Project Proposal

for

Webinar Prime (In Collaboration with ILC Comsats)

Version 1.0

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Project Category:

B-Web Application/Web Application based Information System C-Problem Solving and Artificial Intelligence Others:

- Streaming service
- E- Smartphone Application

Abstract

Webinar prime is a web and mobile based application for members of CUI that will allow its users to create, manage and advertise virtual events free of cost. World is moving towards technological solutions for everything. There are many webinar services out there but all of them are either paid or have limited number of free features. For arranging virtual event in today's era, people usually make WhatsApp groups to advertise or manage an event and hold the meeting on google meet by sharing a link on meeting on different social media platforms which is very hectic for users to keep a record of online events and their timings and most of the time people miss such meetings. Webinar prime will be a one-stop shop for both students and organizers as well who want to organize events. It will help students to find events of their interest all in one place.

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.

2. Problem Statement

Events at CUI and other organizations are held on 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 a difficulty managing and analyzing events because of lack of good solutions. There are many webinar solutions out there, but they are either paid or offer 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.

3. 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 the Covid. Organizers will simply create a virtual event, which will appear into 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 on 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 makes sure to prevent the outside intervention. Webinar prime will offer all these services for free to all its CUI members and other organizations.

3.1 Objectives

Following are the objectives of Webinar Prime.

- **BO-1:** To provide free services to CUI members to host a successful webinar.
- **BO-2:** The application must have 3000+ downloads by the end of 3 months of the initial release.
- **BO-3:** Improving privacy and security.
- **BO-4:** Improving the streaming quality of webinars/virtual events by 30% by the end of 6 months of release.
- **BO-5:** User-friendly UI and easily understandable application for the common man.

4. Related System Analysis/Literature Review

Table 1 describes the weaknesses of related systems and the solution provided by our application.

Table 1: Related System Analysis with the Webinar Prime

Application Name	Weakness	Webinar Prime Solution
Whova ¹	 Fee charged per ticket purchase No recommendation system or event suggestions 	 No fee charged on ticket purchases AI based Recommendation System and suggestions for user
Eventee ²	 Pay for search filters Can only organize one event per year for free 	 Free search and AI recommendation system Free webinar organizing
GoToWebinar ³	High Cost to use marketing and hosting services	Free event management, hosting, and automated marketing services.
Eventbrite ⁴	 No Event streaming and chat service Fee charge per ticket purchase 	 Event streaming and chat service provided. No fee charged per ticket purchase
Bigmaker ⁵	 No Graphic Kit for Logos and Banner Generation High Cost 	 Graphic Kit for Logo and Banner Generation for Webinars Free to use

5. 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 session.

6. Scope

Webinar Prime is 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 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 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 session 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 intended audience on our application. They will be able to generate webinar banners from provided templates and share webinar link on social media accounts. They will be able to provide information about target audience like interests or age group and our app will do the email marketing for them automatically. The app will also provide feature 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.

7. Modules

7.1 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: CAPTCHA Verification for the human check.

FE-5: Reset the Password.

FE-6: Change Password

FE-7: Edit Account Details

FE-8: Delete Account

7.2 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

7.3 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-5: Ask a question

FE-6: Streaming Room Chat

FE-7: Report Abuse

FE-8: Report a problem

FE-9: Kick Out User from Stream

FE-10: End Streaming Session

7.4 Module 4: Email and Social Media Marketing with AI Bots

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

FE-1: Add Marketing Message

FE-2: Insert Webinar Event Banner

FE-3: Choose Target Audience (like student semesters/interests)

FE-4: Email Marketing with AI Bots

FE-5: Social Media Marketing with AI Bots.

7.5 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-4: Generate Webinar Banner.

FE-5: Save Banner or Logo.

7.6 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

7.7 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

FE-8: Report a problem

7.8 Module 8: Webinar History and Analysis

Webinar Managers will be 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.

Scope Document for Webinar Prime

FE-2: View Community/Attendees of Past Webinars.

FE-3: View Tickets sold/Revenue generated from all events.

FE-4: View Tickets sold/Revenue generated from a particular event.

FE-5: Graphical Analysis.

7.9 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: Keep a track of user activities.

FE-2: Suggest webinar events based on user's activities. **FE-3:** Suggest webinar events based on user's interest.

FE-4: Search Webinars

FE-5: Sort by Date, Price, or Rating

FE-6: Apply More Filters.

7.10 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: Broadcast Messages

7.11 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: Provide Support Links

FE-4: Answer User's queries

7.12 Module 12: Payments

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

FE-1: Payment with Stripe

FE-1: Input Card Details

FE-2: Save Card Details

FE-3: View Invoice

8. 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.

9. Data Gathering Approach

Mostly data was gathered from the internet and looking at the problems faced by event managers and event attendees around us. More data will be gathered by visiting small startups and workshop holders who use online streaming platforms for conducting their everyday businesses. Interviews will be conducted with owners of startups and google forms will be used to collect data from the public.

10. Tools and Technologies

Table 2 enlists the tools and technologies that will be used for Webinar Prime.

Table 2: Tools and Technologies for Webinar Prime

	Tools	Version	Rationale	
	VS Code	2022	IDE	
	MongoDB	2022	Database	
Tools	Firebase	9.6.10	Database	
And	Figma	CSC 6	Design Work	
Technologies	Git and Github	3.4.1	Version Control	
	MS Word	2016	Documentation	
	MS PowerPoint	2016	Presentation	
	Technology	Version	Rationale	
	React JS/Next JS	18.0.0	Web Front-end	
	Treact BB/T tent BB	10.0.0		
	Trouble of Trouble of	19.0.0	Development	
	Flutter	2.17.0	Development Mobile Front-end	
			Mobile Front-end	
_	Flutter	2.17.0	Mobile Front-end Development	
	Flutter Node JS	2.17.0 17.8.0	Mobile Front-end Development Back-end Development	

		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

11. Project Stakeholders and Roles

Table 3 below enlists the project stakeholders for Webinar Prime.

Table 3 Project Stakeholders for Webinar Prime

Project Sponsor	COMSATS University Islamabad, Islamabad Campus
Stakeholder	 Student 1: Muhammad Umair Student 2: Waleed Ahmed Supervisor: Mr. Qasim Malik Final Year project committee: Evaluation of the project

12. Module based Work Division

Table 4 below describes team member work division for Webinar Prime.

Table 4 Team Member Work Division for Webinar Prime

Student Name	Student Registration Number	Responsibility/ Module / Feature
Muhammad Umair	FA19-BCS-057	Module 2: Webinar management
		Module 3: Webinar Streaming
		Module 4: Chat
		Module 5: Email and Social Media Marketing with AI Bots
		Module 6: Graphic Kit
		Module: 8: Webinar History and Analysis
		Module 9: AI Recommendation, Search and Filters
		Module 11: AI Chatbot for Assistance
		Web and Mobile Front end and Backend

FA19-BCS-086	Module 1: Account Management
	Module 2: Webinar management
	Module 4: Chat
	Module 5: Email and Social Media Marketing with AI Bots
	Module 6: Graphic Kit
	Module 7: User Operations
	Module 10: Admin Panel
	Module 12: Payments
	Web and Mobile Front end and Backend
	FA19-BCS-086

13. WBS and Gantt Chart

Table 5 below provides Work breakdown structure for Webinar Prime.

Table 5 WBS for Webinar Prime

ID	Task	Duration	Resources
1	Planning and Scope	7 d	Muhammad Umair, Waleed Ahmed
2	Idea Hunting	2 d	Muhammad Umair, Waleed Ahmed
3	Communication with Stakeholders	2 d	Muhammad Umair, Waleed Ahmed
4	Scope Document Completion	2 d	Muhammad Umair, Waleed Ahmed
5	Scope Document Submission	1 d	Waleed Ahmed
6	SRS Document	24 d	Muhammad Umair, Waleed Ahmed
7	Requirement Gathering	3 d	Muhammad Umair, Waleed Ahmed
8	Requirement Finalization	3 d	Muhammad Umair, Waleed Ahmed
9	SRS Document Completion	5 d	Muhammad Umair, Waleed Ahmed
10	SRS Document Submission	1 d	Muhammad Umair
11	SRS Presentation	6 d	Muhammad Umair, Waleed Ahmed
12	Evaluation	5 d	Muhammad Umair, Waleed Ahmed
13	SDS Document	26 d	Muhammad Umair, Waleed Ahmed
14	Design Analysis	6 d	Muhammad Umair, Waleed Ahmed
15	SDS Document Completion	7 d	Muhammad Umair, Waleed Ahmed
16	SDS Submission	1 d	Waleed Ahmed

Scope Document for Webinar Prime

17	SDS Presentation	6 d	Muhammad Umair, Waleed Ahmed
18	SDS Evaluation	6 d	Muhammad Umair, Waleed Ahmed
19	Implementation	50 d	Muhammad Umair, Waleed Ahmed
20	Implementation 30%	20 d	Muhammad Umair, Waleed Ahmed
21	Project Report Document Completion	5 d	Muhammad Umair, Waleed Ahmed
22	Project Report Document Submission	1 d	Waleed Ahmed
23	60% Implementation 24 d		Muhammad Umair, Waleed Ahmed
24	Testing	10 d	Muhammad Umair, Waleed Ahmed
25	Test Case Document Completion	3 d	Muhammad Umair, Waleed Ahmed
26	Initial Testing	7 d	Muhammad Umair, Waleed Ahmed
27	Completion	50 d	Muhammad Umair, Waleed Ahmed
28	100% implementation	35 d	Muhammad Umair, Waleed Ahmed
29	Final Testing	7 d	Muhammad Umair, Waleed Ahmed
30	Final Project Report Document Completion	7 d	Muhammad Umair, Waleed Ahmed
31	Final Project Report Submission	1 d	Muhammad Umair

Scope Document for Webinar Prime

Figure 1 below is Gantt chart for Webinar Prime.

ID	Task Name	Start Date	Finish Date	Duration	Complete	Resource	Q2	2022-05-12 Q3	Q4
1	Idea Hunting	2022-05-11	2022-05-13	3.0 d.	100.0%	Muhammad Umair Walled Ahmed	ı		
2	Communication with Stakeholders	2022-05-13	2022-05-16	2.0 d.	100.0%	Muhammad Umair Walled Ahmed	•		
3	Scope Document Completion	2022-05-13	2022-05-17	3.0 d.	100.0%	Muhammad Umair Walled Ahmed			
4	Scope Document Submission	2022-05-18	2022-05-18	1.0 d.	0.0%	Muhammad Umair Walled Ahmed	1		
5	Requirement Gathering	2022-05-18	2022-05-20	3.0 d.	0.0%	Muhammad Umair Walled Ahmed	•		
6	RequirementFinalization	2022-05-20	2022-05-24	3.0 d.	0.0%	Muhammad Umair Walled Ahmed	•		
7	SRS Doucment Completion	2022-05-24	2022-05-30	5.0 d.	0.0%	Muhammad Umair Walled Ahmed	•		
8	SRS Document Sub mission	2022-01-28	2022-03-30	44.0 d.	0.0%	Muhammad Umair Walled Ahmed			
9	SRS Presentation	2022-05-31	2022-08-07	6.0 d.	0.0%	Muhammad Umair Walled Ahmed	-		
10	System Design Analysis	2022-08-07	2022-08-14	6.0 d.	0.0%	Muhammad Umair Walled Ahmed	-		
11	SDS Document Completion	2022-08-14	2022-08-22	7.0 d.	0.0%	Muhammad Umair Walled Ahmed	-		
12	SDS Document Sub mission	2022-08-23	2022-08-23	1.0 d.	0.0%	Muhammad Umair Walled Ahmed	1		
13	SDS Evaluation	2022-08-24	2022-07-01	6.0 d.	0.0%	Muhammad Umair Walled Ahmed	-		
14	Implementation 30%	2022-06-28	2022-07-25	20.0 d.	0.0%	Muhammad Umair Walled Ahmed	-		
15	Project Report Document Completion	2022-07-21	2022-07-29	7.0 d.	0.0%	Muhammad Umair Walled Ahmed		-	
16	Project Report Document Submission	2022-08-01	2022-08-01	1.0 d.	0.0%	Muhammad Umair Walled Ahmed		1	
17	60% Implementation	2022-08-01	2022-08-26	20.0 d.	0.0%	Muhammad Umair Walled Ahmed			
18	Test Case Document Completion	2022-08-26	2022-08-30	3.0 d.	0.0%	Muhammad Umair Walled Ahmed		•	
19	Initial Testing	2022-08-30	2022-09-07	7.0 d.	0.0%	Muhammad Umair Walled Ahmed		-	
20	100% Implemention	2022-09-08	2022-10-26	35.0 d.	0.0%	Muhammad Umair Walled Ahmed		_	
21	Final Testing	2022-10-26	2022-11-03	7.0 d.	0.0%	Muhammad Umair Walled Ahmed			-
22	Final Project Report Document Completion	2022-11-11	2022-11-21	7.0 d.	0.0%	Muhammad Umair Walled Ahmed			-
23	Final Project Report Document Submission	2022-11-21	2022-11-21	1.0 d.	0.0%	Muhammad Umair Walled Ahmed			1

Figure 1 Gantt Chart for Webinar Prime

14. Mockups

Figure 2 below is a mobile mockup of User Operations of Webinar Prime.



Figure 2 Mockup for User Operations (Mobile)

Figure 3 below is a mobile mockup of AI Recommendation, Search and Filters of Webinar Prime.

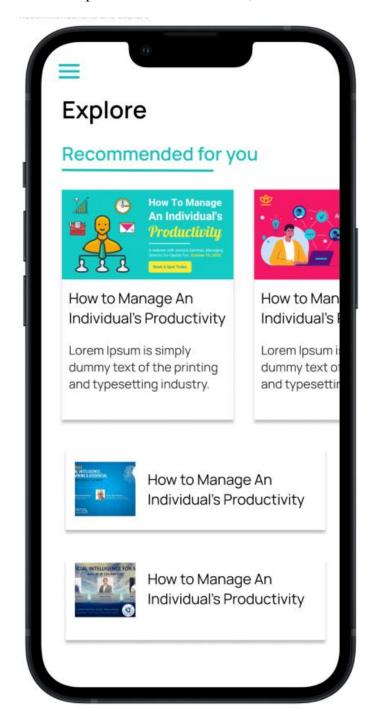


Figure 3 Mockup for AI Recommendation, Search and Filters (Mobile)

Figure 4 below is a mobile mockup of Webinar Streaming.



Figure 5 Mockup for Webinar Streaming (Mobile)

Figure 5 below is a web mockup of User Operations/Webinar Details of Webinar Prime.



Figure 5 Mockup for User Operations / Webinar Details (Web)

Figure 6 below is a web mockup of Admin Panel of Webinar Prime.

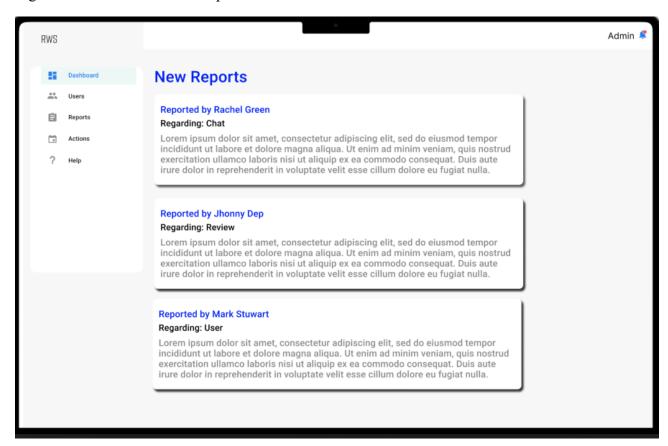


Figure 6 Mockup for Admin Panel (Web)

Figure 7 below is a web mockup of Graphic Kit of Webinar Prime.

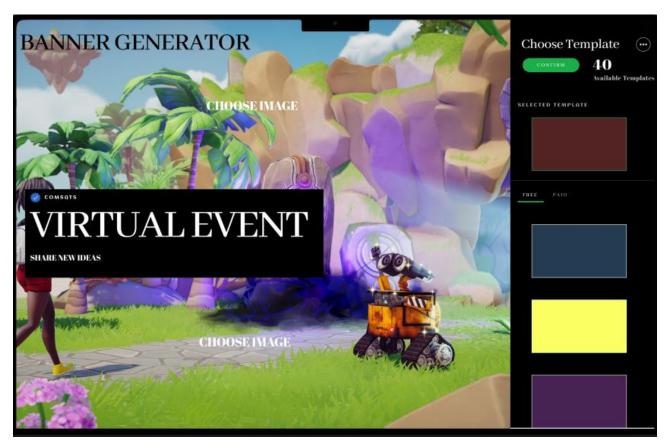


Figure 7 Mockup for Graphic Kit (Web)

15. References

Websites

- 1. https://whova.com/blog/reduce-registration-cost-double-attendeeengagement/?utc source=faq
- 2. https://eventee.co/en/pricing
- 3. https://play.google.com/store/apps/details?id=com.logmein.gotowebinar&hl=en&gl=US
- 4. https://www.eventbrite.com/organizer/overview/
- 5. https://get.bigmarker.com/solutions/overview

16. Plagiarism Report



turnitin Originality Report

Report by M. Umair

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