profile
Requirement	Users can also view the profile of the organizer.
Source	Team Member
Rationale	to allow users to view organizer profile and get a brief idea about organizer.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.44.2 FR-79: View Organizer's Hosted Webinars

Identifier	FR-79
Title	View Organizer's Hosted Webinars
Requirement	User can also see the list of webinars that have been hosted by a specific organizer.
Source	Normal users (attendees)
Rationale	To allow user to scroll through the list of webinars hosted by organizer.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.45 Functional Requirements of UC-45: Chat with Others

3.3.45.1 FR-80: Chat Others

Identifier	FR-80
Title	Chat Others
Requirement	User can also chat with each other using the cha feature.
Source	Normal users (attendees)
Rationale	To enable users to chat with each other.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.46 Functional Requirements of UC-46: Rate Webinar

3.3.46.1 FR-81: Add Stars

Identifier	FR-81
Title	Add Stars
Requirement	Users can add the stars will rating the webinar.
Source	Normal users (attendees)
Rationale	Stars are added to make rating simpler and fun. User can simply tap on stars from 1 to 5 for rating.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.46.2 FR-82: Add a Comment

Identifier	FR-82
Title	Add a Comment
Requirement	Users can add comments about their experience regarding the webinar. these comments will be visible to other users.
Source	Normal users (attendees)

Rationale	To allow users to add comments after they have attended.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.46.3 FR-83: Edit your Review

Identifier	FR-83
Title	Edit your Review
Requirement	User can also edit the already added review.
Source	Normal users (attendees)
Rationale	To enable users to edit their review after they have posted if they want to make some changes to it.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.46.4 FR-84: Delete your Review

Identifier	FR-84
Title	Delete your Review
Requirement	User can also delete their review.
Source	Normal users (attendees)
Rationale	To enable users to delete their review after they have posted.
Business Rule	None
Dependencies	None
Priority	Medium

3.3.47 Functional Requirements of UC-47: Write Message

3.3.47.1 FR-85: Write Message

Identifier	FR-85
Title	Write message.

Requirement	The user can write message to each other.
Source	Organizer, User
Rationale	To enable communication between users.
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.48 Functional Requirements of UC-48: Attach Files

3.3.48.1 FR-86: Browse and Attach File

Identifier	FR-86
Title	Browse and Attach File
Requirement	User will browse file from its local storage
Source	Organizer, User
Rationale	User can be able to select file he/she wants to send
Business Rule	Valid File is selected
Dependencies	N/A
Priority	Medium

3.3.49 Functional Requirements of UC-49: Mute/Unmute Chat Notifications

3.3.49.1 FR-87: Mute All Notifications

Identifier	FR-87
Title	Mute All Notifications
Requirement	User clicks mute all button.
Source	Organizer, User
Rationale	User can mute all message notifications
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.49.2 FR-88: Mute Notifications for Specific Chat

Identifier	FR-88
Title	Mute Notifications for Specific Chat
Requirement	User clicks on mute button of that chat
Source	Organizer, User
Rationale	User can mute notifications for a specific chat
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.49.3 FR-89: Unmute All Notifications

Identifier	FR-89
Title	Unmute All Notifications
Requirement	User clicks on unmute all button.
Source	Organizer, User
Rationale	User can mute all message notifications
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.49.4 FR-90: Unmute Notifications for Specific Chat

Identifier	FR-90
Title	Unmute Notifications for Specific Chat
Requirement	User clicks on Unmute Button of that Chat
Source	Organizer, User
Rationale	User can unmute notifications for a specific chat
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.50 Functional Requirements of UC-50: Block User

3.3.50.1 FR-91: Block User

Identifier	FR-91
Title	Block User
Requirement	User clicks on block button of the chat
Source	Organizer, User
Rationale	User can block chat with other users
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.50.2 FR-92: Unblock User

Identifier	FR-92
Title	Unblock User
Requirement	User clicks on unblock button of the chat
Source	Organizer, User
Rationale	User can unblock chat with other users
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.51 Functional Requirements of UC-51: Search Conversation

3.3.51.1 FR-93: Enter User's Name

Identifier	FR-93
Title	Enter User's Name
Requirement	User types in name of the user he wants to search chat for
Source	Organizer, User
Rationale	User can search for a conversation with another user

Business Rule	The conversation with the searched user exists
Dependencies	N/A
Priority	Medium

3.3.51.2 FR-94: View Search Results

Identifier	FR-94
Title	View Search Results
Requirement	N/A
Source	Organizer, User
Rationale	User can find a specific conversation with another user
Business Rule	User enters a name in search conversations to view results
Dependencies	FR-93
Priority	Medium

3.3.52 Functional Requirements of UC-52: View Conversation

3.3.52.1 FR-95: View all Conversations

Identifier	FR-95
Title	View all Conversations
Requirement	User opens chat section
Source	Organizer, User
Rationale	User can view all the conversations
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.52.2 FR-96: Open Specific Conversation

Identifier	FR-96
Title	Open Specific Conversation

Requirement	User clicks on a conversation
Source	Organizer, User
Rationale	User can open a conversation with another user
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.53 Functional Requirements of UC-53: Report User

3.3.53.1 FR-97: Select Report Reason

Identifier	FR-97
Title	Select Report Reason
Requirement	User selects reason from list of reasons given
Source	Organizer, User
Rationale	User can select a reason for the report
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.53.2 FR-98: Input Report Reason

Identifier	FR-98
Title	Input Report Reason
Requirement	User inputs reason in input field
Source	Organizer, User
Rationale	User can input any other reason if their reason was not in given list
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.53.3 FR-99: Report User

Identifier	FR-99
Title	Report User
Requirement	User clicks on report button
Source	Organizer, User
Rationale	User can confirm report the other user
Business Rule	Report reason must be selected or filled in manually
Dependencies	FR-97, FR-98
Priority	Medium

3.3.54 Functional Requirements of UC-54: View Past Organized Webinar

3.3.54.1 FR-100: View all Past Organized Webinars

Identifier	FR-100
Title	View all Past Organized Webinars
Requirement	Webinar Organizer goes to history and analysis section
Source	Webinar Organizer
Rationale	Webinar Organizer can view all the webinars organized in the past
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.54.2 FR-101: View Specific Webinar

Identifier	FR-101
Title	View Specific Webinar
Requirement	Webinar Organizer clicks on a specific webinar
Source	Webinar Organizer
Rationale	Webinar Organizer can view details of a webinars organized in the past
Business Rule	N/A
Dependencies	N/A

Priority	High
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3.3.55 Functional Requirements of UC-55: View Attendees of Past Organized Webinar

3.3.55.1 FR-102: View Attendees of Past Webinars

Identifier	FFR-102
Title	View Attendees of Past Webinars
Requirement	Webinar Organizer clicks on all attendees
Source	Webinar Organizer
Rationale	Webinar Organizer can view list of attendees of all webinars organized in the past
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.55.2 FR-103: View Attendees of Specific Webinar

Identifier	FR-103
Title	View Attendees of Specific Webinar
Requirement	Webinar Organizer clicks on a specific webinar
Source	Webinar Organizer
Rationale	Webinar Organizer can view list of attendees of specific webinar organized in the past
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.56 Functional Requirements of UC-56: View Revenue / Tickets Sold of Webinars

3.3.56.1 FR-104: View Revenue of Paid Webinars

Identifier	FR-104
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Title	View Revenue of Paid Webinars
Requirement	Webinar Organizer selects dashboard of history and analysis section
Source	Webinar Organizer
Rationale	Webinar Organizer can view revenue of all webinars organized in the past
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.56.2 FR-105: View Tickets Sold of Paid Webinars

Identifier	FR-105
Title	View Tickets Sold of Paid Webinars
Requirement	Webinar Organizer selects dashboard of history and analysis section
Source	Webinar Organizer
Rationale	Webinar Organizer can view tickets sold of all webinars organized in the past
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.57 Functional Requirements of UC-57: View Revenue / Tickets Sold of One Webinar

3.3.57.1 FR-106: View Revenue of Single Webinars

Identifier	FR-106
Title	View Revenue of Single Webinar
Requirement	Webinar Organizer clicks on a webinar from history and analysis section
Source	Webinar Organizer
Rationale	Webinar Organizer can view revenue of specific webinars organized in the past
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.57.2 FR-107: View Tickets Sold of Paid Webinars

Identifier	FR-107
Title	View Tickets Sold of Specific Webinar
Requirement	Webinar Organizer clicks on webinar from history and analysis section
Source	Webinar Organizer
Rationale	Webinar Organizer can view tickets sold of specific webinar organized in the past
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.58 Functional Requirements of UC-58: View Graphs

3.3.58.1 FR-108: View Graph of Webinars by Attendees

Identifier	FR-108
Title	View Graph of Webinar by Attendees
Requirement	Webinar Organizer selects graphs in history and analysis section
Source	Webinar Organizer
Rationale	Webinar Organizer can view all the webinars in form of graph plotted with time and number of attendees in that webinar.
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.58.2 FR-109: View Graph of Webinars by Tickets Sold

Identifier	FR-109
Title	View Graph of Webinar by Attendees
Requirement	Webinar Organizer selects graphs in history and analysis section
Source	Webinar Organizer
Rationale	Webinar Organizer can view all the webinars in form of graph plotted with time and number of tickets sold in that webinar.

Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.58.3 FR-110: View Graph of Webinars by Revenue Generated

Identifier	FR-110
Title	View Graph of Webinar by Attendees
Requirement	Webinar Organizer selects graphs in history and analysis section
Source	Webinar Organizer
Rationale	Webinar Organizer can view all the webinars in form of graph plotted with time and revenue generated for that webinar.
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.59 Functional Requirements of UC-59: View Recommended Webinars

3.3.59.1 FR-111: View Recommended Webinars

Identifier	FR-111
Title	View Recommended Webinars
Requirement	User goes to Search section
Source	User
Rationale	User can view the webinars recommended to them by AI
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.59.2 FR-112: Mark as Not Interested

Identifier	FR-112
Title	Mark as Not Interested

Requirement	User clicks on Not Interested Icon
Source	User
Rationale	User can mark as not interested so the webinar does not appear on their recommendations
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.60 Functional Requirements of UC-60: Search Webinars by Name

3.3.60.1 FR-113: Enter Webinar Name

Identifier	FR-113
Title	Enter Webinar Name
Requirement	User enters text in the search input field
Source	User
Rationale	User can search for a specific webinar event
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.60.2 FR-114: View Search Results

Identifier	FR-114
Title	View Search Results
Requirement	User clicks on search button
Source	User
Rationale	User can view the searched webinars
Business Rule	The webinar name searched exists
Dependencies	FR-113
Priority	High

3.3.61 Functional Requirements of UC-61: Sort Searched Webinars by Rating

3.3.61.1 FR-115: Sort by Rating in Ascending Order

Identifier	FR-115
Title	Sort by Rating in Ascending Order
Requirement	User clicks on Sort by Rating in Ascending Order icon
Source	User
Rationale	User can sort the searched webinars by rating in ascending order
Business Rule	N/A
Dependencies	FR-114
Priority	Medium

3.3.61.2 FR-116 Sort by Rating in Descending Order

Identifier	FR-116
Title	Sort by Rating in Descending Order
Requirement	User clicks on Sort by Rating in Descending Order icon
Source	User
Rationale	User can sort the searched webinars by rating in descending order
Business Rule	N/A
Dependencies	FR-114
Priority	Medium

3.3.61.3 FR-117: View Sorted by Rating Results

Identifier	FR-117
Title	View Sorted by Rating Results
Requirement	User clicks on Sort by Rating
Source	User
Rationale	User can view the searched webinars sorted by ratings
Business Rule	N/A
Dependencies	FR-114

Priority	Medium
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3.3.62 Functional Requirements of UC-62: Sort Searched Webinars by Date

3.3.62.1 FR-118: Sort by Nearest Date First

Identifier	FR-118
Title	Sort by Nearest Date First
Requirement	User clicks on sort by nearest date first icon
Source	User
Rationale	User can sort the searched webinars by nearest date first
Business Rule	N/A
Dependencies	FR-114
Priority	Medium

3.3.62.2 FR-119: Sort by Farthest Date First

Identifier	FR-119
Title	Sort by Farthest Date First
Requirement	User clicks on Sort by Farthest Date First icon
Source	User
Rationale	User can sort the searched webinars by farthest date first
Business Rule	N/A
Dependencies	FR-114
Priority	Medium

3.3.62.3 FR-120: View Sorted by Date Results

Identifier	FR-120
Title	View Sorted by Date Results
Requirement	User clicks on Sort by Date
Source	User

Rationale	User can view the searched webinars sorted by date
Business Rule	N/A
Dependencies	FR-114
Priority	Medium

3.3.63 Functional Requirements of UC-63: Sort Webinars by Price

3.3.63.1 FR-121: Sort by Price from Low to High

Identifier	FR-121
Title	Sort by Price from Low to High
Requirement	User clicks on sort by price form Low to High Icon
Source	User
Rationale	User can sort the searched webinars by price from Low to High
Business Rule	N/A
Dependencies	FR-114
Priority	Medium

3.3.63.2 FR-122: Sort by Price from High to Low

Identifier	FR-122
Title	Sort by Price from High to Low
Requirement	User clicks on Sort by Price from High to Low icon
Source	User
Rationale	User can sort the searched webinars by price from High to Low
Business Rule	N/A
Dependencies	FR-114
Priority	Medium

3.3.63.3 FR-123: View Sorted by Price Results

Identifier	FR-123
Title	View Sorted by Price Results

Requirement	User clicks on Sort by Price
Source	User
Rationale	User can view the searched webinars sorted by price
Business Rule	N/A
Dependencies	FR-114
Priority	Medium

3.3.64 Functional Requirements of UC-64: More filters

3.3.64.1 FR-124: Filter Webinars by Category

Identifier	FR-124
Title	Filter Webinars by Category
Requirement	User clicks on Filter by Category and Select a Category
Source	User
Rationale	User can filter webinars based on category
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.64.2 FR-125: Filter Webinars by Price Range

Identifier	FR-125
Title	Filter Webinars by Price Range
Requirement	User clicks on Filter by Price Range and Select a Price Range
Source	User
Rationale	User can filter webinars based on price range
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.64.3 FR-126: Filter Webinars by Date

Identifier	FR-126
Title	Filter Webinars by Date
Requirement	User clicks on Filter by Date and Select a Date
Source	User
Rationale	User can filter webinars based on date
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.64.4 FR-127: Filter Webinars by Rating

Identifier	FR-127
Title	Filter Webinars by Rating
Requirement	User clicks on Filter by Rating and Select a Rating
Source	User
Rationale	User can filter webinars based on rating
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.64.5 FR-128: View Filtered Webinars

Identifier	FR-128
Title	View Filtered Webinars
Requirement	User applies any filter
Source	User
Rationale	User can view the list of filtered webinars
Business Rule	N/A
Dependencies	FR-124, FR-125, FR-126, FR-127
Priority	Medium

3.3.65 Functional Requirements of UC-65: View Reports

3.3.65.1 FR-129: View Report

Identifier	FR-129
Title	View Report
Requirement	Admin Clicks on View Reports Section in Admin Panel
Source	Admin
Rationale	Admin can view the list of reports
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.65.2 FR-130: Mark as Received

Identifier	FR-130
Title	Mark as Received
Requirement	Admin will click on Mark as received icon
Source	Admin
Rationale	Admin can mark a report as received to inform the report user
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.66 Functional Requirements of UC-66: Ban Users

3.3.66.1 FR-131: Enter Username to Ban

Identifier	FR-131
Title	Enter Username to Ban
Requirement	Admin will enter text in the name input field
Source	Admin
Rationale	Admin can search for a username to ban

Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.66.2 FR-132: Select User to Ban

Identifier	FR-132
Title	Enter User to Ban
Requirement	Admin will click on user from list of found users by name
Source	Admin
Rationale	Admin can select a user to ban
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.67 Functional Requirements of UC-67: View Banned Users

3.3.67.1 FR-133: View Banned Users

Identifier	FR-133
Title	View Banned Users
Requirement	Admin will click in View Banned Users Button
Source	Admin
Rationale	Admin can view all the users banned from using the application
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.68 Functional Requirements of UC-68: Remove Ban

3.3.68.1 FR-134: Remove User Ban

Identifier	FR-134
Title	Unban User
Requirement	Admin will click on unban icon
Source	Admin
Rationale	Admin can unban user from using the application
Business Rule	N/A
Dependencies	FR-133
Priority	High

3.3.69 Functional Requirements of UC-69: Delete Webinars

3.3.69.1 FR-135: Search Webinar to Delete

Identifier	FR-135
Title	Search Webinar to Delete
Requirement	Admin will enter webinar name
Source	Admin
Rationale	Admin can search for a webinar he/she wants to delete from application
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.69.2 FR-136: Select Webinar to Delete

Identifier	FR-136
Title	Select Webinar to Delete
Requirement	Admin will select one of the searched webinars
Source	Admin
Rationale	Admin can select for a webinar he/she wants to delete from application

Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.69.3 FR-137: Delete Webinar

Identifier	FR-137
Title	Delete Webinar
Requirement	Admin will click on Delete Button
Source	Admin
Rationale	Admin can delete a webinar from the application
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.70 Functional Requirements of UC-70: Approve Users

3.3.70.1 FR-138: View Approval Requests

Identifier	FR-138
Title	View Approval Request
Requirement	Admin will click on Approve Requests Button
Source	Admin
Rationale	Admin can view all the approve requests
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.70.2 FR-139: Approve User

Identifier	FR-139
Title	Approve User

Requirement	Admin will click on Approve Button
Source	Admin
Rationale	Admin can approve the user for the application
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.71 Functional Requirements of UC-71: Approve Webinars

3.3.71.1 FR-140: Approve User

Identifier	FR-140
Title	Approve webinar
Requirement	Admin will click on Approve webinar
Source	Admin
Rationale	Admin can approve the webinar for the application
Business Rule	N/A
Dependencies	N/A

3.3.72 Functional Requirements of UC-72: Broadcast Message

3.3.72.1 FR-141: Type Message to Broadcast

Identifier	FR-141
Title	Type Message to Broadcast
Requirement	Admin will input message in text field
Source	Admin
Rationale	Admin can type message to broadcast to all users of the application
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.72.2 FR-142: Broadcast Message

Identifier	FR-142
Title	Broadcast Message
Requirement	Admin will click on Broadcast Button
Source	Admin
Rationale	Admin can broadcast message to all users of the application
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.72.3 FR-143: Edit Broadcast Message

Identifier	FR-143
Title	Edit Broadcast Message
Requirement	Admin will click on edit button
Source	Admin
Rationale	Admin can edit broadcasted message
Business Rule	N/A
Dependencies	FR-142
Priority	High

3.3.72.4 FR-144: Delete Broadcast Message

Identifier	FR-144
Title	Delete Broadcast Message
Requirement	Admin will click on delete button
Source	Admin
Rationale	Admin can delete broadcasted message
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.73 Functional Requirements of UC-73: Write Message to Chatbot

3.3.73.1 FR-145: Send Message to Chatbot

Identifier	FR-145
Title	Send Message to Chatbot
Requirement	User will send message to chatbot
Source	User
Rationale	User can send message to chatbot
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.74 Functional Requirements of UC-74: View Chatbot Responses

3.3.74.1 FR-146: View Chatbot Responses

Identifier	FR-146
Title	View Chatbot Responses
Requirement	User will open the chat with chatbot
Source	User
Rationale	User can view
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.75 Functional Requirements of UC-75: Open Links

3.3.75.1 FR-147: Open Chatbot Links

Identifier	FR-147
Title	Open Chatbot Links
Requirement	User will click on Link in Chat to open it

Source	User
Rationale	User can go to different support links suggested by chatbots
Business Rule	N/A
Dependencies	N/A
Priority	Medium

3.3.76 Functional Requirements of UC-76: Payment with Stripe

3.3.76.1 FR-148: Select Credit or Debit Card for Payment

Identifier	FR-148
Title	Select Credit or Debit Card for Payment
Requirement	User will select credit or debit card from list of added cards or input card details if no card is there
Source	User
Rationale	User can select debit or credit to advance for the payment
Business Rule	Debit or Credit card is added, or new card information is given
Dependencies	N/A
Priority	High

3.3.76.2 FR-149: Authenticate Payment

Identifier	FR-149
Title	Authenticate Payment
Requirement	User will authenticate payment with SMS code sent to him.
Source	User
Rationale	User can authenticate the payment
Business Rule	N/A
Dependencies	FR-148
Priority	High

3.3.77 Functional Requirements of UC-77 Input Credit/Debit Card Details

3.3.77.1 FR-150: Input Credit/Debit Card Details

Identifier	FR-150
Title	Input Credit/Debit Card Details
Requirement	User will input credit/debit details if he wants to make payment.
Source	User
Rationale	Enable user to make online payment.
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.78 Functional Requirements of UC-78: Save Card Details

3.3.78.1 FR-151: Save Card Details for Future Use

Identifier	FR-151
Title	Save Card Details for Future Use
Requirement	User will click save card details button to save the card or use that for payment
Source	User
Rationale	User can save credit/debit card details or use those for payment.
Business Rule	All the card information is filled correctly
Dependencies	FR-150
Priority	High

3.3.79 Functional Requirements of UC-79: View Invoice

3.3.79.1 FR-152: View Invoice

Identifier	FR-152
Title	View Invoice

Requirement	User will click on view invoice to view invoice for a payment he/she has done
Source	User
Rationale	User can view invoices for the payment done by him/her.
Business Rule	N/A
Dependencies	N/A
Priority	High

3.3.79.2 FR-153: Download Invoice

Identifier	FR-153
Title	Download Invoice
Requirement	User will click on download button to download invoice for a payment he/she has done
Source	User
Rationale	User can download invoices for the payment done by him/her.
Business Rule	N/A
Dependencies	FR-152
Priority	High

3.4 Non-Functional Requirements

Following are non-functional requirements of Webinar Prime.

3.4.1 Reliability

Webinar Prime will have following reliability requirements:

REL-1: Availability: System should be available 99% of the time.

REL-2: Mean Time Between Failures (MTBF): Mean time to failures shall exceed more than usual applications. In case of any failure the application MTBF will be improved.

REL-3: Mean Time to Repair (MTTR): Mean time to repair will not be more than several days.

REL-4: Max Bugs or Defect Rate: Bugs and Defect Rate shall be very less.

REL-5: Critical Bugs: Critical Bugs shall not be more than 1% to 2%.

3.4.2 Usability

Webinar Prime will have following useability requirements:

USE-1: Training Time: Training time should be only 30 minutes.

USE-2: Accessibility: Application should be accessible to all kinds of users.

USE-3: User Friendly: Application shall be easy to use for people above 16 years of age.

3.4.3 Performance

Performance is a key requirement of our system. Following are the performance requirements of our system:

PER-1: Render Time: The average render time should not be more than 1 second for the users with 35 Mbps or faster internet connection.

PER-2: Capacity: The system shall accommodate more than 4000 users at a time.

PER-3: Capacity: The system shall broadcast livestream to at least 1000 users at a time.

PER-4: Throughput: The system shall handle at least 8 transactions per second.

3.4.4 Security

Webinar Prime will have following security requirements:

SEC-1: Accounts Privacy: All types of users will have password protection for their accounts.

SEC-2: Server Security: The server will be deployed on secure clouds and datacenters.

3.4.5 Scalability

Webinar Prime will be scalable to accommodate a greater number of users in future.

3.5 External Interface Requirements

Following are the external interface requirements of Webinar Prime.

3.5.1 User Interfaces Requirements

Webinar will have following UI Requirements:

UI-1: The application will GUI standards and style guides of top best GUI applications.

UI-2: Material Design Icons will be used throughout the application. Complementary Color Scheme along with combination of different color schemes will be used to have the best colors. Google Fonts will be used for fonts.

UI-3: The app will be functional on all screen sizes of desktop and mobile systems. App will be responsive to all screen sizes.

UI-4: Navigation Bar and Footer Links will appear on most of the screens.

UI-5: Enter key will be used as shortcut to confirm actions.

3.5.2 Software interfaces

Webinar will use following software interfaces:

SI-1: Visual Studio Code will be used as Code Editor.

SI-2: Webinar Prime will use Node JS for backend server.

SI-3: The system will use MongoDB as database.

SI-4: Figma will be used to design UI Components.

SI-5: LiveKit Open-Source SDK will be used for live streaming server.

3.5.3 Hardware interfaces

No hardware interfaces will be used in our application.

3.5.4 Communications interfaces

Webinar Prime will use following communications interfaces:

CI-1: Webinar prime will use Gmail services for automated email marketing.

CI-2: The system will use WS, WSS, HTTP and HTTPS network protocols.

4 Design and Architecture

4.1 Architectural Design

The architecture of Webinar Prime is a three-tier architecture. The Frontend of the system or Client part of the system will be made in ReactJS, and mobile application frontend will be made with flutter. The backend server of the system and rest API will be implemented in Node, Express and Socket IO which will also communicate with LiveKit server for real time communication. Server will also communicate with Stripe API for payments. Mongo DB will be used as database.

4.1.1 Box and Line Diagram

Figure 4.1 shows the box and line diagram of Webinar Prime

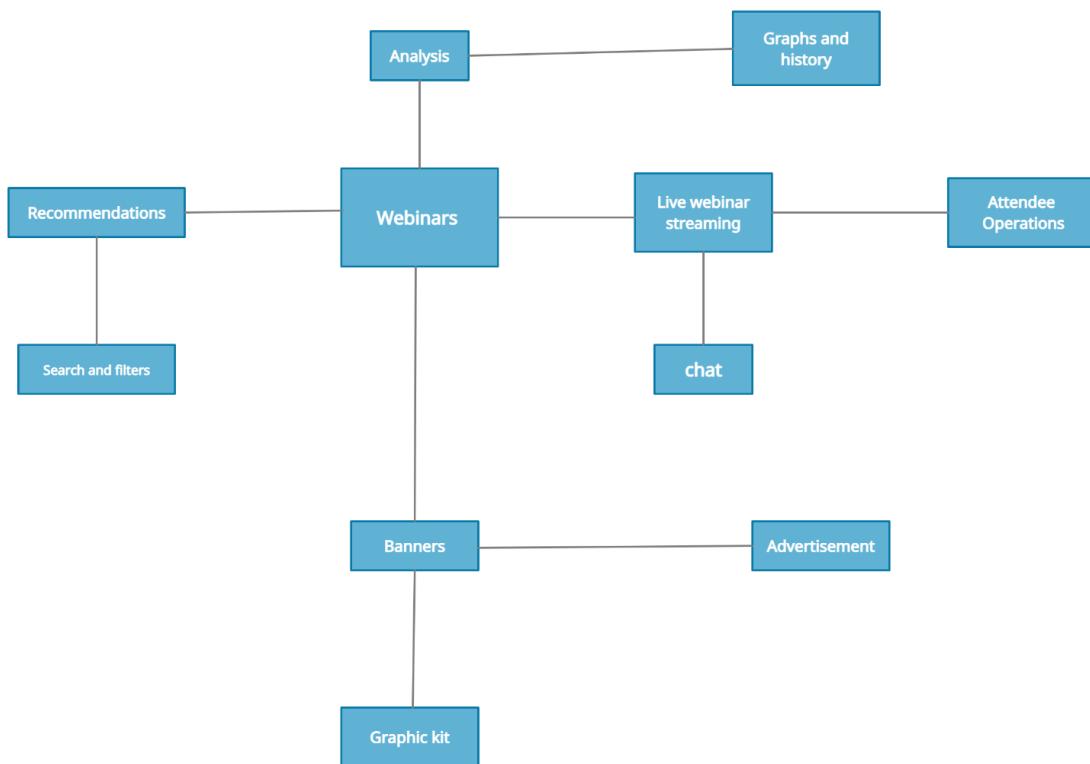


Figure 4.1: Box and Line Diagram of Webinar Prime

4.1.2 Architecture Diagram

Figure 4.2 shows the architecture diagram of Webinar Prime

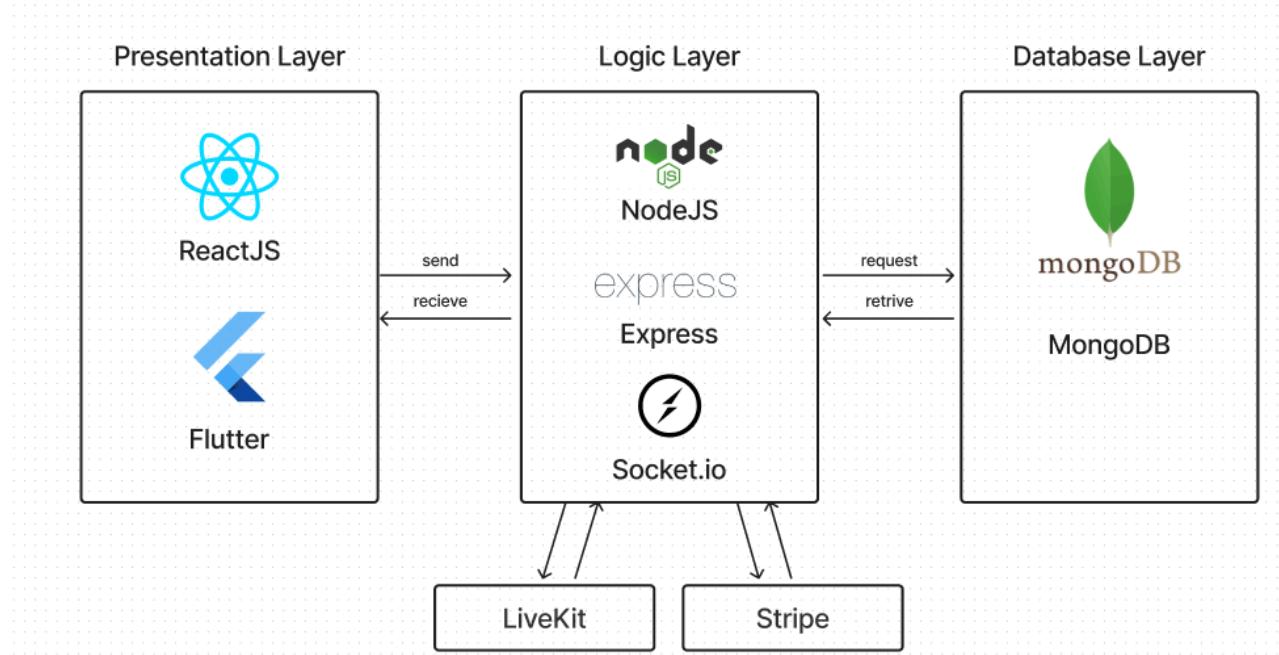


Figure 4.2: Architecture Design of Webinar Prime

4.2 Design Models

Following are the design models of Webinar Prime.

4.2.1 Activity Diagram

4.2.1.1 AD-01: Activity Diagram of Login Use Case

Figure 4.3 shows activity diagram of Login Use Case.

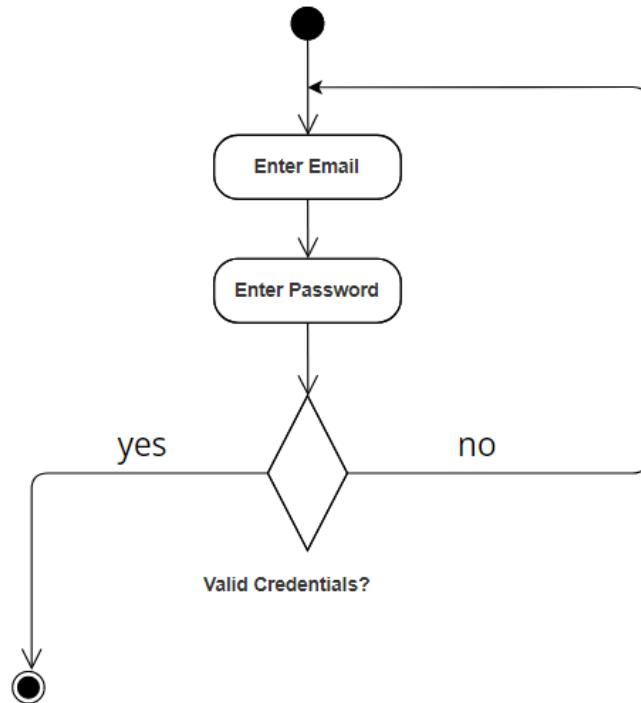


Figure 4.3: Activity Diagram of Login Use Case

4.2.1.2 AD-02: Activity Diagram of Create Webinar

Figure 4.4 shows the activity diagram of Create Webinar Use Case.

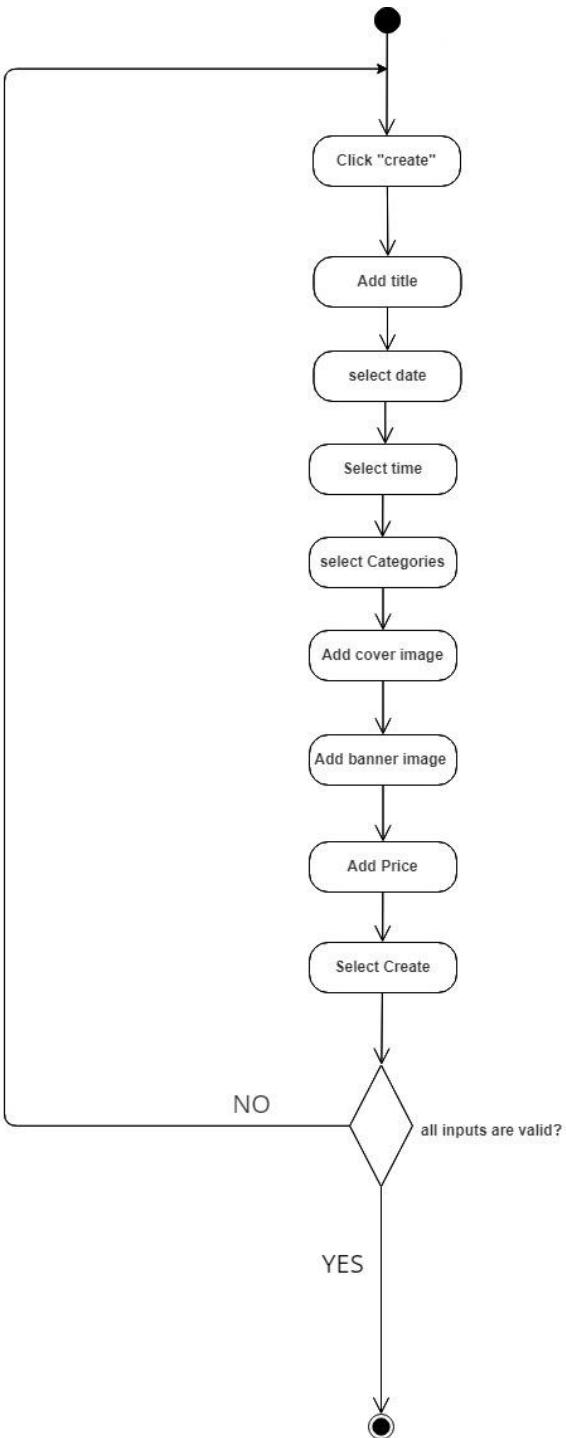


Figure 4.4: Activity Diagram of Create Webinar

4.2.1.3 AD-03: Activity Diagram of Start Webinar Stream

Figure 4.5 shows activity diagram of Start Webinar Streaming Use Case.

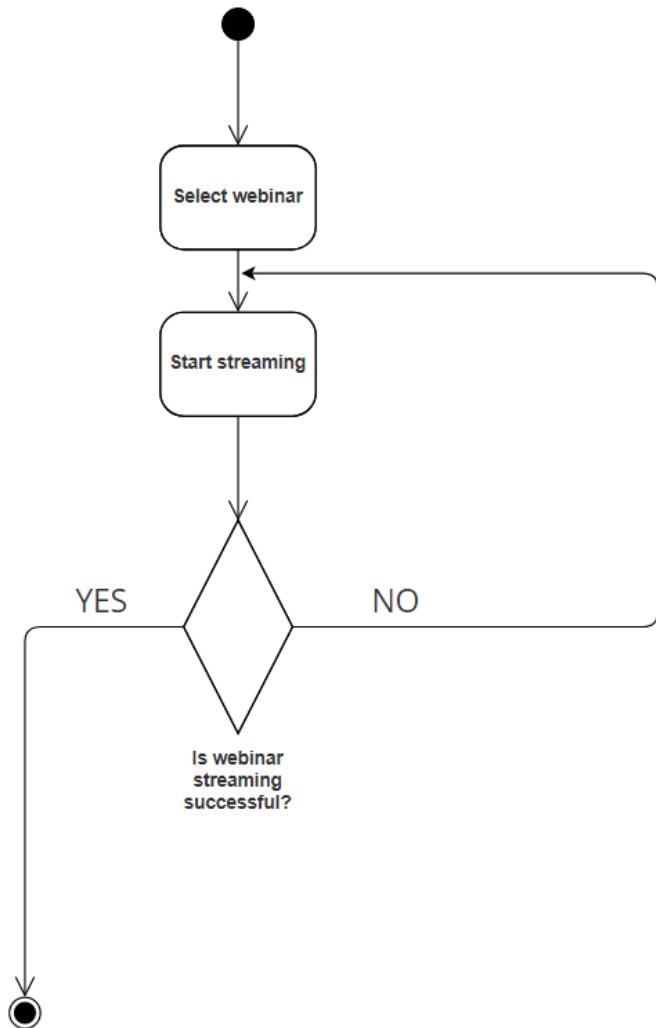


Figure 4.5: Activity Diagram of Start Webinar Stream

4.2.1.4 AD-04: Activity Diagram of Email Marketing

Figure 4.6 the activity diagram of Email Marketing Use Case.

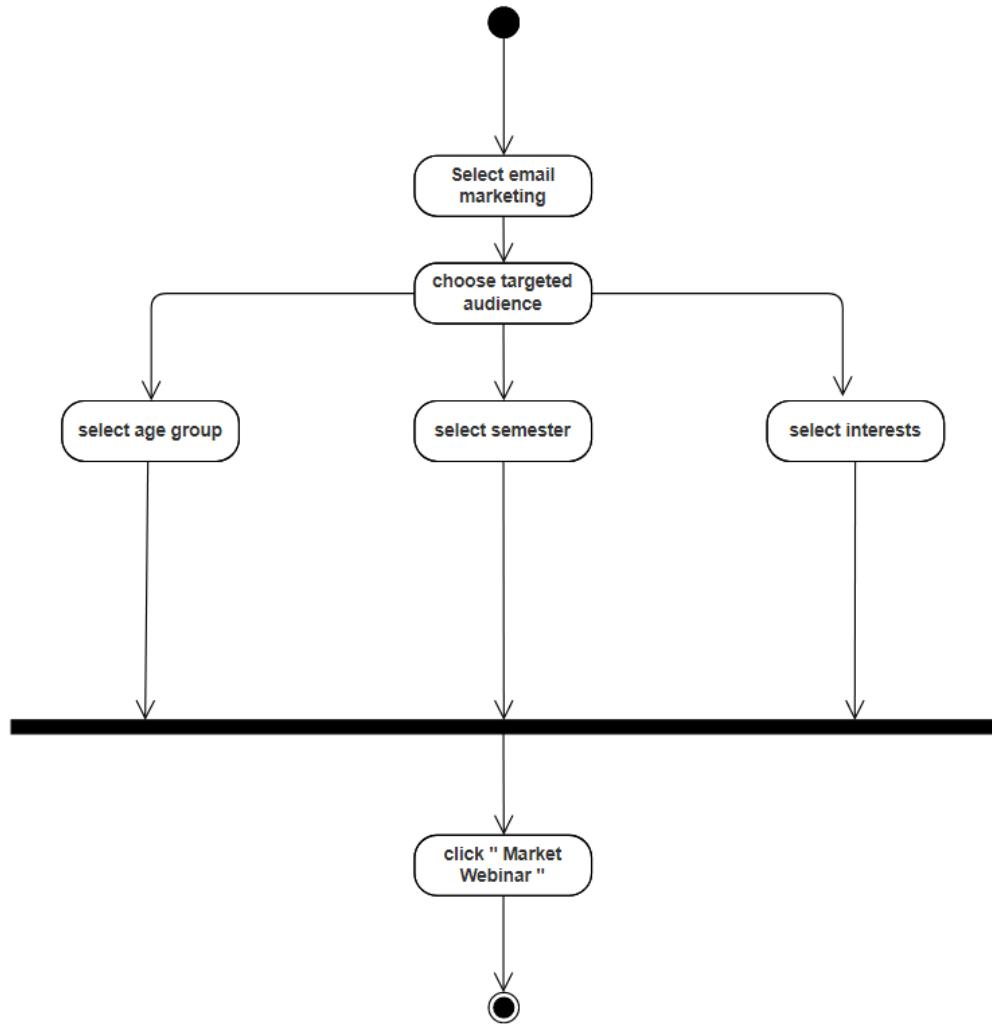


Figure 4.6: Activity Diagram of Email Marketing

4.2.1.5 AD-05: Activity Diagram of Generate Banner

Figure 4.7 shows the activity diagram of Generate Banner Use Case.

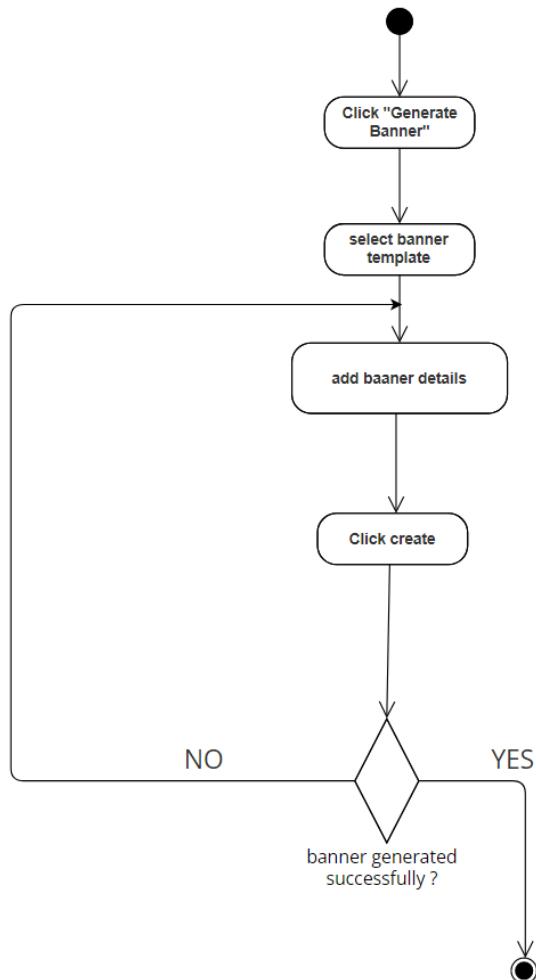


Figure 4.7: Activity Diagram of Generate Banner

4.2.1.6 AD-06: Activity Diagram of Review Webinar

Figure 4.8 shows the activity diagram of Review Webinar Use Case.

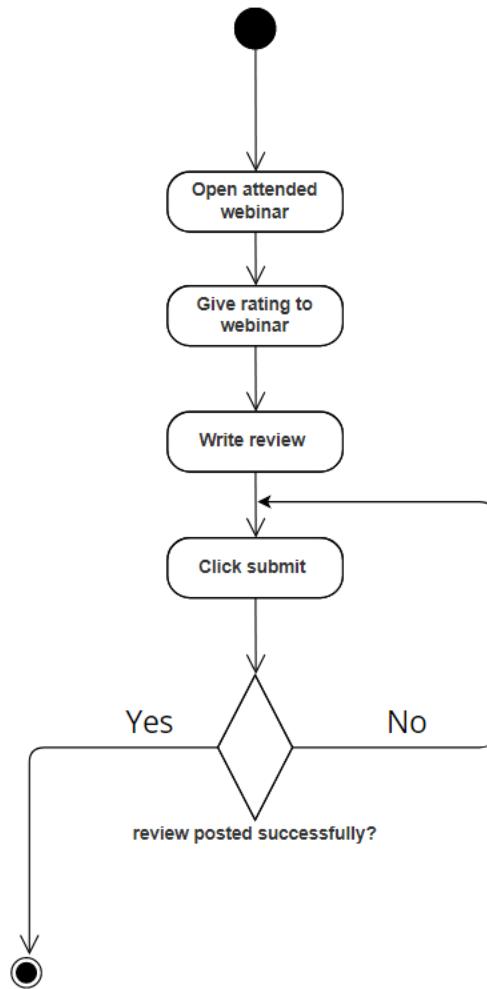


Figure 4.8: Activity Diagram of Review Webinar

4.2.1.7 AD-07: Activity Diagram of Send Message

Figure 4.9 shows the activity diagram of Send Message Use Case.

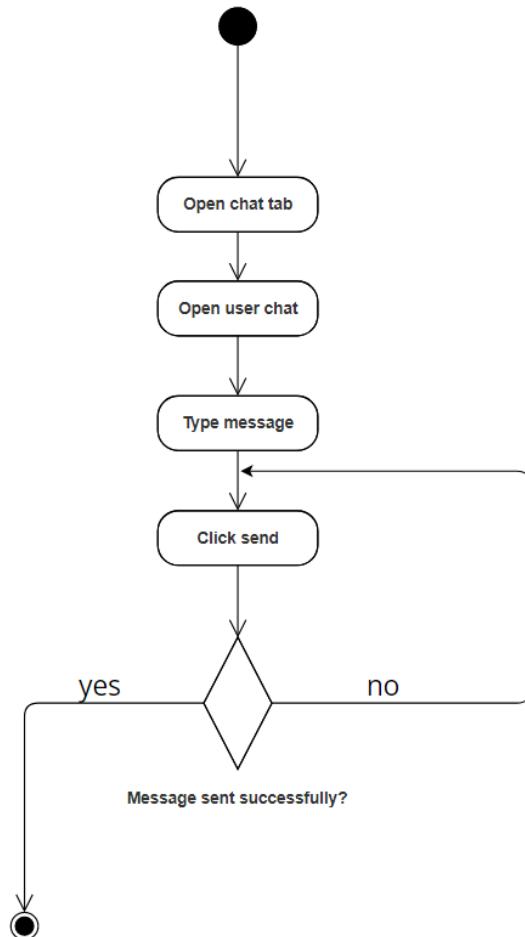


Figure 4.9: Activity Diagram of Send Message

4.2.1.8 AD-08: Activity Diagram of Search Webinar

Figure 4.10 shows the activity diagram of Search Webinar Use Case.

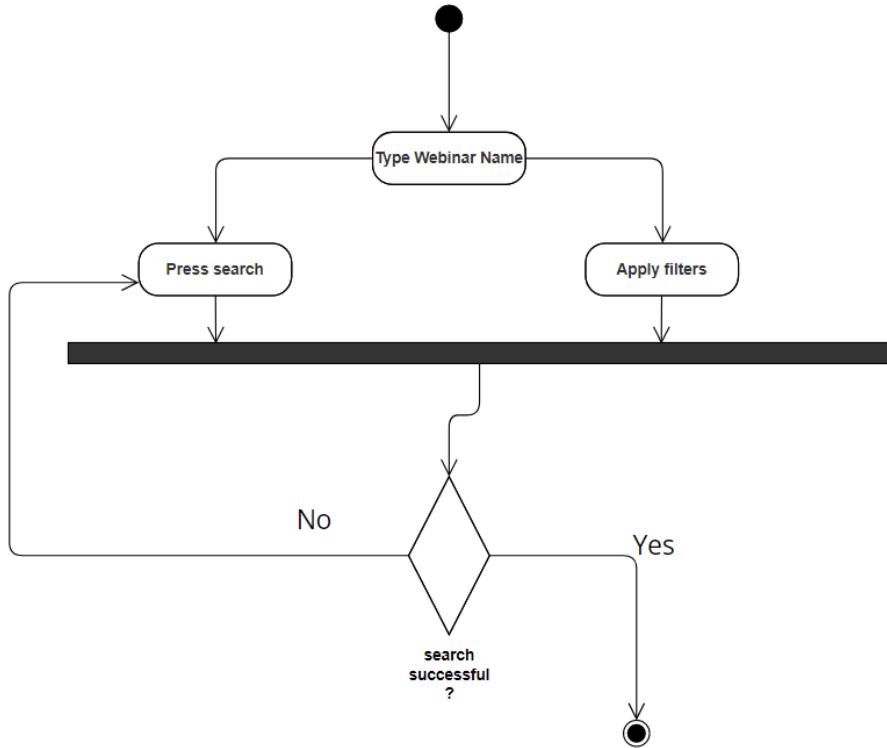


Figure 4.10: Activity Diagram of Search Webinar

4.2.1.9 AD-09: Activity Diagram of Ban User

Figure 4.11 shows the activity diagram of Ban User Use Case.

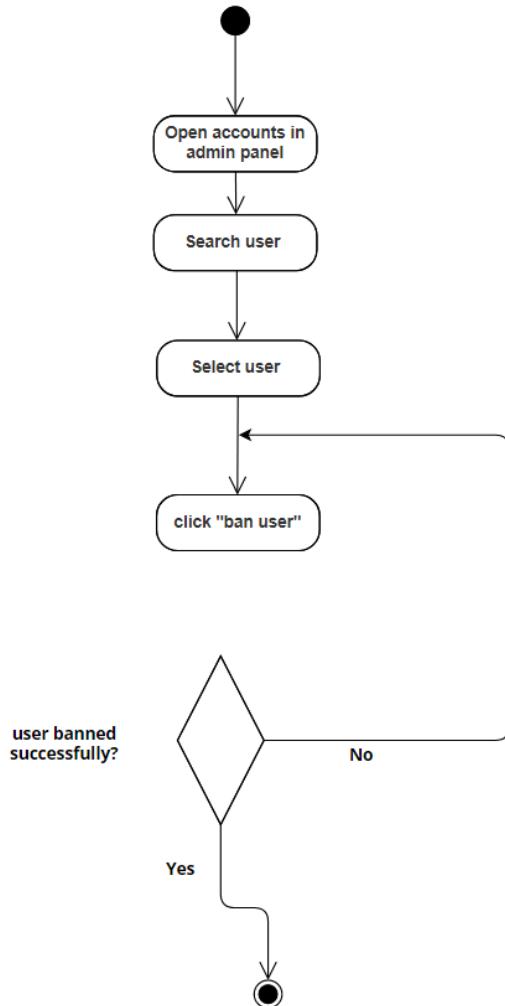


Figure 4.11: Activity Diagram of Ban User

4.2.1.10 AD-10: Activity Diagram of Payment with Stripe

Figure 4.12 shows the activity diagram of Payment with Stripe Use Case.

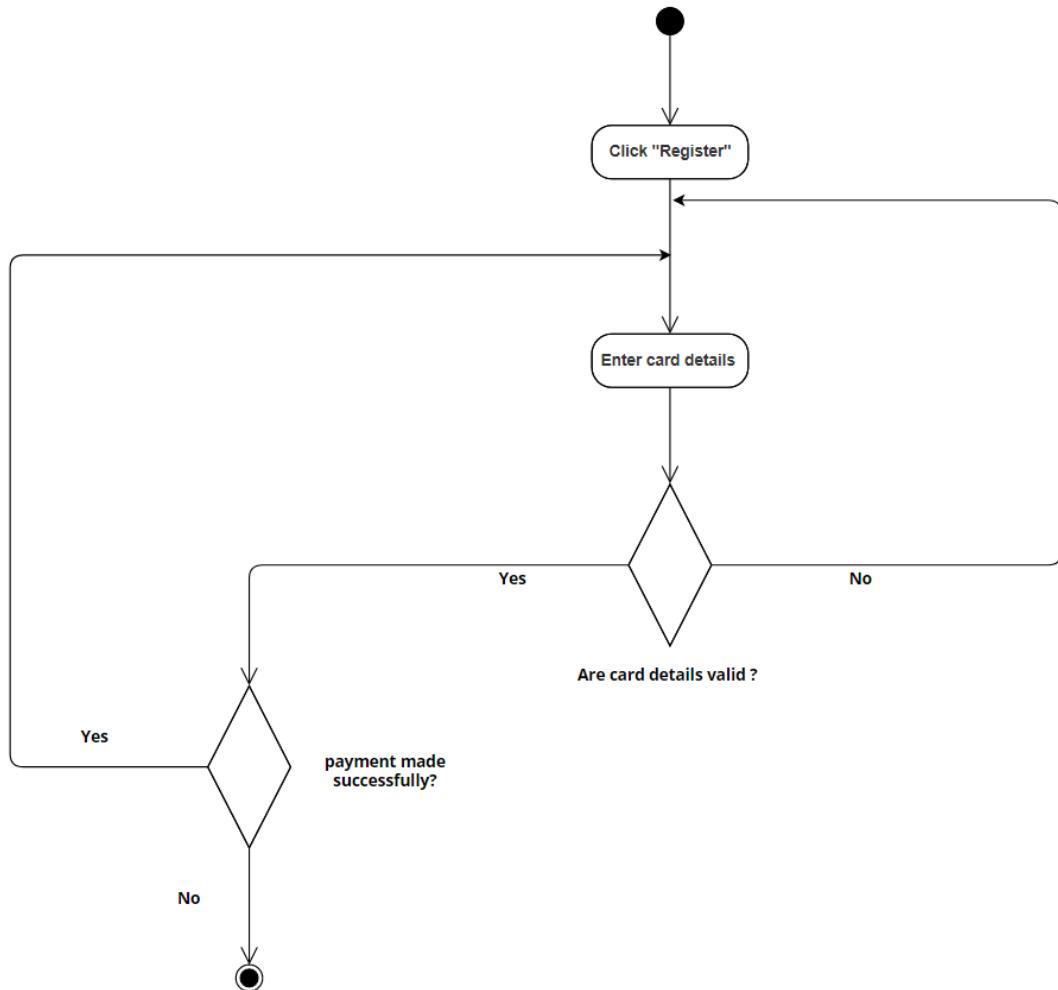


Figure 4.12: Activity Diagram of Payment with Stripe

4.2.2 Class Diagram

Figure 4.13 shows class diagram of Webinar Prime.

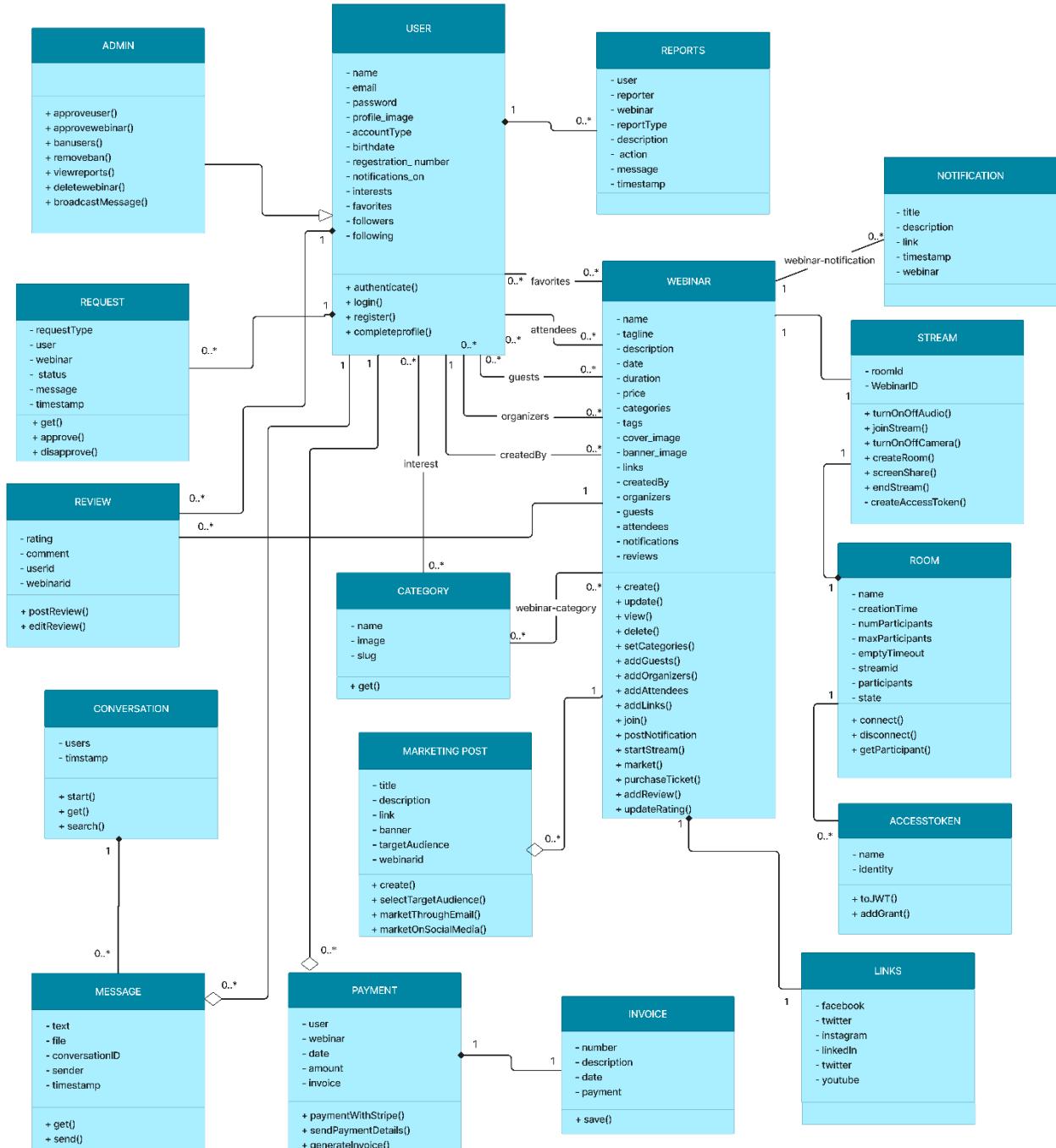


Figure 4.13: Class Diagram of Webinar Prime

4.2.2.1 Class Description

Following are the class descriptions on major classes of Webinar Prime.

User Class:

User class contains name, email, password, profile image, account type, birthdate, reg number and other fields of the user. It has getter and setter methods for all the fields and login, register, complete profile, and authentication methods.

Admin Class:

Admin class has methods to approve webinars, ban users, remove bans, view, and manage reports and getters and setters for its fields. All of the admin functions are managed in this class.

Webinar Class:

Webinar Class has all the fields required for the webinar such as name, description, date, duration, price and others. It has methods for creating, editing, and managing webinars as well as getters and setters for its fields.

Stream Class:

Webinar Stream Class has methods and fields required for starting and managing the stream. It has methods for creating room, screen sharing, end streaming, getters, and setters for data, etc.

Payment Class

Payment has a user and a webinar, amount paid, date and invoice of payment. It has getters and setters for user, webinar, amount, date, and invoice.

Message Class

Message has text or a file, sender, and its timestamp. It has getters and setters for its fields and conversation id of the conversation that message belongs to.

4.2.3 Sequence Diagram

4.2.3.1 SD-01: Sequence Diagram of Register Use Case

Figure 4.14 shows sequence diagram of Register User Use Case.

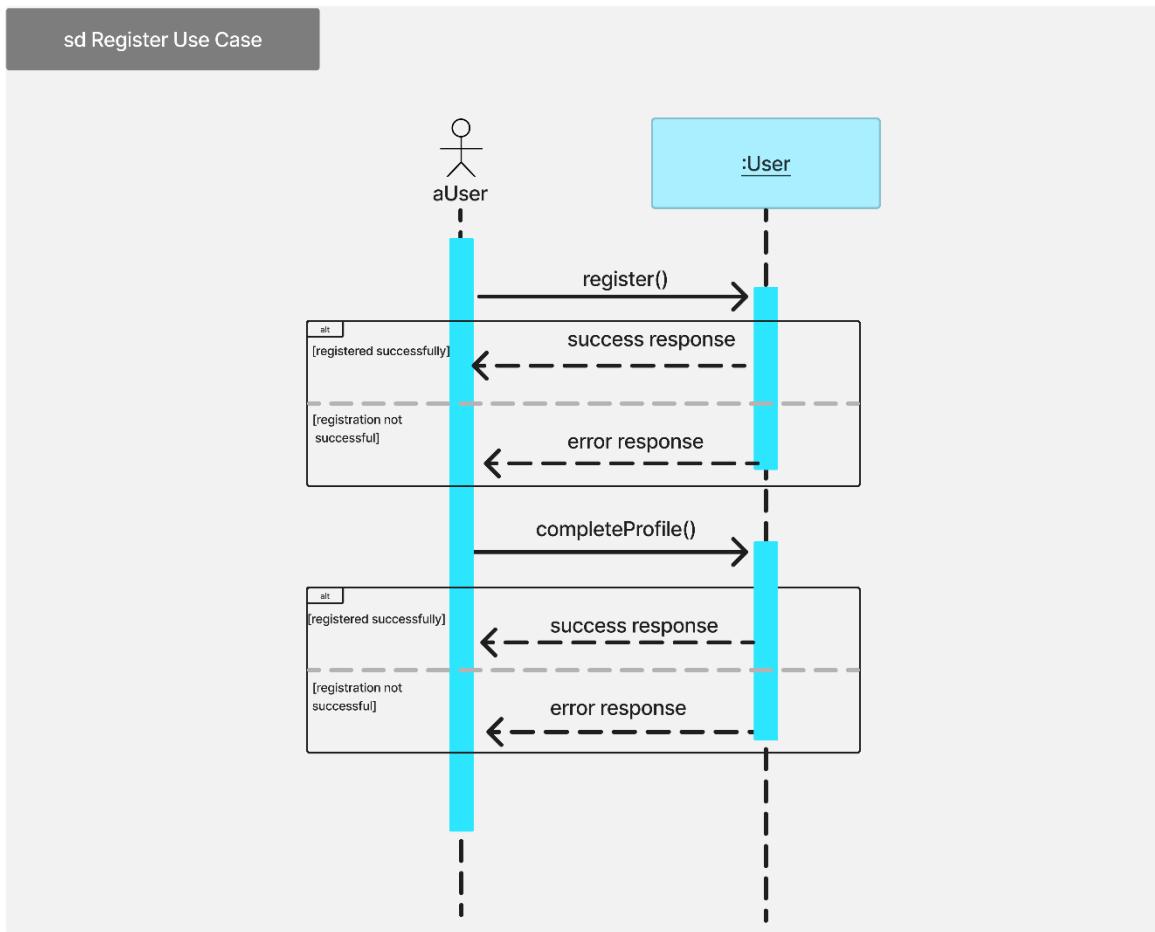


Figure 4.14: Sequence Diagram of Register Use Case

4.2.3.2 SD-02: Sequence Diagram of Create Webinar Use Case

Figure 4.15 shows sequence diagram of Create Webinar Use Case.

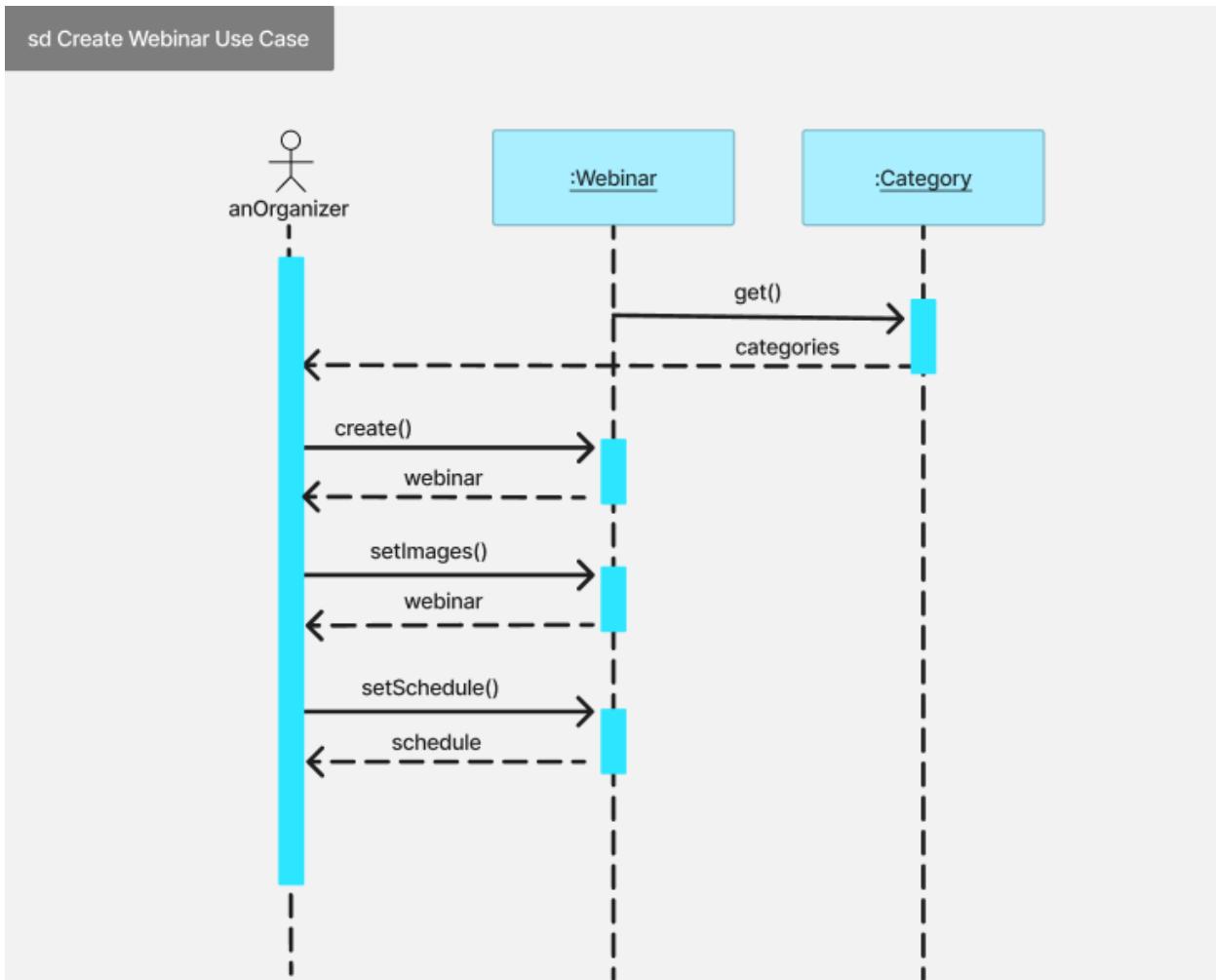


Figure 4.15: Sequence Diagram of Create Webinar Use Case

4.2.3.3 SD-03: Sequence Diagram of Start Webinar Stream Use Case

Figure 4.16 shows sequence diagram of Start Webinar Stream Use Case.

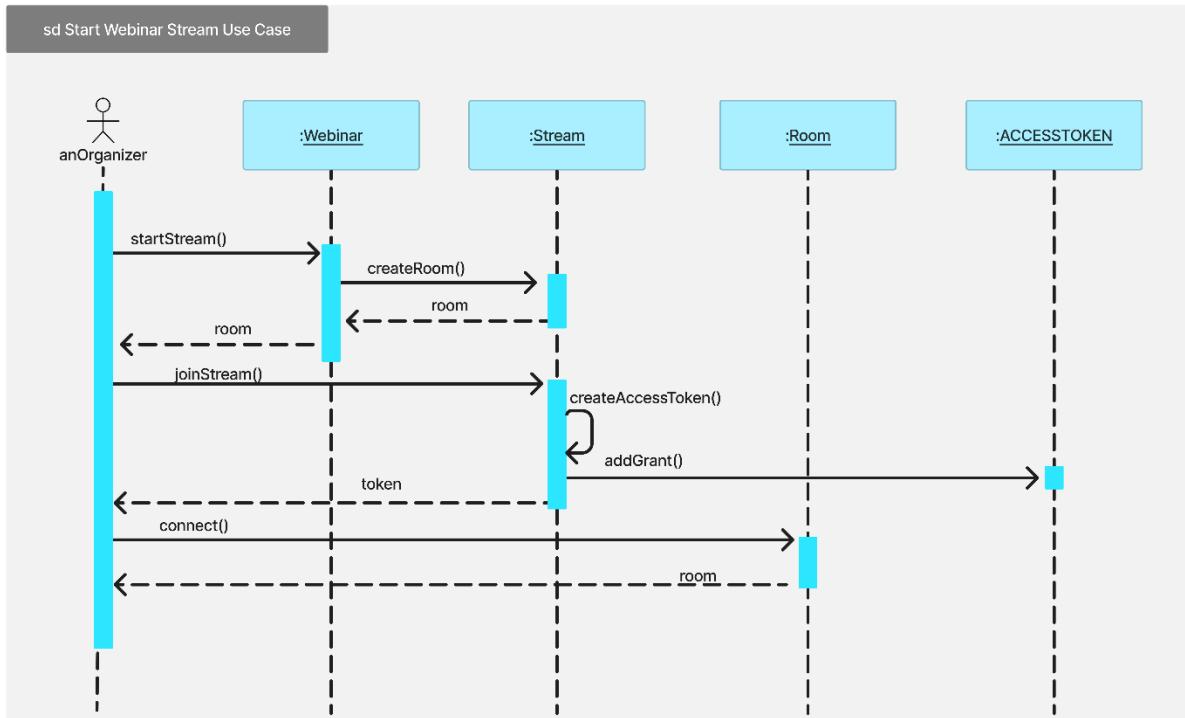


Figure 4.16: Sequence Diagram of Start Webinar Stream Use Case

4.2.3.4 SD-04: Sequence Diagram of Market Webinar Use Case

Figure 4.17 shows sequence diagram of Market Webinar Use Case.

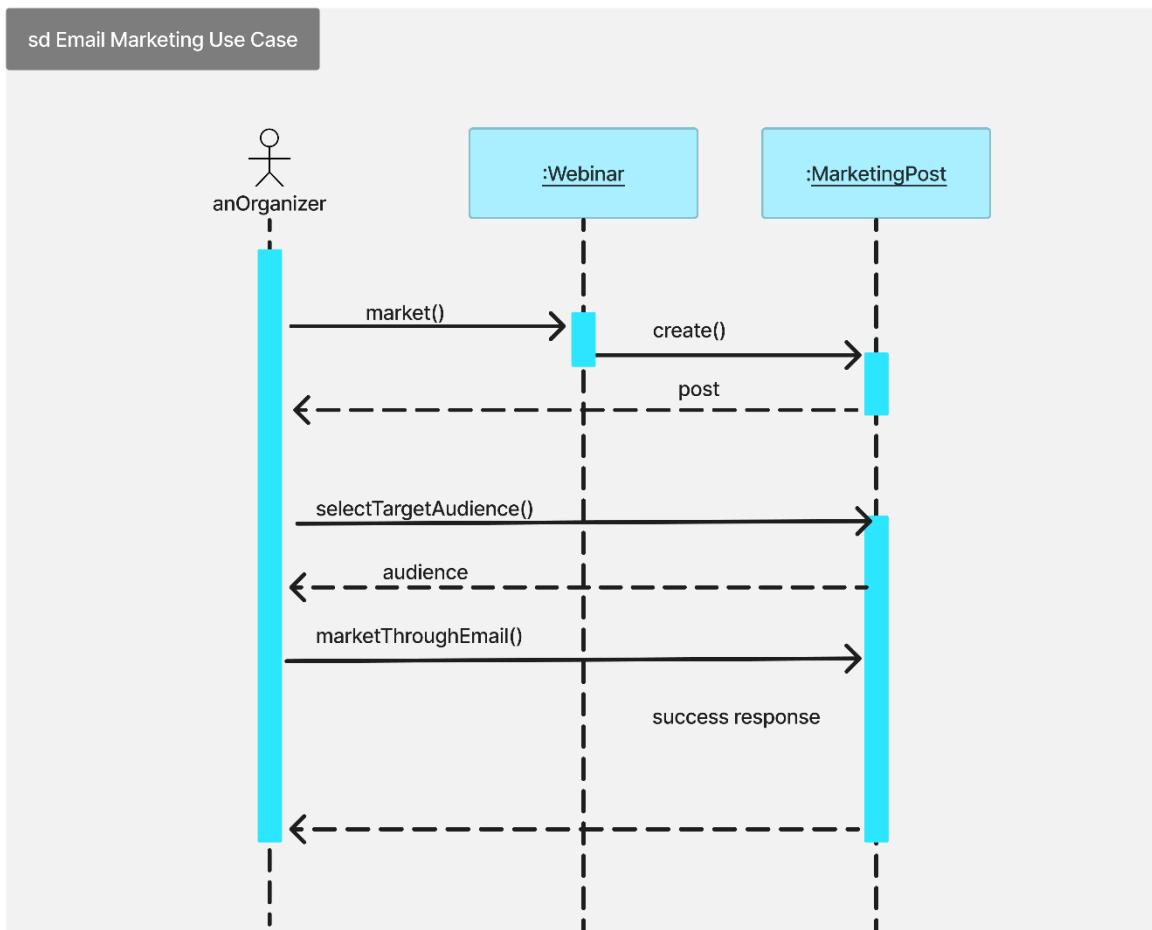


Figure 4.17: Sequence Diagram of Market Webinar Use Case

4.2.3.5 SD-05: Sequence Diagram of Review Webinar Use Case

Figure 4.18 shows sequence diagram of Review Webinar Use Case.

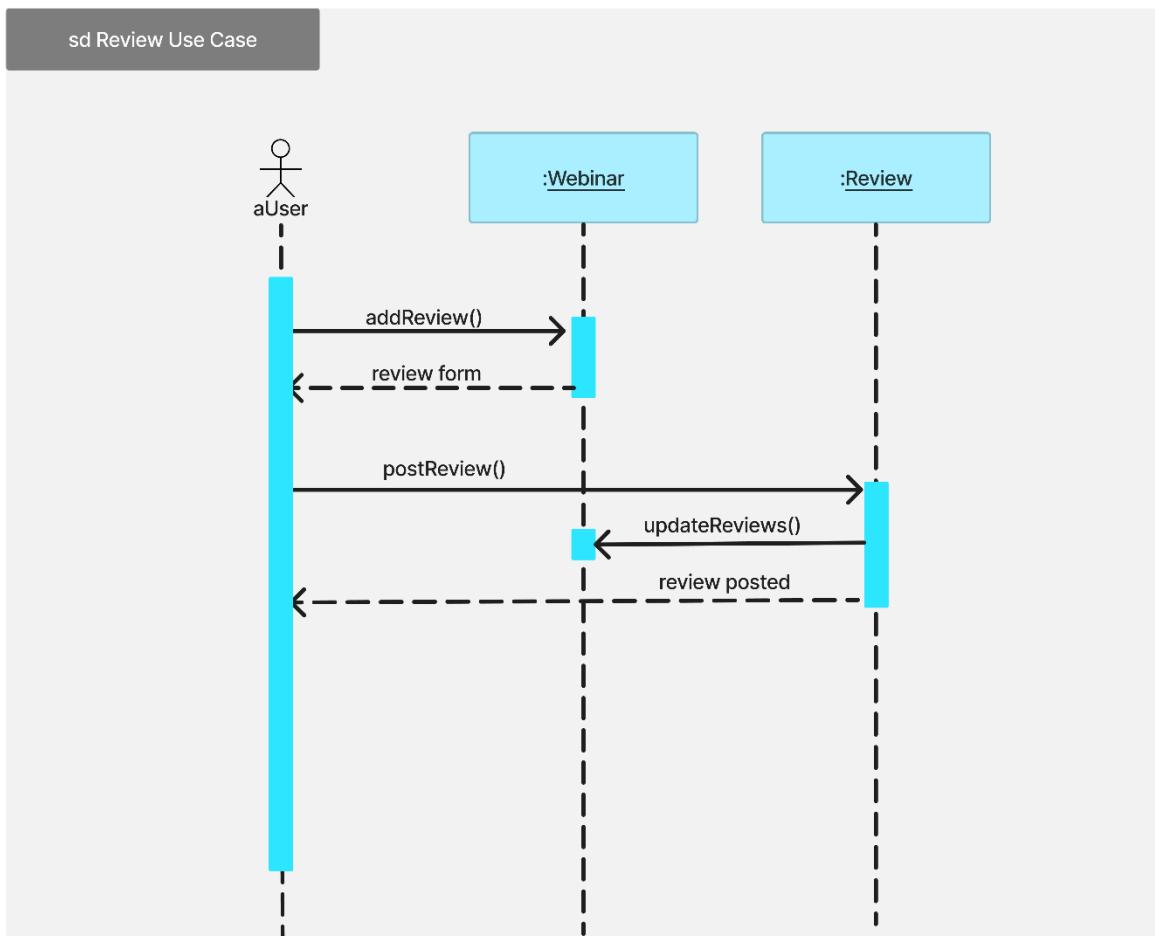


Figure 4.18: Sequence Diagram of Review Webinar Use Case

4.2.3.6 SD-06: Sequence Diagram of Send Message Use Case

Figure 4.19 shows the sequence diagram of Send Message Use Case.

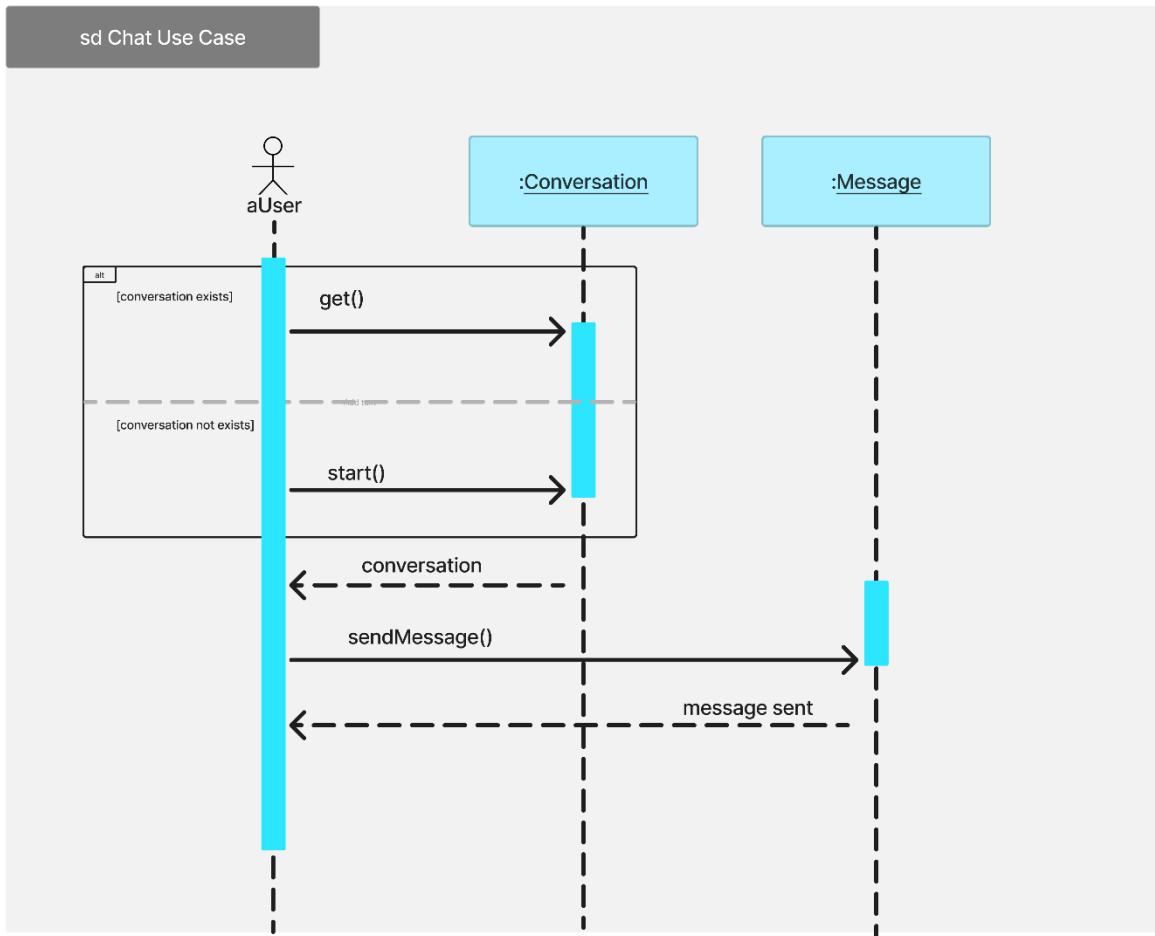


Figure 4.19: Sequence Diagram of Send Message

4.2.3.7 SD-07: Sequence Diagram of Approve Request Use Case

Figure 4.20 shows sequence diagram of Approve Request Use Case.

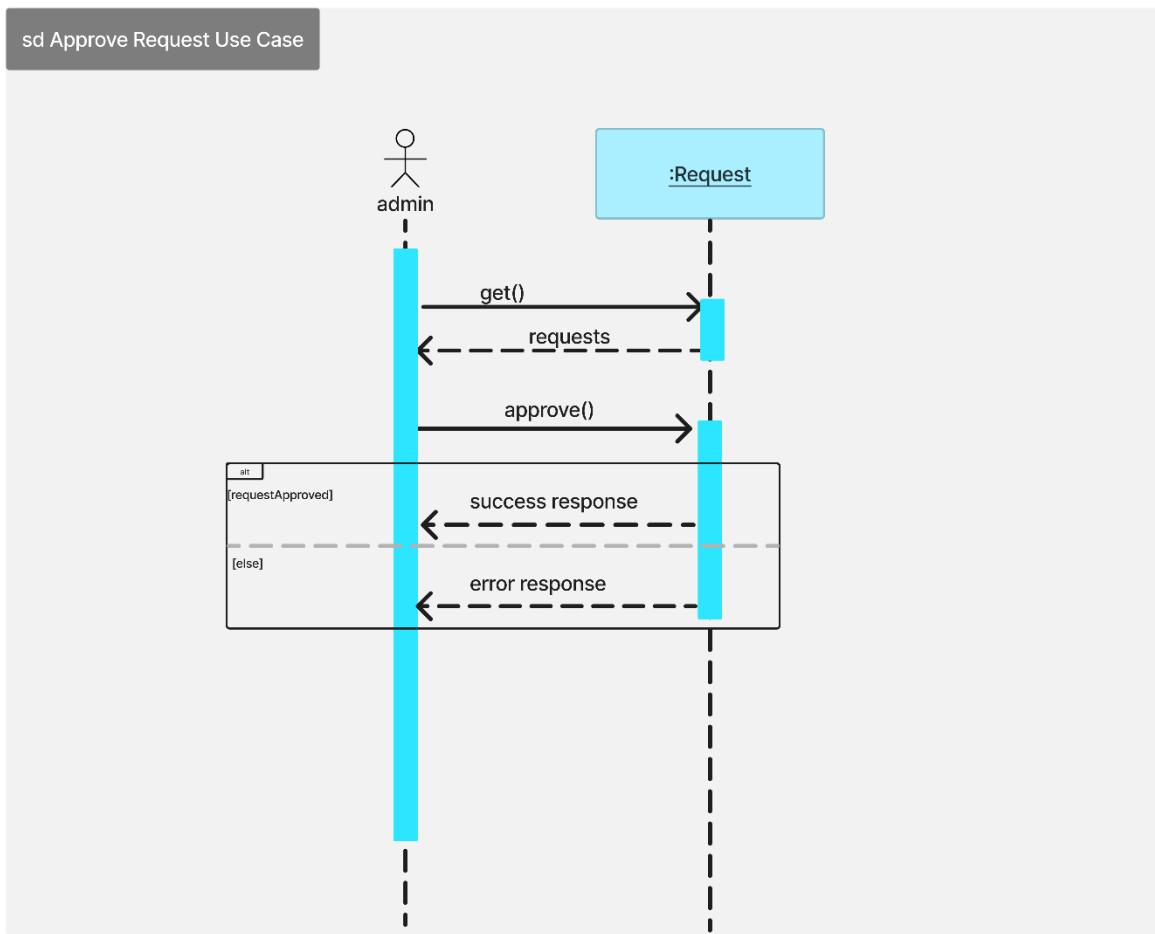


Figure 4.20: Sequence Diagram of Approve Request Use Case

4.2.3.8 SD-08: Sequence Diagram of Payment Use Case

Figure 4.21 shows sequence diagram of Payment Use Case.

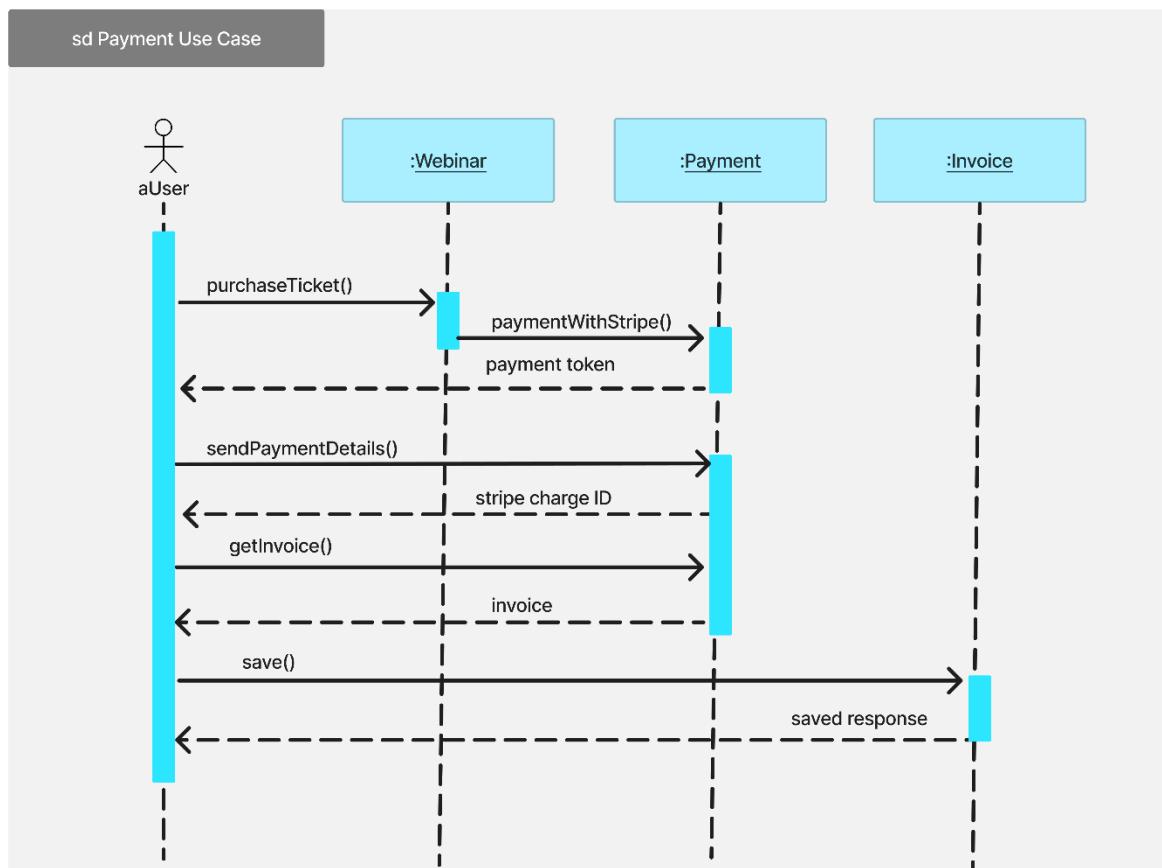


Figure 4.21: Sequence Diagram of Payment Use Case

4.3 Data Design

MongoDB is used as database and data is stored in our system as documents in Mongo DB. Data is sent between client and server in the form of JSON objects.

Following is the JSON Schema of our data structures:

4.3.1 User Schema

Below is the schema definition for user object.

```
User: {
    name: {
        type: String,
        required: true
    },
    email: {
        type: String,
        required: true,
        unique: true,
        index: true
    },
    password: {
        type: String,
        required: true
    },
    profile_image: {
        type: String
    },
    accountType: {
        type: String,
        required: true
    },
    birthdate: {
        type: String,
    },
    registration_number: {
        type: String,
    },
    interests: [
        type: Schema.Types.ObjectId,
        ref: 'Category',
    ],
    notificationsOn: {
        type: Boolean,
        required: true
    },
    favorites: [{
```

```

        type: Schema.Types.ObjectId,
        ref: 'Webinar',
    }],
    following: [
        type: Schema.Types.ObjectId,
        ref: 'User'
    ],
    followers: [
        type: Schema.Types.ObjectId,
        ref: 'User'
    ],
    bannedUsers: [
        type: Schema.Types.ObjectId,
        ref: 'User'
    ],
    bannedChats: [
        type: Schema.Types.ObjectId,
        ref: 'User'
    ],
],
}

```

4.3.2 Webinar Schema

Below is the schema definition of webinar object.

```

Webinar: {
    name: {
        type: String,
        required: true
    },
    tagline: {
        type: String,
        required: true,
    },
    description: {
        type: String,
        required: true
    },
    datetime: {
        type: String,
        required: true
    },
    duration: {
        type: String,
        required: true
    },
    price: {

```

```

        type: Number,
        required: true
    },
    categories: [
        type: Schema.Types.ObjectId,
        ref: 'Category',
    ],
    tags: {
        type: [String],
    },
    coverImage: {
        type: String,
    },
    bannerImage: {
        type: String,
    },
    links: {
        type: linksSchema,
    },
    createdBy: {
        type: Schema.Types.ObjectId,
        ref: 'User',
        required: true
    },
    organizers: [
        type: Schema.Types.ObjectId,
        ref: 'User'
    ],
    guests: [
        type: Schema.Types.ObjectId,
        ref: 'User'
    ],
    attendees: [
        type: Schema.Types.ObjectId,
        ref: 'User'
    ],
    notifications: [notificationSchema],
    reviews: [reviewSchema],
    ended: {
        type: Boolean,
    }
}

```

4.3.3 Reports Schema

Below is the schema definition of reports object.

```

Report: {
    user: {
        type: Schema.Types.ObjectId,
        ref: 'User',
    },
    webinar: {
        type: Schema.Types.ObjectId,
        ref: 'Webinar',
    },
    reason: {
        type: String,
    },
    description: {
        type: String,
    },
    status: {
        type: String,
    },
    type: {
        type: String,
    }
}

```

4.3.4 Notification Schema

Below is the schema definition of notification object.

```

Notification: {
    user: {
        type: Schema.Types.ObjectId,
        ref: 'User'
    },
    title: {
        type: String,
    },
    description: {
        type: String,
    },
    type: {
        type: String,
    },
    status: {
        type: String,
    },
    link: {
        type: String,
    }
}

```

```
}
```

4.3.5 Stream Room Schema

Below is the schema definition of stream room object.

```
StreamRoomSchema: {
  webinar: {
    type: Schema.Types.ObjectId,
    ref: 'Webinar',
  },
  name: {
    type: String,
    required: true,
  },
  participants: [{ 
    user: {
      type: Schema.Types.ObjectId,
      ref: 'User',
    },
    role: {
      type: String,
      enum: ['host', 'attendee'],
    },
    accessToken: {
      type: String,
    }
  }],
  host: {
    type: Schema.Types.ObjectId,
    ref: 'User',
  },
  status: {
    type: String,
    enum: ['live', 'ended'],
    default: 'live',
  },
  maxParticipants: {
    type: Number,
    default: 40,
  },
  blockedParticipants: [{ 
    type: Schema.Types.ObjectId,
    ref: 'User',
  }]
}
```

4.3.6 Category Schema

Below is the schema definition of Category object.

```
Category: {
  name: {
    type: String,
    required: true
  },
  image: {
    type: String,
  },
  slug: {
    type: String,
    required: true
  }
}
```

4.3.7 Conversation Schema

Below is the schema definition of conversation object.

```
Conversation: {
  users: [{{
    type: Schema.Types.ObjectId,
    ref: 'User'
  }],
  messages: [{{
    type: Schema.Types.ObjectId,
    ref: 'Message'
  }}]
}
```

4.3.8 Message Schema

Below is the schema definition of message object.

```
Message: {
  from: {
    type: Schema.Types.ObjectId,
    ref: 'User'
  },
  text: {
    type: String,
  },
  file: {
    type: messageFileSchema,
  }
}
```

```
        },
        link: {
            type: String,
        },
    }
}
```

4.3.9 Review Schema

Below is the schema definition of review object.

```
Review: {
    rating: {
        type: Number,
        require: true
    },
    comment: {
        type: String,
    },
    user: {
        type: Schema.Types.ObjectId,
        ref: 'User',
        require: true
    },
    webinar: {
        type: Schema.Types.ObjectId,
        ref: 'Webinar',
        require: true
    }
}
```

4.3.10 Webinar Member Schema

Below is the schema definition of webinar member object.

```
WebinarMember: {
    webinar: {
        type: Schema.Types.ObjectId,
        ref: 'Webinar',
    },
    user: {
        type: Schema.Types.ObjectId,
        ref: 'User'
    },
    status: {
        type: String,
        enum: ['pending', 'joined'],
    },
}
```

```

        role: {
            type: String,
            enum: ['organizer', 'guest', 'attendee'],
        }
    }
}

```

4.3.11 Payment Schema

Below is the schema definition of payment object.

```

Payment: {
    currency: {
        type: String,
        required: true
    },
    amount: {
        type: Number,
        required: true
    },
    webinar: {
        type: Schema.Types.ObjectId,
        ref: 'Webinar',
    },
    user: {
        type: Schema.Types.ObjectId,
        ref: 'User',
    },
    description: {
        type: String,
    },
    type: {
        type: String,
        enum: ['webinar'],
    }
}

```

4.3.12 Data Dictionary

Table 4.1 shows major data along with their types and descriptions.

Table 4.1: Data Dictionary of Major Data

Class	Attribute	Data Type	Description
User	name	String	Name of the user
User	email	String	Email of the user

User	password	String	Password of the user
User	profile_image	String	URL of profile image of the user
User	accountType	String	Account type of user (admin, user, organizer)
User	birthdate	String	Birthdate of user
User	registration_number	String	Registration Number of the user
User	notificationsOn	String	Notification Flag, on or off.
User	interests	Array<ref(Category)>	Interests of a user
User	favorites	Array<ref(Webinar)>	Favorites Webinars of a user
User	followers	Array<ref(User)>	Other people that user follows
User	following	Array<ref(User)>	People that follow this user
Webinar	name	String	Name of Webinar
Webinar	tagline	String	Name of Webinar
Webinar	date	String	Date and Time of Webinar
Webinar	duration	String	Duration of Webinar
Webinar	price	Number	Price of Webinar, 0 if free
Webinar	categories	Array<ref(Category)>	Categories of Webinar
Webinar	tags	String	Tags of Webinar
Webinar	cover_image	String	URL of cover image of Webinar
Webinar	banner_image	String	URL of banner image of Webinar
Webinar	links	ref(Links)	Links to Webinar
Webinar	createdBy	ref(User)	Creator of the webinar
Webinar	organizers	Array<ref(User)>	List of Organizers of the webinar
Webinar	attendees	Array<ref(User)>	List of Attendees of the webinar
Webinar	guests	Array<ref(User)>	List of Guest Speakers of the webinar

Webinar	notifications	Array<ref(Notification)>	List of Notifications of the webinar
Webinar	reviews	Array<ref(Reviews)>	List of Reviews of the webinar
Review	rating	Number	Rating of a webinar, 1 to 5
Review	comment	String	Comment of the user
Review	userId	ref(User)	User rating the webinar
Review	webinarId	ref(Webinar)	Webinar which is being reviewed
Conversation	users	Array<ref(User)>	List of Users that are part of the conversation
Conversation	timestamp	String	Datetime of the conversation
Message	text	String	Text of the message
Message	file	String	URL of the file in the message
Message	conversationID	ref(Conversation)	Conversation ID of the Message
Message	sender	ref(User)	Sender of the message
Message	timestamp	String	Datetime of the message
Category	name	String	Name of the category
Category	image	String	URL of the image of the category
Category	slug	String	Category slug
Payment	user	ref(User)	Reference Id of user who makes the payment
Payment	user	ref(User)	Reference Id of user who makes the payment
Payment	webinar	ref(Webinar)	Webinar whose payment of Ticket is made
Payment	date	String	Date and time of payment
Payment	amount	Number	Amount of Payment made
Payment	invoice	ref(Invoice)	Reference of Payment invoice
Invoice	number	Number	Invoice number
Invoice	description	String	Description of Invoice

Invoice	number	Number	Invoice generation date
Invoice	payment	ref(Payment)	Reference to Payment

4.4 Human Interface Design

4.4.1 Screen Images

Figure 4.22 shows the screen image of User Operations.

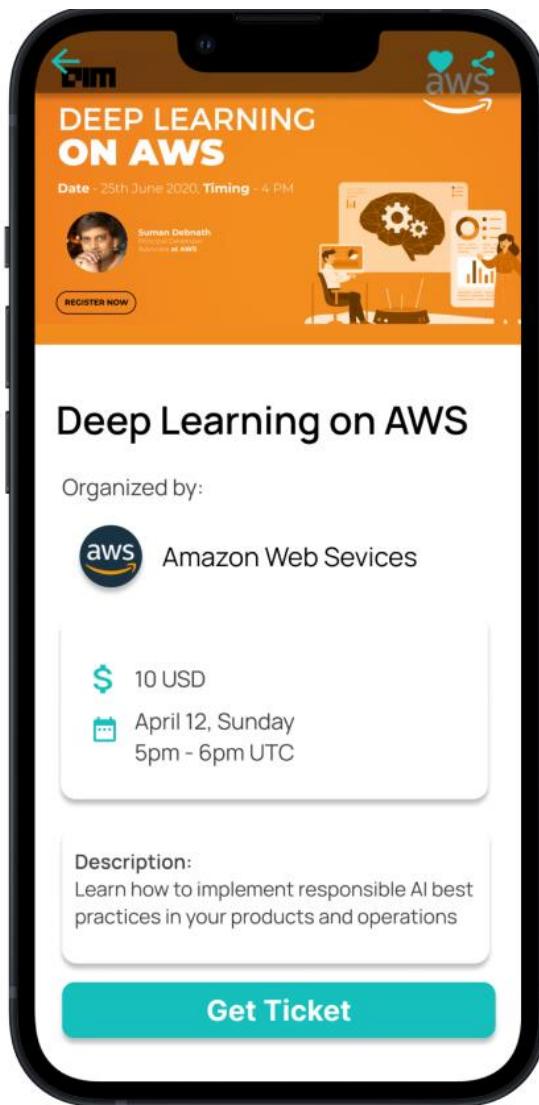


Figure 4.22: Screen Image of User Operations

Figure 4.23 shows the screen image of Home.

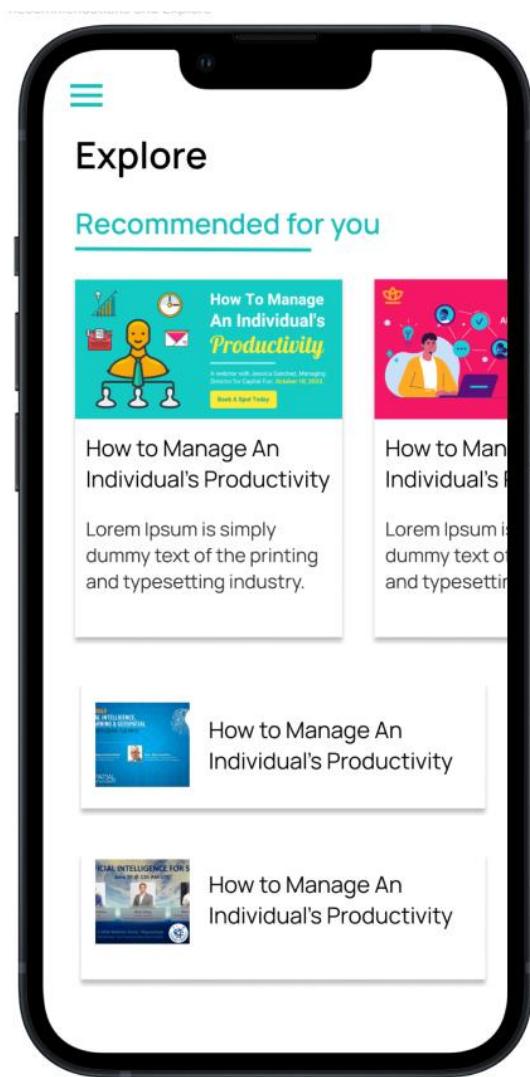


Figure 4.23: Screen Image of Home

Figure 4.24 shows the screen image of Live Webinar Streaming.

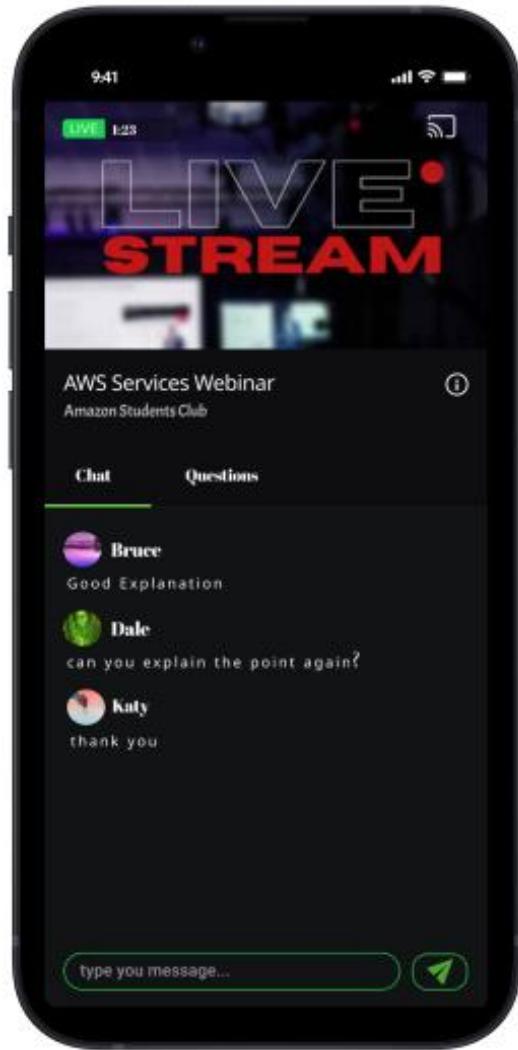


Figure 4.24: Screen Image of Live Webinar Streaming

Figure 4.25 shows the screen image of Admin Panel (web).

The screenshot displays the Admin Panel (web) interface. At the top left is the RWS logo, and at the top right is the Admin user icon with a notification bell. The main content area is titled "New Reports". On the left, there is a sidebar with navigation links: Dashboard (selected), Users, Reports, Actions, and Help. The "New Reports" section contains three items, each in its own box:

- Reported by Rachel Green**
Regarding: Chat
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla.
- Reported by Jhonny Dep**
Regarding: Review
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla.
- Reported by Mark Stewart**
Regarding: User
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla.

Figure 4.25: Screen Image of Admin Panel

Figure 4.26 shows the screen image of Graphic Kit (web).

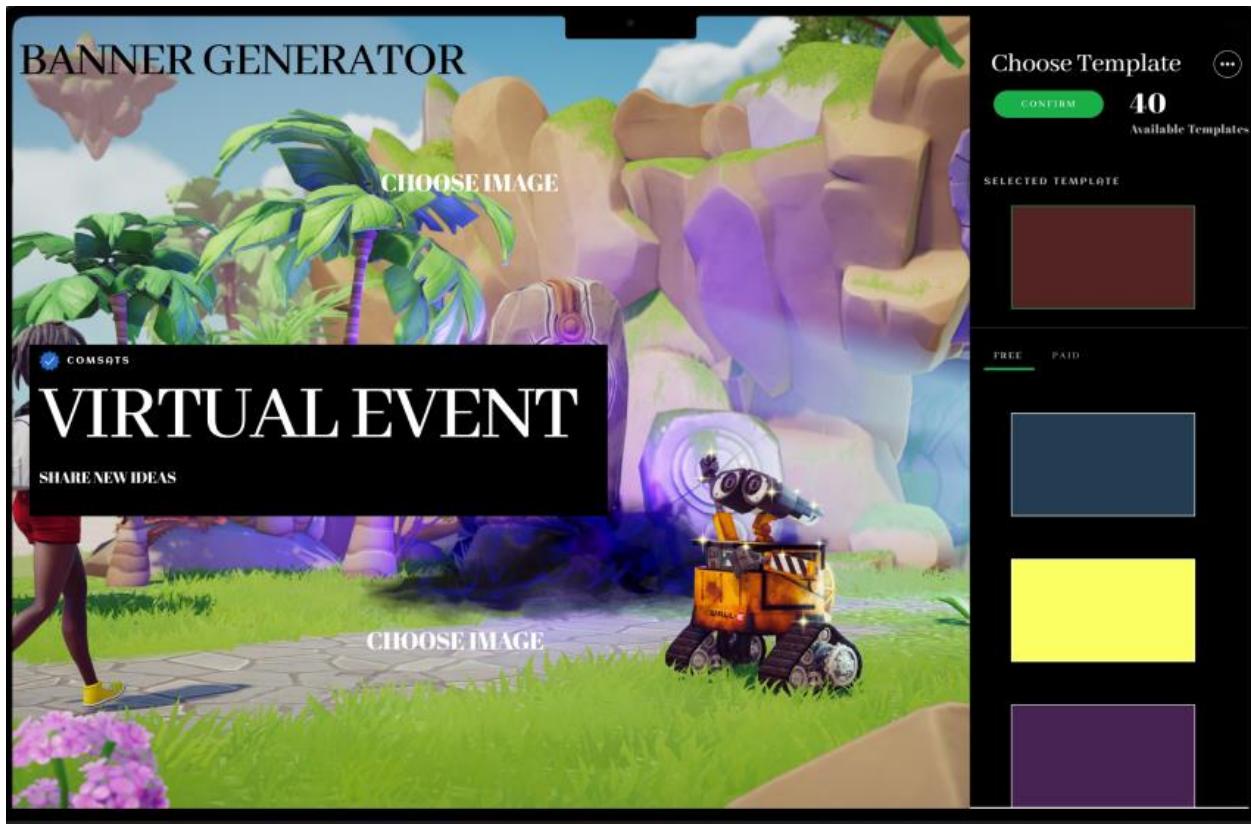


Figure 4.26: Screen Image of Graphic Kit

Figure 4.27 shows the screen image of Webinar View (web).

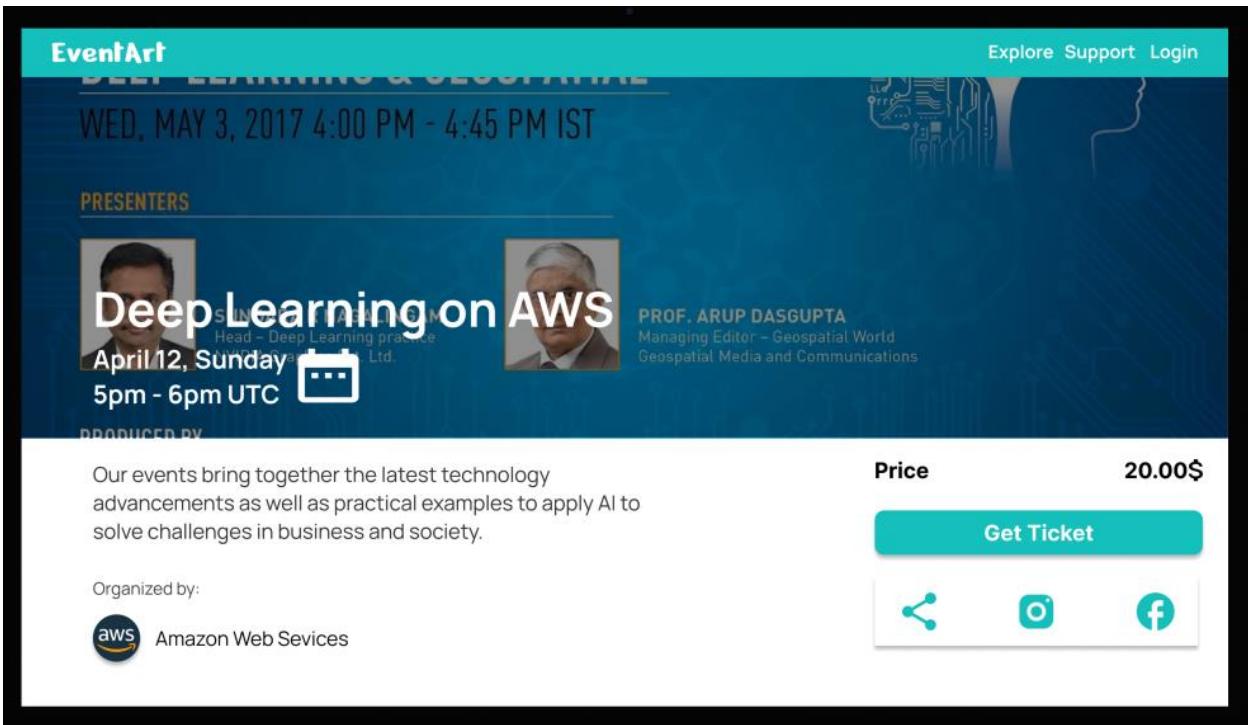


Figure 4.27: Screen Image of Webinar View (web)

4.4.2 Screen Objects and Actions

4.4.2.1 Home Screen:

This screen displays a list of recommended, suggested, and popular webinars to the users. Users will be able to view the webinars by clicking on them and they can explore other webinars with a search option.

4.4.2.2 Webinar Screen:

All the details of webinar, including title, tagline, description, cover image, banner, price, and schedule are displayed on this screen. Users will be able to scroll through all the details of the webinar and join the webinar by join option on this screen.

4.4.2.3 Webinar Creation Screen:

Webinar Creation is divided into different sections and more than one screens are used to complete the creation of webinar. First user will have to provide necessary webinar details and go to next screen, then he/she will have to add images, interests and in the end he/she will have to add schedule of the webinar and after that the webinar will be created.

4.4.2.4 Marketing Screen:

Marketing Screen will allow organizers to choose and market their webinars on email and social media. They will provide details of webinars and choose the target audience for email marketing.

4.4.2.5 Graphic Kit Screen:

Graphic Kit Screen will display options to the user to generate logo or banner of webinar. Once selected, user will be provided with banner/logo templates which he/she can use to generate banners/logos for their webinars.

4.4.2.6 Livestream Screen:

Livestream screen will display livestreaming of the webinars to the users. Users will have audio, video, screen share and chat options available to interact with other users in the webinar streaming session.

4.4.2.7 Admin Panel Screen:

Admin Panel Screen is only accessible to admins where they will be able to perform admin functions such as approving users, webinars and managing reports.

5 Implementation

5.1 Algorithm

Table 5.1 shows Webinar Recommendation with Cosine Similarity.

Table 5.1: Recommendation with Cosine Similarity

Algorithm 1: Recommendation with Cosine Similarity

```
Webinars= get webinars
TargetWebinars= getTargetWebinar()
webinarIndex = array of webinarid
webinars[id]= webinar[‘description’]
similarities = cosine_similarity(webinars)
Similarities = sort(similarities)
SimilarWebinars= []
Loop through given webinars n
    If iteration no > n
        break
    append webinars to SimilarWebinars
end loop
return SimilarWebinars
```

5.2 External APIs/SDKs

Table 5.2 provides details of APIs and SDKs used in the project.

Table 5.2: Details of APIs and SDKs used in Webinar Prime

Name of API/SDK and version	Description of API/SDK	Purpose of usage	List down the API endpoint/function/class in which it is used
Stripe (version 2022-11-15)	Credit Card payment integration	Sandbox used for the orders payment	webinar/join
LiveKit SDK (version 1.2.3)	Open Source Realtime Video WebRTC stack.	Livestreaming of Webinars	stream/startstream stream/createroom stream/joinroom
Google Dialogflow	Lifelike conversational AI	Chatbot	chatbot/getchatbotresponse

5.3 User Interface

Following are a few User Interfaces of Webinar Prime.

5.3.1 User Profile Screen

User profile screen where user can view and edit his/her profile.
Figure 5.1 shows UI of user profile.

The screenshot shows the Webinar Prime user profile interface. On the left is a sidebar with a navigation menu:

- Webinar Prime logo
- Search bar: Search Webinars
- Menu:
 - Home
 - Chat
 - Webinars
 - History and Analysis
 - Profile** (highlighted)
- General:
 - Settings
 - Help and Support
 - Logout

The main content area features a large aerial photograph of a forest bordering a blue body of water. Overlaid on this is a circular profile picture of a person with white hair and a beard, wearing a dark jacket. Below the profile picture is the text "FA19-BCS-099".

Below the profile picture are four statistics:

- 8 Created
- 0 Organized
- 0 Guest
- 0 Attended

Below these stats is a section titled "Created" which lists eight recent webinars:

Thumbnail	Title
	We The Medicine - Healing Our Inner Child 2022. Guided Meditations
	Career Fair: Exclusive Tech Hiring: New Tickets Available
	Amsterdam: An Adventurer's Guide
	The Goverment of Moscow
	The Perks of Artificial Intelligence
	The wolf of Social Media
	Everything you need to know about Dropshipping
	The Successful Business Model

A small green circular button with a white pencil icon is located at the bottom right of the thumbnail grid.

Figure 5.1: UI of User Profile

5.3.2 Webinar View

Webinar View screen displays the details of webinar and options to edit for organizer. Figure 5.2 shows UI of Webinar View.

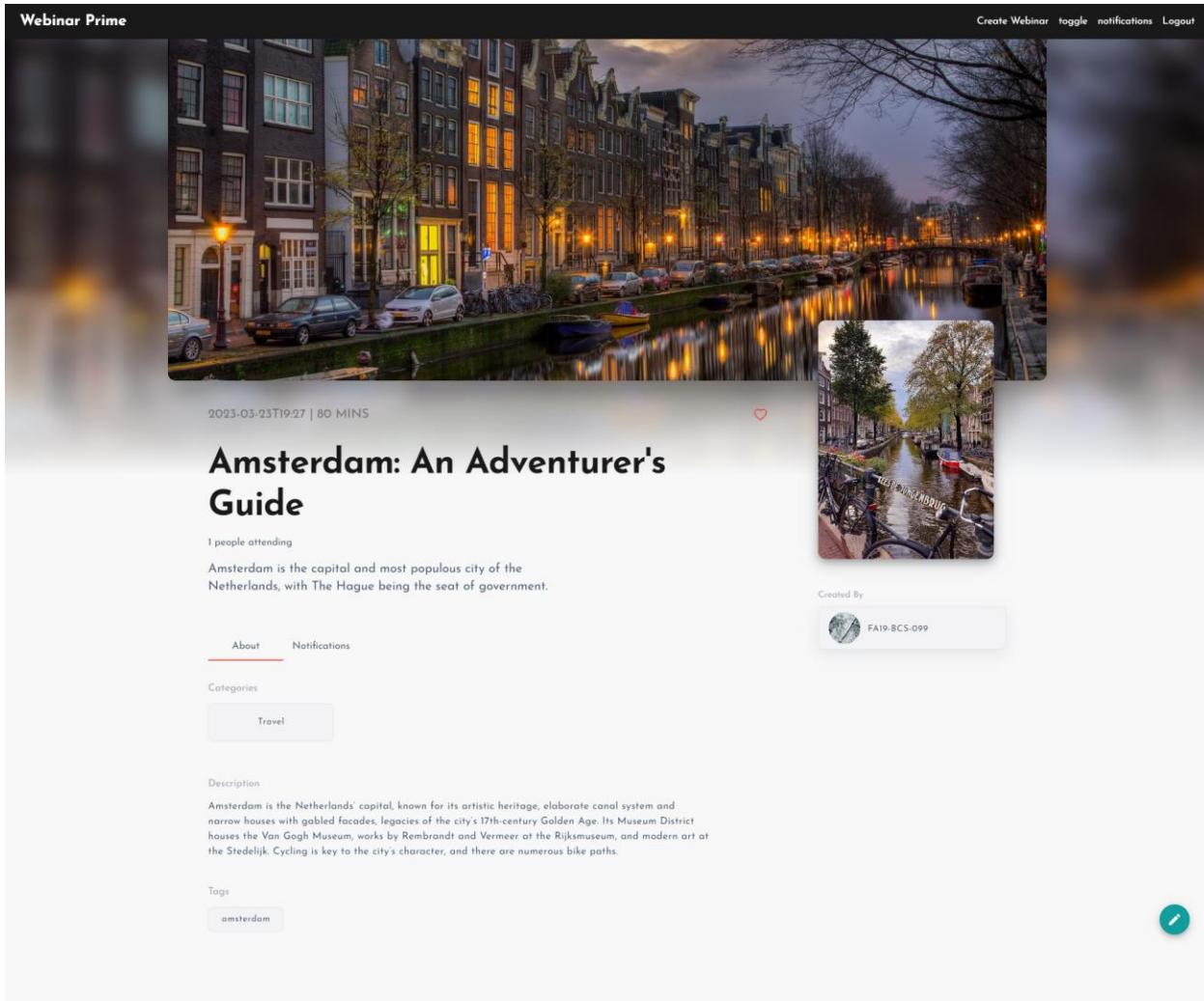


Figure 5.2: UI of Webinar View

5.3.3 Home Screen

Home screen displays all the latest, popular and recommended webinars for users to explore. Figure 5.3 shows UI of home screen.

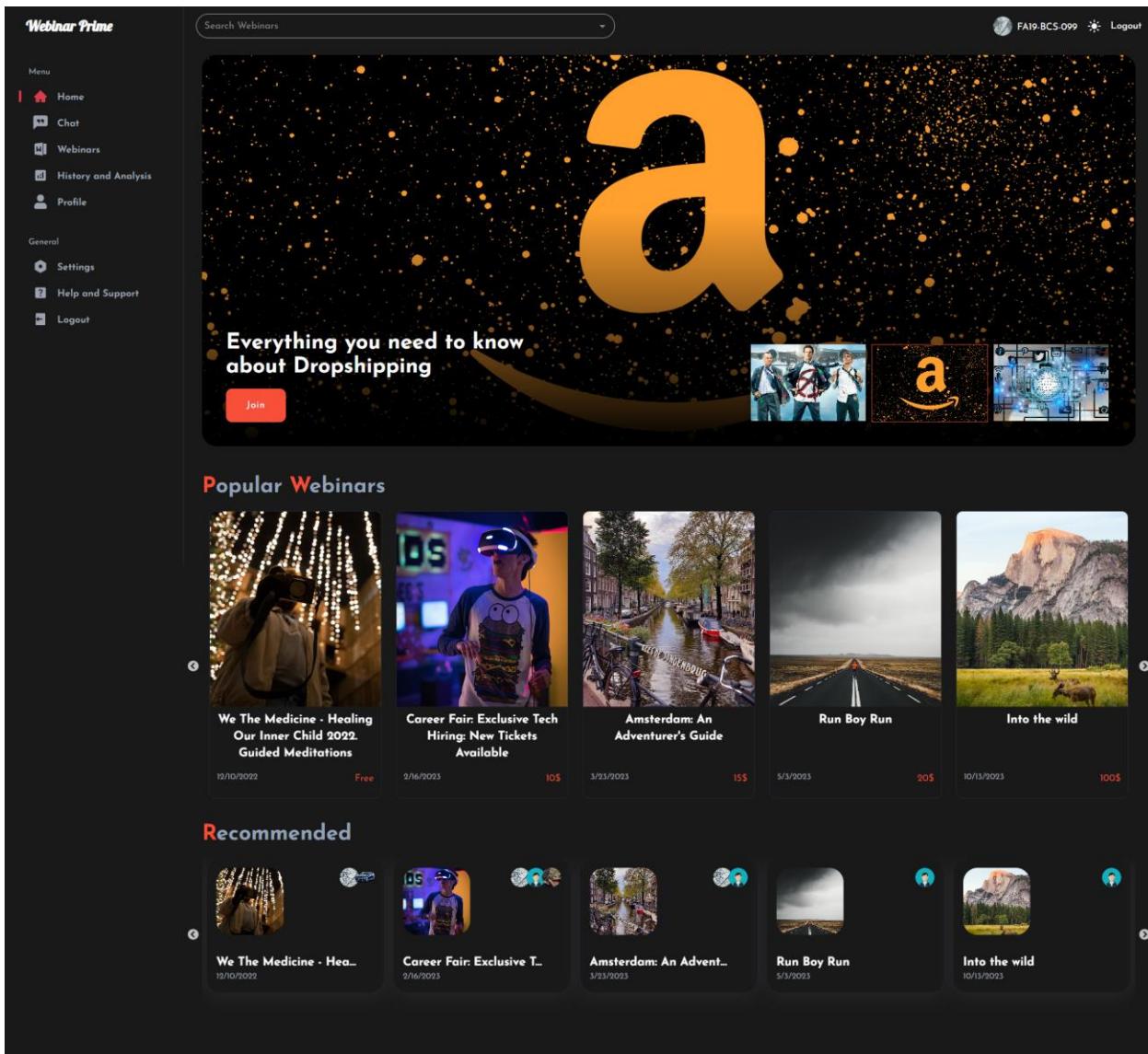


Figure 5.3: UI of Home Screen

5.3.4 Create Webinar Screen:

User can add input details of webinar and move to the next section of webinar creation. After all the sections of create webinar are completed, a new webinar will be created.

Figure 5.4 shows UI of Create Webinar.

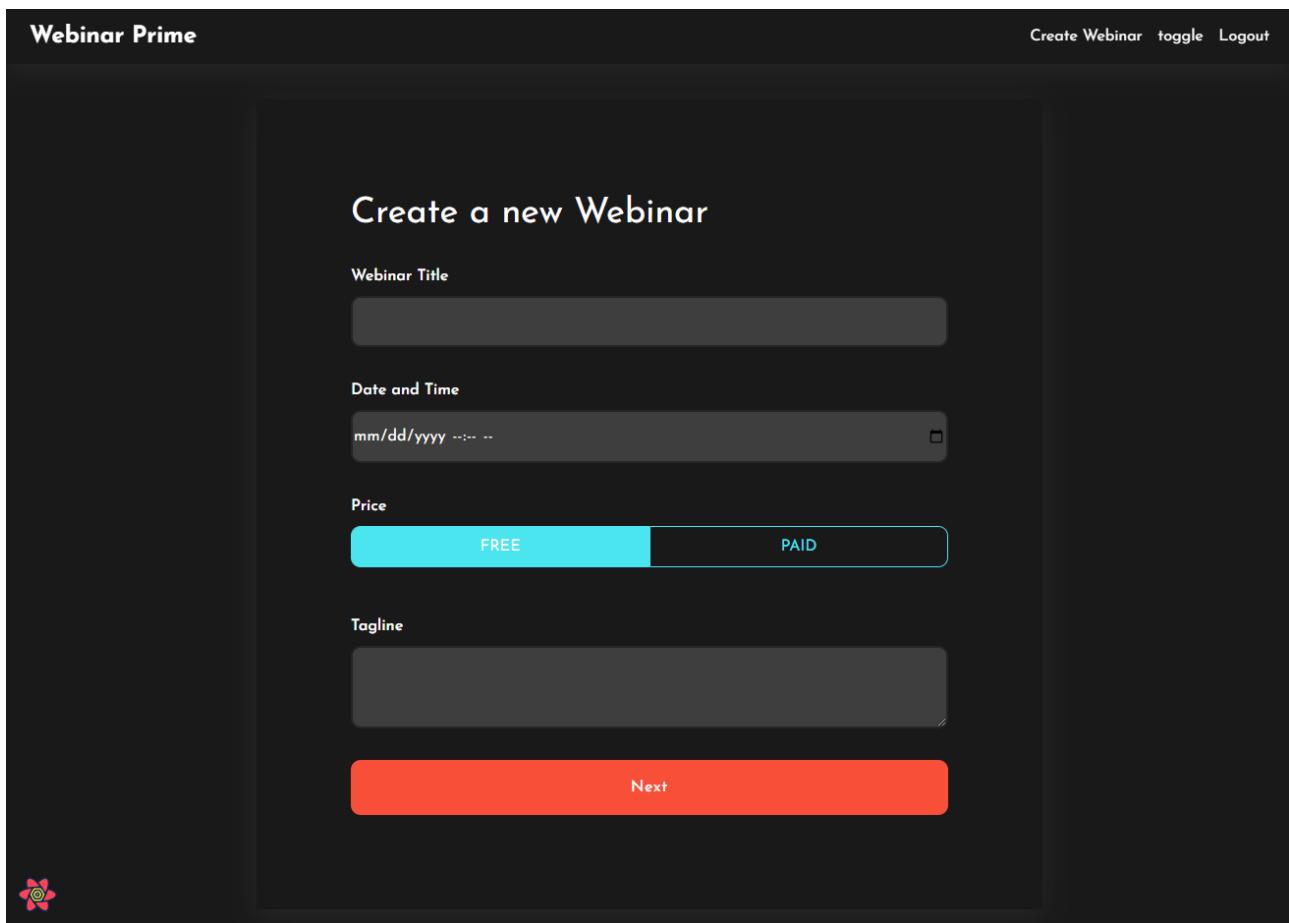


Figure 5.4: UI of Create Webinar

5.3.5 Chat:

User can view conversations, add contacts, send messages in Chat Screen.

Figure 5.5 shows UI of Chat.

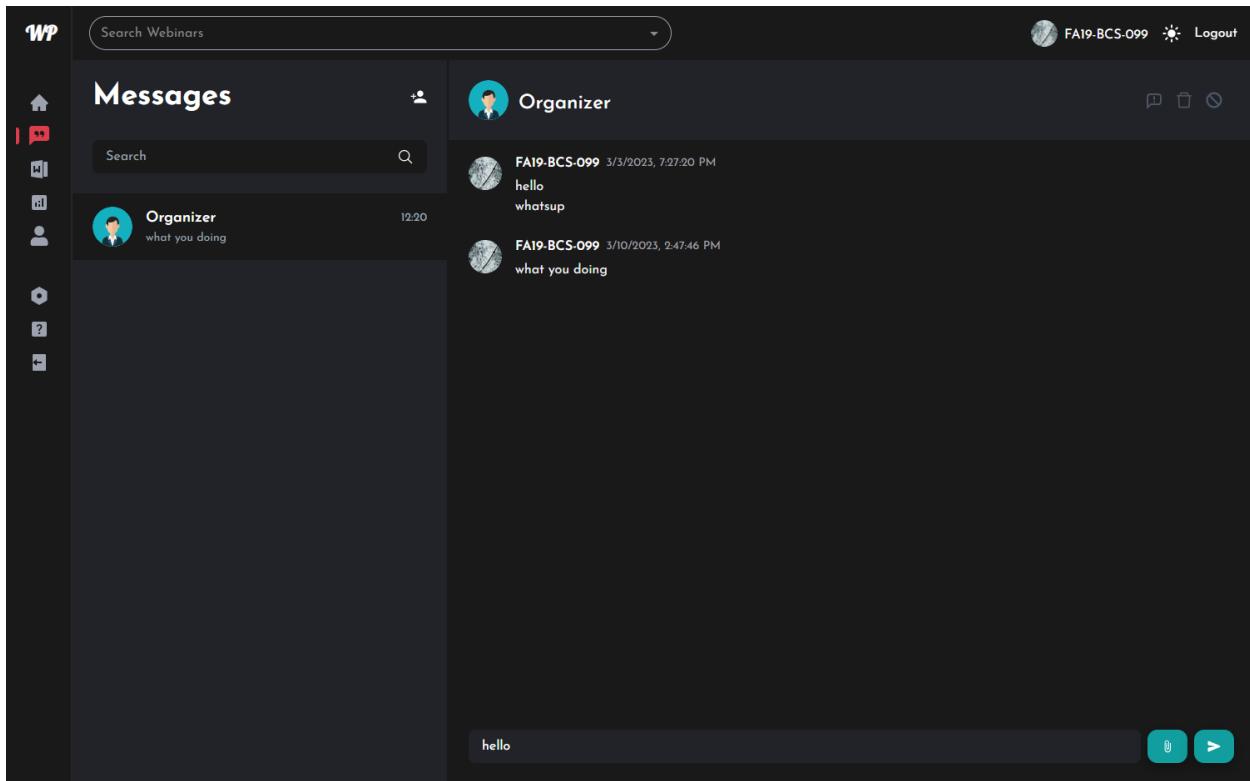


Figure 5.5: UI of Chat

5.3.6 Webinar Streaming:

Webinar Streaming includes all operations of streaming a webinar like, stream chat, share screen, camera, disconnect, ask a question, etc.

Figure 5.6 shows UI of Webinar Stream.

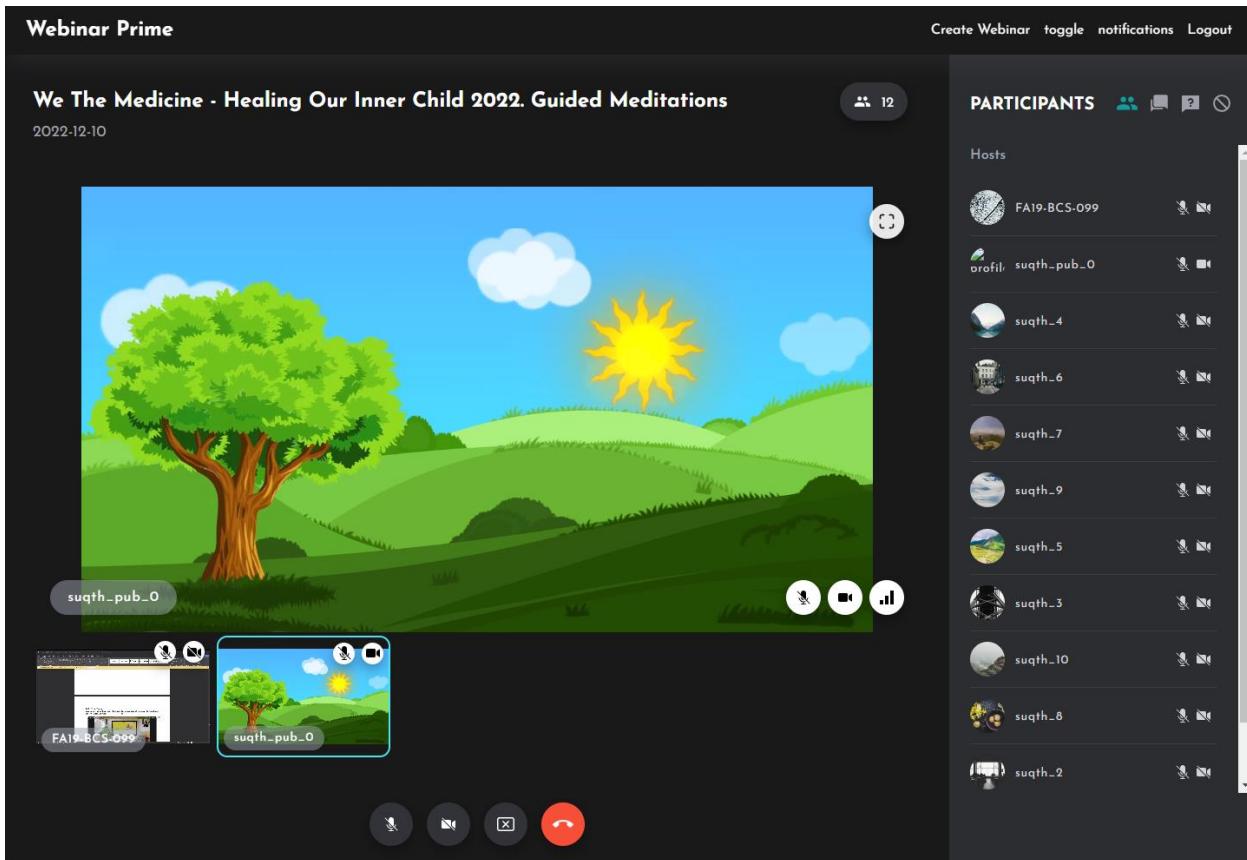


Figure 5.6: UI of Webinar Stream

5.4 Deployment

React Frontend will be deployed on Vercel which is PaaS service model. Node JS backend will be deployed on Railway Cloud Service and LiveKit Server will be deployed on Amazon EC2 Cloud/LiveKit Cloud Service.

6 Testing and Evaluation

6.1 Unit Testing

6.1.1 UT-01: Login as a Normal User with valid and invalid credentials

Testing Objective: To ensure the login form is working correctly with valid and invalid credentials/inputs.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check the email field of login to validate that it takes proper email	Email: abc@gmail.com	Validates email address and moves cursor to next textbox	Pass
2	Check the email field of login to validate that it displays error message.	Email: al@g com.	Highlights field and displays error message	Pass
3.	Check the password field validity with valid password	Password :23242323	Validates password and show no error	Pass
4.	Check the password field with some invalid password	Password :23cs	Shows error of invalid password	Pass

6.1.2 UT-02: Using Logout Feature to logout of the Application

Testing Objective: to ensure that logout feature is working as needed.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Click the logout feature to logout the application	Stay signed in box checked	User stays signed in and homepage open directly	Pass

6.1.3 UT-03: Using Signup Feature to sign up for the Application

Testing Objective: to ensure that sign up feature is working as needed.

No.	Test case/Test script	Attribute and value	Expected result	Result

1	Check the email field of sign up to validate that it takes proper email	Email: abc@gmail.com	Validates email address and moves cursor to next textbox	Pass
2	Check the email field of signup to validate that it displays error message.	Email: al@g com.	Highlights field and displays error message	Pass
3	Check the password field validity with valid password	Password :23242323	Validates password and show no error	Pass
4	Check the password field with some invalid password	Password :23cs	Shows error of invalid password	Pass
5	Enter confirm email field with different email	Confirm email: abcs@g.co	Shows error of confirm email not same as email	Pass
6	Check confirms email field with some invalid field	Confirm email: “ww@..c”	Shows error that confirm email is not valid	Pass
7	Check password hiding by clicking the eye icon in password filed	Tap the eye icon in password field	The password becomes visible	Pass
8	Check profile image validity for the sign up	Upload picture from device	Selected picture becomes visible	Pass
9	Check registration no validity for the valid registration number	Registration no: 045	Validates reg no and moves on to next	Pass
10	Check registration no validity for the invalid registration number	Registration no: 04ss	Shows error of invalid registration number	Pass
11	check validity of birthdate by selecting birthdate from calendar	Birthdate: Jan 03,1999	Shows no error and moves to next field	Pass
12	check validity of birthdate by leaving birthdate empty	Birthdate:	Validates birthdate and show error	Pass
13	Check selected interests get marked on tapping	Taps on interest and interest is marked	Interest gets marked	Pass

6.1.4 UT-04: Reset Password through Email

Testing Objective: To reset password in case of forget password through by entering new password.

No.	Test case/Test script	Attribute and value	Expected result	Result

1	Check the email field of the reset password to check if it takes proper email.	Email: waleed@gmail.com	Validates email address and move the cursor to the next text field focusing out the current one.	Pass
2	Check the email field of the reset password to check if any wrong format email is entered display error message.	Email: alexa@gmail.com	Validates email address and display error text with red highlight below the text field.	Pass
3	Check the password field of the reset password to check if it takes correct length password	Password: 1asdja232	Validates password and focus out the current text field and moves the cursor to the next field.	Pass
4	Check the password field of the reset password to check if any wrong format password is entered.	Password: 123123123	Validates the password and display an error text with red highlight under the text field.	Pass
5	Check the confirm password field of the sign up to check if it takes correct length password and matches the password enter above.	Password: 123asdq2312	Validates password and focus out the current text field and moves the cursor to the next field.	Pass
6	Check the password field of the reset password to check if any wrong format password is entered and does not match the password enter above.	Password: 123123123	Validates the password and display an error text with red highlight under the text field.	Pass

6.1.5 UT-05: Using Create Webinar feature of the Application

Testing Objective: to ensure that add webinar feature is working as needed.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check cover image validity by leaving it empty	Cover image: null	Shows error to select cover image	Pass
2	Check cover image validity by selecting an image from device	Cover image: null	Shows no error and validates image	Pass
3	Check the title field of create webinar with valid title	Title: data science	Validates webinar title and moves	Pass

			cursor to next textbox	
4	check validity of date by selecting date from calendar	date: Jan 03,2023	Shows no error and moves to next field	Pass
5	check validity of date by leaving date empty	date:	Validates date and show error	Pass
6	check validity of time text field by selecting time from time picker	time: 08:27:00	Shows no error and moves to next field	Pass
7	check validity of time by leaving time field empty	time:	Validates time and show error	Pass
8	Check validity of tags and interests by leaving tags and interest empty	Tags: Interests:	Shows error to add at least one tag or interest	Pass
9	Check validity of tags and interests by leaving tags and interest empty	Tags: data, ai Interests: tech	Validates interest and tags and shows no error	Pass
10	Check the description field of create webinar with valid description value	Description: “intro to data science is a vast filed	Validates webinar description and moves cursor to next textbox	Pass
11	Check the description field of create webinar with invalid description value	Description: “data is needed to...”	Shows error of invalid description	Pass
12	Check tagline field of create webinar with valid tagline value	Tagline: “data science is needed to”	Validates webinar tagline and shows no error	Pass
13	Check tagline field of create webinar with invalid tagline value	Tagline: “data.”	Validates webinar tagline and shows error	Pass
14	Check create schedule for webinar with valid values	Topic “intro’ From “Jan 02,2023 08:50” To “Jan 02,2023 09:00”	Validates input and moves to next field	Pass

6.1.6 UT-06: Using Edit Webinar feature of the Application

Testing Objective: to ensure that edit webinar feature is working as needed.

No.	Test case/Test script	Attribute and value	Expected result	Result

1	Check cover image validity by leaving it empty for edit webinar	Cover image: null	Shows error to select cover image	Pass
2	Check cover image validity by selecting an image from device	Cover image: "abc.jpg"	Shows no error and validates image	Pass
3	Check the title field of edit webinar with valid title	Title: "data Ai"	Validates webinar title and moves cursor to next textbox	Pass
4	check validity of date by selecting date from calendar	date: Jan 03,2023	Shows no error and moves to next field	Pass
5	check validity of date by leaving date empty	date:	Validates date and show error	Pass
6	check validity of time text field by selecting time from time picker	time: 08:27:00	Shows no error and moves to next field	Pass
7	check validity of time by leaving time field empty	time:	Validates time and show error	Pass
8	Check validity of tags and interests by leaving tags and interest empty	Tags: Interests:	Shows error to add at least one tag or interest	Pass
9	Check validity of tags and interests by leaving tags and interest empty	Tags: data, ai Interests: tech	Validates interest and tags and shows no error	Pass
10	Check the description field of edit webinar with valid description value	Description: "intro to data science is a vast filed"	Validates webinar description and moves cursor to next textbox	Pass
11	Check the description field of edit webinar with invalid description value	Description: "data is needed to..."	Shows error of invalid description	Pass
12	Check tagline field of edit webinar with valid tagline value	Tagline: "data science is needed to"	Validates webinar tagline and shows no error	Pass
13	Check tagline field of edit webinar with invalid tagline value	Tagline: "data."	Validates webinar tagline and shows error that tagline must be of length greater than 10	Pass
4	Check edit schedule for edit webinar with valid values	Topic "intro" From "Jan 02,2023 08:50"	Validates input and moves to next field	Pass

		To “Jan 02,2023 09:00”		
--	--	------------------------	--	--

6.1.7 UT-07: Using View Webinar feature of application as normal user

Testing Objective: to ensure that view webinar feature is working as needed.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check the view webinar feature for normal user when data loads successfully	Load data	Show all the details of the webinar	Pass
2	Check the view webinar feature for normal user when data loads successfully	Loading data	Failed to load data message	Pass

6.1.8 UT-08: Register for Webinar

Testing Objective: Register for webinar as a normal user.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check payment process for registration is working	Loading payment details page	payment page loaded	Pass
2	Check if added card number is valid	4242424242424	Invalid card number	Pass
3	Check if card has sufficient funds	Card is insufficient funds	Failed to make payment	Pass
4	Check if payment was successful	Payment success page	User added to webinar	Pass

6.1.9 UT-09: Show Attendees List

Testing Objective: To view attendees list of webinars.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	To view attendees list of webinars	Loading data	Show attendees list	Pass

6.1.10 UT-10: View Webinar as an organizer

Testing Objective: to test webinar view of organizer.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if action button is visible	Currently logged in user is organizer of current webinar	Show actions button	Pass

6.1.11 UT-11: Edit Webinar as organizer or creator of webinar

Testing Objective: to ensure that webinar is editable.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check Edit name is working	“New name of web3”	Name edited successfully	Pass
2	Check Edit tagline	“This is the new tagline of webinar”	Tagline edited successfully	Pass
3	Check Edit Date	Mar 15,2023	Date Edited successfully	Pass
4	Check Edit Time	7:00:00	Time edited successfully	Pass
4	Check Edit Description	“New description”	description edited successfully	Pass
5	Check Edit categories	[science, math, social]	categories edited successfully	Pass
6	Check Edit tags	#web, #ai	Tags edited successfully	Pass
7	Check Edit banner Image	New banner image selected	Banner image edited Successfully	Pass
7	Check Edit cover Image	New cover image selected	Cover image edited Successfully	Pass

6.1.12 UT-12: Post Notification

Testing Objective: to check if notifications can be posted from webinar.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Validate notification title	“New Member added”	Valid input and show no error	Pass

2	Validate notification description	“This is description”	Valid description Show no error	Pass
3	Check is Notification posted successfully	Posting notification	Show success alert	Pass

6.1.13 UT-13: Add Organizer to webinar as Creator

Testing Objective: to ensure that organizers can be added to webinars.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	To check if search is working	“Ali”	Show users named Ali	Pass
2	To check if organizer gets added	Pending request	Request send to user	Pass
3	To check if organizer accepted request	Accepted	User gets added to organizers List	Pass

6.1.14 UT-14: Add Attendee to Webinar as Organizer or Creator

Testing Objective: to ensure that attendees can be added to webinars.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	To check if search is working	“Ali”	Show users named Ali	Pass
2	To check if attendee gets added	Pending request	Request send to user	Pass
3	To check if user accepted request	Accepted	User gets added to attendees List	Pass

6.1.15 UT-15: Add Guest to Webinar as Organizer or Creator

Testing Objective: to ensure that guests can be added to webinars.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	To check if search is working	“Ali”	Show users named Ali	Pass
2	To check if guest gets added	Pending request	Request send to user	Pass
3	To check if user accepted request	Accepted	Guest gets added to organizers List	Pass

6.1.16 UT-16: Start Webinar Stream as Creator

Testing Objective: to ensure that creator can start the webinar stream.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if start stream is working	Starting stream	Stream will be started successfully	Pass

6.1.17 UT-17: End Webinar Stream as Creator

Testing Objective: to ensure that creator can end the webinar stream.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if webinar stream gets ended	Ending stream	Stream will be ended successfully, and all participants will be removed from stream	pass

6.1.18 UT-18: Join Webinar Stream as Creator

Testing Objective: to ensure that creator can join the webinar stream.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if creator can join the already on going stream	Join stream tapped	Creator will enter the streaming room	Pass.

6.1.19 UT-19: Join Webinar Stream as Organizer

Testing Objective: to ensure that organizer can join the webinar stream.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if organizer can join the stream	Join stream	Organizer will enter the stream room	Pass
2	Check if banned user can join the stream	Join stream tapped	Failed to join stream	Pass

6.1.20 UT-20: Join Webinar Stream as Guest

Testing Objective: to ensure that guest can join the webinar stream.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if guest can join the stream	Join stream tapped	Guest will join the stream	Pass
2	Check if banned guest can join the stream	Join stream tapped	Guest will fail to join the stream	Pass

6.1.21 UT-21: Join Webinar Stream as Attendee

Testing Objective: to ensure that attendee can join the webinar stream.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if attendee can join the stream	Join stream tapped	attendee will join the stream	Pass
2	Check if banned attendee can join the stream	Join stream tapped	Attendee will fail to join the stream	Pass

6.1.22 UT-22: Streaming Operations for Creator

Testing Objective: to ensure creator has full access to meeting operation.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if mic can be enabled	Enable mic	Mic will be turned on	Pass
2	Check if mic can be disabled	Disable mic	Mic will be disabled	Pass
3	Share Screen.	Share screen tapped	Screen will be shared	Pass
4	Check if video can be enabled	Enable video	Video will start sharing through camera	Pass

6.1.23 UT-23: Streaming Operations for Organizer

Testing Objective: to check organizer streaming operation access.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if mic can be enabled	Enable mic	Mic will be turned on	Pass
2	Check if mic can be disabled	Disable mic	Mic will be disabled	Pass
3	Share Screen.	Share screen tapped	Screen will be shared	Pass
4	Check if video can be enabled	Enable video	Video will start sharing through camera	Pass

6.1.24 UT-24: Streaming Operations for Attendee

Testing Objective: to check attendee streaming operations access.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if mic can be enabled	Enable mic	Attendee cannot turn on mic	Pass
2	Share Screen.	Share screen tapped	Attendee cannot share screen	Pass

6.1.25 UT-25: Streaming Operations for Guests

Testing Objective: to check guests streaming operations access.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if mic can be enabled	Enable mic	guest mic enabled	Pass
2	Share Screen.	Share screen tapped	guest can share screen	Pass
3	Check if mic can be disabled	Disable mic tapped	Mic will be turned off	Pass
4	Check if video can be enabled	Enable video	Video will start sharing through camera	Pass

6.1.26 UT-26: Chat during Streaming Operations for Organizer

Testing Objective: to check organizer access in room chat.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Organizer can create question	“What is AI? ”	Question will be created in chat	Pass
2	Organizer can reply to question in chat	“ Ai is simple if else”	Answer will be added below question	Pass
3	Check if organizer can send messages in chat	“hello”	Message will be sent to stream room chat	Pass

6.1.27 UT-27: Chat during Streaming Operations for Guests

Testing Objective: to check guest access in room chat.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	guests can create question	“What is AI? ”	Question will be created in chat	Pass
2	Guests can reply to question in chat	“Ai is simple if else”	Answer will be added below question	Pass
3	Check if guests can send messages in chat	“hello”	Message will be sent to stream room chat	Pass
4	View live chat	Chat loading	All chat will be displayed	Pass

6.1.28 UT-28: Chat during Streaming Operations for Attendee

Testing Objective: to check attendee access in room chat.

No.	Test case/ Script	Attribute and value	Expected Result	Result
1	attendee can create question	“What is AI? ”	Question will be created in chat	Pass
3	Check if attendee can send messages in chat	“hello”	Message will be sent to stream room chat	Pass
3	Check if attendee can view all chat message	Loading chat messages	All chat is visible	Pass

6.1.29 UT-29: Ban User from Stream as Creator

Testing Objective: to ensure that creator can ban users from stream.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if creator can ban user from chat	Click ban icon next to username	User will be banned and removed from stream	Pass

6.1.30 UT-30: Marking Webinar as Favorite

Testing Objective: to ensure webinar can be marked as favorite.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if webinar can be marked as favorite	Favorite icon pressed	Webinar will be added to favorite list	Pass
2	Check if webinar can be removed from favorites	Favorite icon tapped again	Webinar will be removed from favorite list	Pass

6.1.31 UT-31: Invitations Operation for user

Testing Objective: to ensure user can view invitation.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	View invitation option	Loading invitation	All invitation will be visible	Pass
2	Check if invitation can be accepted	Accept invitation	Invitation will be accepted	Pass
3	Check if invitation can be declined	Decline button tapped	Invitation will be declined	Pass

6.1.32 UT-32: Edit Profile

Testing Objective: to ensure that user can edit his profile details.

No.	Test case/Test script	Attribute and value	Expected Result	Result

1	Check if email can be edit by providing a new valid and unique email	“waleed12@gmail.com”	New email will be updated	Pass
2	Check if invalid email is detected	‘waled23@..g.c	Invalid email message	Pass
3	Check if edit username is working	“Waleed”	User name will be updated	Pass
4	Check if edit username is working with invalid username	‘13awleed’	Invalid username error	Pass
5	Check if edit date of birth is working	‘march 23,2023’	DOB updated	Pass
6	Check if user interests can be updated	[science, math]	Update interests and show success alert	Pass
7	Check if notifications can be disabled	Tap mute notification	Notifications will be muted	Pass

6.1.33 UT-33: Change Password

Testing Objective: to ensure that update his password.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Validate old password	12121212	Old password in incorrect failed to update password	Pass
2	Add new password	22sc	Password is too short failed to proceed further	Pass
3	Add new password with valid length	12adeds232	Proceed to confirm password	Pass
4	Check if confirm password same as above new password	12adeds232	Matches and update password	Pass

6.1.34 UT-34: Add New user to chat

Testing Objective: to ensure user can be added to chat.

No.	Test case/Test script	Attribute and value	Expected Result	Result

1	Check if add new user in chat is working	Tap on user tile	New conversation will be created with user	Pass
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6.1.35 UT-35: Search for User in current chat list

Testing Objective: to ensure that user search filtering is working as expected.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if search user is working	“Ali”	Show users named Ali	Pass
2	Check if empty field can be searched	“ ”	No result found	Pass

6.1.36 UT-36: Send Message

Testing Objective: to ensure that send text feature is working.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if text message send is working?	“hello”	Message is sent and shown in chat	Pass
2	Check if empty message can be sent	“ ”	Failed to send message	Pass

6.1.37 UT-37: Send Image in Chat

Testing Objective: to ensure that send image is working.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	To check image can be send as message	“abc.jpg”	Image will be sent	Pass
2	Check if image of very large size can be sent	‘Abc.jpg’	Failed to send image size too large	Pass

6.1.38 UT-38: Send File in Chat

Testing Objective: to ensure that send file is working.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	To check file can be send as message	“ abc.pdf”	File will be send	Pass
2	Check if file of very large size can be sent	‘Abc.jpg’	Failed to send file size too large	Pass

6.1.39 UT-39: Block User from Chat

Testing Objective: to ensure that blocking feature is working.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if block feature is working	Click block user icon	User will be blocked	Pass

6.1.40 UT-40: Unblock User from Chat

Testing Objective: to ensure that unblock feature is working.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if unblock feature is working	Click unblock user icon	User will be unblocked	Pass

6.1.41 UT-41: Leave Webinar Stream

Testing Objective: to check if user can leave webinar stream.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if user can leave currently join webinar stream	Click on end button	User will leave the stream	Pass

6.1.42 UT-42: Rate Webinar

Testing Objective: to ensure that attendee can rate the webinar after webinar has ended.

No.	Test case/Test script	Attribute and value	Expected Result	Result

1	Check if user can rate the webinar with empty review	Review: “ ”	Review will not be posted	Pass
2	Check if user can rate the webinar with valid data	Review: “good”	Review will be posted	Pass

6.1.43 UT-43: View Analysis for Webinars created by Organizers

Testing Objective: to check if organizers can view the stats of the webinar that have created.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if user can view the analysis of webinar, he has created	View analysis	Analysis will be viewed	Pass

6.1.44 UT-44: View Payment Receipt

Testing Objective: to ensure that attendee can rate the webinar after webinar has ended.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if user can view payment receipt of paid webinar	View receipt	Receipt will be viewed	Pass

6.1.45 UT-45: Banner Image Attachment

Testing Objective: Verify that an authorized user can insert a webinar event banner to the system.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Verify that an authorized user can insert a webinar event banner to the system.	Banner image is provided	The banner image is added to the system and saved in the database	Pass
2	Verify if the user can use the already existing banner image for the webinar	banner image of webinar	The already added banner image of the webinar is used	Pass

6.1.46 UT-46: Add Target Audience Age

Testing Objective: Verify that an authorized user can select a target audience age for a webinar.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Verify that an authorized user can select a target audience age for a webinar.	Age :16-21	The targeted audience age is set.	Pass

6.1.47 UT-47: Suggest Webinar events based on user's activities

Testing Objective: Verify that the system can suggest webinar events based on a user's activities.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Verify that the system can suggest webinar events based on a user's activities.	System analyzes user's activity history and suggests relevant webinars on AI and Machine Learning	The system suggests relevant webinar events based on the user's activity history. The suggested webinars are relevant and interesting to the user	Pass

6.1.48 UT-48: Search Webinars

Testing Objective: Verify that users can search for webinars.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	user searches for the webinar by querying keywords.	User enters "AI and Machine Learning" as the search query. The system retrieves webinars containing "AI and Machine Learning" in their title or description	The search results contain webinars that are relevant to the search query	Pass.

6.1.49 UT-49: Sort by Date, Price or Duration

Testing Objective: To Verify that users can sort webinar events by date, price, or rating.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Verify that users can sort webinar events by date	User selects to sort by date	Webinars are sorted by date.	Pass.
2	Verify that users can sort webinar events by duration	User selects to sort by duration	Webinars are sorted by duration	Pass.
3	Verify that users can sort webinar events by price.	User selects to sort by price	Webinars are sorted by price	Pass.

6.1.50 UT-50: Chatbot Responses

Testing Objective: Verify that the AI chatbot can respond to user messages.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Verify that the AI chatbot can respond to user messages.	User sends message: "hi how are you?"	Expected Result: Chatbot provides a quick and smart response.	Pass.
2.	Verify that the AI chatbot can answer user queries.	User sends message: "how can I create webinar?"	Chatbot provides a quick and smart response with relevant information and assistance.	Pass.

6.1.51 UT-51: Report Webinar

Testing Objective: To Verify that users can sort webinar events by date, price, or rating.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Verify webinar report.	Report reason: Inappropriate content Report description: The presenter used offensive language during the webinar	User is able to submit a report for the webinar and the appropriate action is taken by the system.	Pass.

6.1.52 UT-52: Report User

Testing Objective: Verify that users can report a user.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Verify user report.	Report reason: “Harassment” Report description: The presenter used offensive language during the webinar	User is able to submit a report for the user and the appropriate action is taken by the system.	Pass.

6.1.53 UT-53: Report Chat

Testing Objective: To Verify that users can report a chat.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Verify chat report.	Report reason: Spam Report description: The user repeatedly posted irrelevant messages in the chat	User is able to submit a report for the webinar and the appropriate action is taken by the system.	Pass.

6.1.54 UT-54: Add Text while generating Banner

Testing Objective: verify if the text can be added to the banner.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the user can add custom text to the banner	Text value: “welcome”	the text will be added to the banner.	Pass.

6.1.55 UT-55: Test Case for changing text color

Testing Objective: verify if the text font color can be changed in banner.

No.	Test case/Test script	Attribute and value	Expected Result	Result

1.	Checking if text color can be changed.	<ul style="list-style-type: none"> Text: "Join our Webinar on AI" Current text color: black New color: red 	The text size should increase from black to red.	Pass.
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6.1.56 UT-56: Test Case for adding image to Banner

Testing Objective: verify if image can be added to banner.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the user can add custom image to the banner	Image file: "webinar.jpg"	the image will be added to the banner.	Pass.

6.1.57 UT-57: Test Case for changing image width

Testing Objective: verify if user can change image width.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the user can change width of the image added to the banner.	<ul style="list-style-type: none"> Image file: "webinar.jpg" Current width: 150px New width: 200px 	Image width will be changed.	Pass.

6.1.58 UT-58: Test Case for changing image border radius

Testing Objective: verify if user can change border radius of added image to the webinar.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Verify if user can change border radius of added image to the banner	<ul style="list-style-type: none"> Image file: "webinar.jpg" Current border radius: 0px 	Border radius of image will be changed	Pass.

6.1.59 UT-59: Test Case for changing image height

Testing Objective: verify if user can change image width of the banner.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the user can change width of the image added to the banner.	<ul style="list-style-type: none"> • Image file: "webinar.jpg" • Current height: 300px • New Height set: 400px. 	Image height will be changed.	Pass.

6.1.60 UT-60: Test Case for deleting text from banner

Testing Objective: verify if the text can be removed from the banner.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the user can delete text from the banner	Text: "Join our Webinar on AI" Delete icon tapped.	The text will be deleted from banner.	Pass.

6.1.61 UT-61: Test Case for deleting image from Banner

Testing Objective: verify if the image can be removed from the banner.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the user can delete image from the banner	Image file: "webinar.jpg" Delete icon tapped.	The image "webinar.jpg" should be removed from the banner.	Pass.

6.1.62 UT-62: Test Vase for saving banner to local storage

Testing Objective: verify if the text can be added to the banner.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the user can save banner.	Save the banner or logo to local storage using the "save" button.	The banner or logo should be saved to local storage as a PNG file.	Pass.

6.1.63 UT-63: Test for View Reports from Admin Panel

Testing Objective: verify if the text can be added to the banner.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the superuser can successfully view a report.	Report ID: 12345	The superuser should be able to view the report with the provided ID.	Pass.

6.1.64 UT-64: Test for Banning/Unbanning Users

Testing Objective: Check if the superuser can successfully ban a user.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the superuser can successfully view a report.	User ID: 54321	The user with the provided ID should be banned and unable to access the system.	Pass.
2	Check if the superuser can successfully unban a previously banned user.	User ID: 54321	The user with the provided ID should be unbanned and able to access the system again.	Pass

6.1.65 UT-65: Delete Webinars using Admin Panel

Testing Objective: Check if the superuser can successfully delete a webinar.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the superuser can successfully delete a webinar.	Webinar ID: 98765	The webinar with the provided ID should be deleted from the system.	Pass.

6.1.66 UT-66: Approve Webinars using Admin Panel

Testing Objective: Check if the superuser can successfully approve a webinar.

No.	Test case/Test script	Attribute and value	Expected Result	Result

1.	Check if the superuser can successfully approve a webinar.	Webinar ID: 56789	The webinar with the provided ID should be approved and made available for users to access.	Pass.
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6.1.67 UT-67: Broadcast Message using Admin Panel

Testing Objective: Check if the superuser can successfully broadcast a message.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1.	Check if the superuser can successfully broadcast a message.	Message: "This is a test message."	The provided message should be broadcasted to all users in the system.	Pass.
2	Check if an error is thrown when the superuser tries to broadcast an empty message.	Message: ""	An error should be thrown indicating that the message cannot be empty.	Pass

6.1.68 UT-68: View Payment Receipt

Testing Objective: to ensure that attendees view the payment receipt of the payment.

No.	Test case/Test script	Attribute and value	Expected Result	Result
1	Check if user can view payment receipt of paid webinar	View receipt	Receipt will be viewed	Pass

6.2 Functional Testing

6.2.1 FT-01: Login with Different roles

Objective: To ensure that Login for different account types is working correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result

1.	Login as a ‘admin’.	Username: (correct username M003) Password: (correct password 1234)	Main page for the Management is loaded with the Management navigation bar.	Logged in and redirected to admin dashboard	Pass
2.	Login as normal user.	Username: w@gmail.com Password: 1212SD3 1234	Main page for the Doctor is loaded with the doctor navigation bar.	Login failed – invalid credentials error	Fail
3	Login as normal user	Username: (correct username waleed@gmail.c) Password: (correct password 123423311)	Main of the user will be loaded	Logged in and directed to main page of user	Pass
4	Login as normal user who is organizer	Username: (correct username waleed@gmail.c) Password: (correct password 123423311)	Main of the user will be loaded with organizer sidebar	Logged in and directed to main page of user with organizer sidebar	Pass

6.2.2 FT-02: Webinar Management Tasks

Objective: To ensure that all the management tasks are working correctly such as webinar creation, editing and viewing of webinars.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Create webinar as “organizer”	Title: “webinar title” Cover image: ‘abc.jpg’ Date: ‘Jan 01,2023’ Tags: ‘ data, ai ’ Interests: ‘tech’ Description: ‘valid’ Tagline: ‘computer science’ Schedule topic : ‘intro’ From “8:30” To: “8:50”	Request for creating webinar will be sent to admin	Request sent for creating webinar	Pass
2.	Edit webinar as “organizer”	Title: ‘webinar title’ Cover image: ‘abc.jpg’ Date: ‘Jan 01,2023’	New details will be updated	Webinar details updated	Pass

		Tags: ‘data, ai’ Interests: ‘tech’ Description: ‘valid’ Tagline: ‘computer science’ Schedule topic: ‘intro’ From “8:30” To: “8:50”			
3	View webinar as organizer	N/A	Webinar details will be loaded	Webinar details loaded	Pass
4	View webinar as normal user	N/A	Webinar details will be loaded	Webinar details loaded	Pass
5	Approve webinar as admin	N/A	Webinar will be approved	Webinar approved	Pass
4	Check if organizer can add more organizers	N/A	New screen will be opened where organizer can search and add more organizer	Same as expected result	Pass
5	Check if attendee can register for webinar	N/A	Payment screen will be opened	Payment details screen launched	Pass
6	Check if already registered user can register again	N/A	User can not register again	User can not register again	Pass
7	Check if organizer can post notification	Title: “new notification” Description: “this is it”	Notification will be posted	Notification posted	Pass

6.2.3 FT-03: Webinar Streaming Tasks

Objective: To ensure that Webinar Streaming operations are working correctly like start stream, stream control based on user’s role, end stream.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result

1.	Start webinar stream. As creator	N/A	Streaming session starts and attendees can join the session.	Stream started	Pass
2.	Check if start stream option is visible to organizer	N/A	Start stream option not visible to user	Start stream hidden	Pass
3	End stream as creator	N/A	Stream will be ended, and webinar will be closed	Stream ended and meeting closed	Pass
4	check if organizer can end stream	N/A	Cannot end stream	Action not visible and cannot end stream	Pass
5	check if organizer can remove ban users from stream	N/A	User will be banned and removed from stream	User banned and removed from stream	Pass
6	Check if organizer can unban users from stream	N/A	user will be unbanned from stream	User can join stream now and is unbanned	Pass
7	Check if users can ask questions	Attribute and value: question text = "What is the next topic?"	Question is posted and visible to other attendees and managers.	Question is posted and visible to other attendees and managers.	Pass
8	Check if room chat is streaming in real time	message text = "Hello everyone!"	Message is posted and visible to other attendees and managers.	Message is posted and visible to other attendees and managers.	Pass
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6.2.4 FT-04: User Operations Testing

Objective: To ensure all the user operations like viewing webinars, add to favorites, joining webinars, follow organizers and rate webinars are working.

No.	Test case/Test script	Attribute and value	Expected result.	Actual result	Result
1	Check if user can view webinar attendees list	Action: User clicks on a webinar Input: None	The system displays the list of attendees who have registered for the webinar.	system displays the list of attendees who have registered for the webinar.	Pass
2	Adding webinar to favorites	Action: User clicks on "Save to Favorites" button Input: None	The system adds the webinar to the	The system adds the webinar to the	Pass

		User: Attendee A clicks on "Save to Favorites" button for a webinar	attendee's favorites list.	attendee's favorites list.	
3	Test webinar registration	Action: User clicks on "Register" button Input: None User: Attendee A clicks on "Register" button for a webinar	system displays payment details form for the attendee to fill in their details.	Payment form displayed	Pass
4	Check if user can join or leave the webinar session	Action: User clicks on "Join Webinar" button Input: None User: Attendee A clicks on "Join Webinar" button for a webinar	The system redirects the attendee to the webinar session screen	The system redirects the attendee to the webinar session page.	Pass
5	Check if users can follow organizers	Action: User clicks on "Follow Organizer" button Input: None User: Attendee A clicks on "Follow Organizer" button for an organizer	The system adds the organizer to the attendee's following list.	The system adds the organizer to the attendee's following list.	Pass
6	Check if user can view organizers profile	Action: User clicks on an organizer's name Input: None User: Attendee A clicks on an organizer's name	The system displays the organizer's profile page.	The system displays the organizer's profile page.	Pass
7	Check if attendee can rate webinar session	Action: User clicks on "Rate Webinar" button Input: Rating: 4 out of 5 and adds a comment User: Attendee A clicks on "Rate Webinar" button and rates the webinar 4 out of 5	The system records the attendee's rating for the webinar session and displays it in rating list	The system records the attendee's rating for the webinar session and displays it	Pass

6.2.5 FT-05: Chat Operations

Objective: To ensure all the features of chat such as send message, receive message, delete conversation and block are working and functional as expected of them.

No.	Test case/Test script	Attribute and value	Expected result.	Actual result	Result
1	Message sending and receiving	Action: User sends a message to another user	User B receives the message from User A in real-time	User B receives the message from	Pass

		Input: Text message "Hello, how are you?" User: User A sends the message to User B		User A in real-time.	
2	Message history	Action: User views message history Input: None User: User A views message history	User A can view a list of all the messages sent and received in the chat module, including date and time stamps.	User A can view a list of all the messages sent and received in the chat module, including date and time stamps.	Pass
3	Attaching files test	Action: User attaches a file Input: Image file "example.jpg" User: User A attaches the image file.	The image file is displayed in the chat conversation and all users can download it.	The image file is displayed in the chat conversation and all users can download it.	Pass
3	Mute conversations	Action: User mutes notifications Input: None User: User A mutes notifications.	User A does not receive any notifications for new messages in the chat conversation.	User A does not receive any notifications for new messages in the chat conversation.	Pass
4	Check blocking feature working	Action: User blocks another user Input: User B User: User A blocks User B.	User A no longer receives messages from User B and User B is unable to message User A.	User A no longer receives messages from User B and User B is unable to message User A.	Pass
5	Search for filtering chats	Action: User searches for a conversation Input: Text "Project Meeting" User: User A searches for a conversation with the title "Project Meeting."	User A is able to view all conversations with the title "Project Meeting."	User A is able to view all conversations with the title "Project Meeting."	Pass
6	View conversation feature testing	Action: User views a conversation. Input: None User: User A views a conversation with User B.	User A is able to view the conversation history with User B, including all messages and files exchanged.	User A is able to view the conversation history with User B, including all messages and files exchanged.	Pass
7	Check reporting feature working	Action: User reports another user Input: User B User: User A reports User B.	The system logs the report and notifies the appropriate administrator for review.	The system logs the report and notifies the appropriate administrator for review.	Pass

8	Report problem a	Action: User reports a problem Input: Text "Chat messages not loading." User: User A reports the problem.	The system logs the report and notifies the appropriate administrator for review.	The system logs the report and notifies the appropriate administrator for review.	Pass
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6.2.6 FT-06: History and Analysis of Webinars

Objective: To ensure that creator can view the history and analysis of his organized webinars.

No.	Test case/Test script	Attribute and value	Expected result.	Actual result	Result
1	Testing view of graphical analysis of organized webinars	Action: user taps webinar	A chart displaying the revenue generated from all past events is displayed.	A line chart displaying the revenue generated from all past events is displayed.	Pass

6.2.7 FT-07: Webinar Search and Recommendation

Objective: To verify that search and recommendation and filters are working as expected.

No.	Test case/Test script	Attribute and value	Expected result.	Actual result	Result
1	Check if user can be registered for a webinar and its record is stored in database		User activity is recorded and saved.	User activity is recorded and saved.	Pass
2	Verify if system suggest webinar events based on user's activities	N/A	System suggests relevant events based on user's past activities	System suggests relevant events based on user's past activities	Pass
3	Verify User types a search query in the search bar	Search query = "AI"	System displays relevant webinars based on the search query.	System displays relevant webinars based on the search query.	Pass
4	Verify if user can apply sorting filters	Sorting option = "Price"	Webinars are sorted based on the selected option.	Webinars are sorted based on the selected option.	Pass

6.2.8 FT-08: Functional Test for Graphic Kit

Objective: To ensure that graphic kit (banner and logo generator) is functional and working as expected.

No.	Test case/Test script	Attribute and value	Expected result.	Actual result	Result
1	User adds text to webinar	Banner text = "Welcome to our website"	Text appears in banner	Text appears in banner	Pass
2	User changes text color	Text color = "#ff0000"	Text color changes to the selected color	Text color changes to the selected color	Pass
3	Verify if User can upload an image to the banner	Image file = "ex.png"	Image appears in the banner	Image appears in the banner	Pass
4	User changes image width	Image width= 500px	Image width changes to the specified value	Image width changes to the specified value	Pass
5	Verify if text can be deleted from banner	N/A	Text is removed from the banner	Text is removed from the banner	Pass
6	Verify delete feature for image, User clicks on the "Delete Image" button	N/A	Image is removed from the banner	Image is removed from the banner	Pass

6.2.9 FT-09: Marketing Tasks

Objective: To test the functionality of adding a message and banner image for social media marketing, as well as selecting an age range for email marketing.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1	Verify User adds message for social media marketing	User types a message. message = "Check out our latest webinar on AI!"	The message is added to the social media marketing post	The message is added to the social media marketing post	Pass
2	Verify if user can add banner image for social	User attaches a file. Image file = "banner.jpg"	The banner image is added to the social media marketing post	The banner image is added to the social media marketing post	Pass

	media marketing				
3	Verify age range selection for email marketing	Age range = "25 - 40"	Only users within the selected age range receive the email marketing	Only users within the selected age range receive the email marketing	Pass

6.2.10 FT-10: Admin Panel

Objective: To ensure that organizer or creator and view the history and analysis of his organized webinars.

No.	Test case/Test script	Attribute and value	Expected result.	Actual result	Result
1	Accept/Reject User Request	User Request with status 'unapproved'	Set user request as accepted or rejected	User request removed on accepting it and moved to rejected requests on rejecting	Pass
2	Accept/Reject Webinar Request	Webinar Request with status 'unapproved'	Set webinar request as accepted or rejected	Webinar request removed on accepting it and moved to rejected requests on rejecting	Pass
3	View Reports	Reports with status 'pending'	Set report status to resolved or rejected based on action taken	Report status was changed after the action	Pass
4	Ban Users	User with account status 'active'	Set user account status to banned	User account status was changed to banned	Pass
5	Delete Webinars	Webinar with status 'approved'	Webinar removed from database	Webinar was deleted from the database	Pass
6	Add Categories	Category title: 'Adventure' Category image url: 'www.unspl.....'	New Category Added	New category was added	Pass
7	Broadcast Message	Message: 'Hello from Admin'	Message Broadcasted	Message was broadcasted from admin to all users	Pass

6.3 Business Rules Testing

6.3.1 BRT-01: User must be an Organizer to Create a Webinar.

Objective: To ensure only Organizers can Create Webinars.

No.	Test case/Test script	Attribute and value	Expected result.	Actual result	Result
1	Testing create webinar access	Action: user taps to create webinar User account type is organizer	Webinar creation screen will be opened	Create webinar screen opened	Pass

6.3.2 BRT-02: Only Users that have attended the webinar can rate it

Objective: to ensure only attendees can rate webinar not others.

No.	Test case/Test script	Attribute and value	Expected result.	Actual result	Result
1	Testing webinar rating access	Action: user taps to write webinar review he has attendee webinar	User can give review	User can give review	Pass

6.4 Integration Testing

6.4.1 IT-01: Webinar Management

Testing Objective: To ensure the webinar management is being done correctly and the interface between module ‘Account Management’ and module ‘Webinar Management’ is running correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Create Webinar	Webinar name, datetime, price, tagline, description, tags, categories, banner image and cover image	Successfully create webinar and show all the webinar view with all details of webinar with the user as its creator.	Webinar created successfully	Pass
2.	Post Notifications	Notification message	Users that are members of member will receive notification	Notification received successfully	Pass

3.	Add Organizers	User id	Invitation will be sent to user to join webinar as organizer	Invitation sent successfully	Pass
4.	Add Guests	User id	Invitation will be sent to user to join webinar as guest	Invitation sent successfully	Pass
5.	Add Attendees	User id	Invitation will be sent to user to join webinar as attendee	Invitation sent successfully	Pass
6.	Accept invitation	Webinar invitation	User will become part of the webinar	Invitation accepted successfully	Pass

6.4.2 IT-02: Webinar Streaming

Testing Objective: To ensure the webinar streaming is being done correctly and the connection between module ‘Webinar Management’ and module ‘Live Webinar Streaming’ is running correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Start Stream	Webinar stream status is “not streaming”	Successfully start and join the webinar stream of the webinar and display webinar streaming view.	Webinar streaming successfully	Pass

6.4.3 IT-03: Streaming Operations

Testing Objective: To ensure the users can perform different operations in webinar streaming and the connection between module ‘User Operations’ and module ‘Live Webinar Streaming’ is running correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Join Stream	Webinar stream status is “live” and user is member of webinar	Successfully join the webinar stream as attendee or host.	Stream joined successfully	Pass
2.	Leave Stream	User joined webinar	Successfully leave webinar streaming session	Stream left successfully	Pass

6.4.4 IT-04: Webinar Operations

Testing Objective: To ensure the users can perform different in webinar and the interface between module ‘User Operations’ and module ‘Webinar Management’ is running correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Join Webinar	Webinar	User will successfully become a part of the webinar	Webinar joined successfully	Pass
2.	Save to Favorites	Webinar not in favorites	User will successfully save a webinar to its list of favorites	Webinar Saved to favorites successfully	Pass
3.	View Webinar	Webinar	User will successfully view the details of webinar	Webinar view successful	Pass
4.	Rate Webinar	Webinar ended	User will successfully rate webinar.	Webinar rated successfully	Pass

6.4.5 IT-05: Chat

Testing Objective: To ensure the users can chat with other users and the interface between module ‘User Operations’, module ‘Accounts Management’ and module ‘Chat’ is running correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Send Message	Message text, file or image	Message will be sent successfully to other users. And users will be notified	Message sent successfully	Pass
2.	Add Conversation	User with no existing conversation	Successfully search for user and start a conversation with the user	Conversation added successfully	Pass

6.4.6 IT-06: Webinar Analysis

Testing Objective: To ensure the webinar organizers can view analysis of their previous organized webinars and the interface between module ‘Webinar History and Analysis’, module ‘Payment’ and module ‘Webinar Management’ is running correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	View Tickets/Sold Revenue Generated	Webinar tickets count and payment total	Successfully display webinar’s ticket and revenue generated.	Analysis displayed successfully	Pass
2.	View Past Organized Webinars	Webinars that have been ended	Successfully display all the past organized webinars.	Past organized webinars	Pass

				displayed successfully	
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6.4.7 IT-07: Admin Panel

Testing Objective: To ensure the admin can view user and webinar requests and the interface between module ‘Accounts Management’, module ‘Webinar Management’ and module ‘Admin Panel’ is running correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	View User Requests	Account Upgrade requests from users	Successfully display User requests to admin	User Requests displayed Successfully	Pass
2.	View Webinar	Webinar Approval requests from creators	Successfully display Webinar requests to admin	Webinar Requests displayed Successfully	Pass
3.	View Users	All Users of Webinar Prime	Successfully display all Users to admin	Users displayed Successfully	Pass
4.	View Webinars	All Webinars of Webinar Prime	Successfully display all Webinars to admin	Webinars displayed Successfully	Pass
5.	Approve User Requests	Account upgrade requests from users	Successfully Approve account upgrade request of User	Request approved Successfully	Pass
6.	Approve Webinar Requests	Webinar approval requests from users	Successfully Approve webinar request of a webinar	Webinar approved Successfully	Pass

6.4.8 IT-08: AI Recommendation, Search and Filters

Testing Objective: To ensure that similar webinars are recommended and the interface between module ‘User Operations’ and the module ‘AI Recommendation, Search and Filters’ is running correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Content based recommendation	Currently Viewed Webinar	Successfully recommend similar webinars to user	Webinars recommended Successfully	Pass
2.	Filter Webinars by Category	Webinar Category Selected	Successfully display list of webinars of a specific category	Webinars Displayed Successfully	Pass

3.	Filter Webinars by Tag	Webinar Selected	Tag	Successfully display list of webinars of a specific tag	Webinars Displayed Successfully	Pass
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7 Conclusion and Future Work

7.1 Conclusion

In conclusion, Webinar Prime is an all-in-one solution for organizers who want to host, manage, and market virtual events. The web and mobile-based application offers a simple user interface and provides all necessary features for free, including live streaming services for hosting webinar sessions. Unlike other applications that can be complex and costly, Webinar Prime offers an accessible and user-friendly solution for organizers to successfully manage and market their virtual events. Overall, Webinar Prime is a valuable tool for those looking to simplify the process of hosting and managing virtual events.

7.2 Future Work

We will work on more optimization and performance of our application. We will add new features and update the application with respect to new technology and design trends.

8. References

Websites

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9. Plagiarism Report



Report by M. Umair

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