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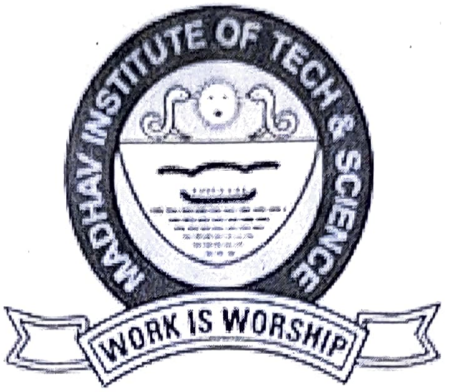


**Project Report**

**on**

# Video Conferencing Management

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MAY-JUNE 2022

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**Project Report**

**on**

## Video Conferencing Management

A project report submitted in partial fulfilment of the requirement for the degree of

**BACHELOR OF TECHNOLOGY**

in

**COMPUTER SCIENCE AND ENGINEERING**

Submitted by:

**Rishabh Arya**

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Submitted to:

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# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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## CERTIFICATE

This is certified that **Rishabh Arya** (0901CS191094) has submitted the project report titled **Video Conferencing Management** under the mentorship of **Mr. Mir Shahnawaz Ahmad,** in partial fulfilment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

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## MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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# DECLARATION

I hereby declare that the work being presented in this project report, for the partial fulfilment of requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentorship of **Mr. Mir Shahnawaz Ahmad, Assistant Professor**, Computer Science and Engineering.

I declare that I have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

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I am sincerely thankful to my faculty mentors. I am grateful to the guidance of **Mr. Mir Shahnawaz Ahmad, Assistant Professor**, Computer Science and Engineering, for his continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

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# ABSTRACT

For the past decade, video conferencing (VC) has become more popular and more reliable as a tool to bridge the distance gap when travel is not an option, impractical or undesired. Video conferencing uses audio and video telecommunications to bring people at different sites together. Understanding what are required for video conferencing and its application has become one of the major researched topics by various learning institutions and businessmen.

**Keyword:** Video Conference (VC), Distance Learning.

**सार:** पिछले एक दशक से, वीडियो कॉन्फ्रेंसिंग (वीसी) दूरी के अंतर को पाटने के एक उपकरण के रूप में अधिक लोकप्रिय और अधिक विश्वसनीय हो गया है, जब यात्रा एक विकल्प नहीं है, अव्यवहारिक या अवांछित। वीडियो कॉन्फ्रेंसिंग विभिन्न साइटों पर लोगों को एक साथ लाने के लिए ऑडियो और वीडियो दूरसंचार का उपयोग करती है। यह समझना कि वीडियो कॉन्फ्रेंसिंग के लिए क्या आवश्यक है और इसका अनुप्रयोग विभिन्न शिक्षण संस्थानों और व्यवसायियों द्वारा शोध किए गए प्रमुख विषयों में से एक बन गया है।

# TABLE OF CONTENTS


| TITLE | PAGE NO. |
|---|---|
| **Abstract** | **6** |
| **सार** | **7** |
| **List of figures** | **10** |
| **Chapter 1: Project Overview** | **11** |
| 1.1 Introduction | 11 |
| 1.2 System Purpose | 11 |
| 1.3 System Scope | 11 |
| 1.3.1 Gallery Module | 11 |
| 1.3.2 Conference Scheduling Module | 11 |
| 1.3.3 Conference Joining Module | 11 |
| 1.3.4 Meeting Summary Module | 11 |
| **Chapter 2: Requirements** | |
| 2.1 External Interfaces | 12 |
| 2.1.1 System Interfaces | 12 |
| 2.1.2 User Interfaces . . . . . | 12 |
| 2.2 Performance Requirement | 13 |
| 2.3 Design Constraints | 13 |
| 2.3.1 User Modules | 13 |
| 2.4 Functions | 13 |
| 2.4.1 Functions Requirements | 13 |
| 2.4.1.1 Software Requirements | 13 |
| 2.4.1.2 Hardware Requirements | 13 |
| 2.4.2 Non-Functions Requirements | 13 |
| **Chapter 3: Preliminary Design** | **14** |
| 3.1 Data Flow Diagram | 14 |
| 3.2 Entity-Relationship Diagram | 15 |
| 3.3 Tools & Technologies | 15 |
| 3.3.1 HTML | 15 |
| 3.3.2 CSS | 15 |

3.3.3 JavaScript 15
3.3.4 Bootstrap 16
3.3.5 XAMPP 16
3.3.6 PHP 16
3.3.7 MYSQL 16
**Chapter 4: Final Analysis** 17
4.1 Benefits of Video Conferencing 17
4.2 Disadvantages of Video Conferencing 17
4.3 Application of Video Conferencing 17
4.3.1 Teaching 17
4.3.2 Meetings 17
4.3.3 Data Sharing 18
4.3.4 Interviews 18
4.3.5 Telemedicine 18
4.3.6 Legal work 18
4.3.7 Other Applications 18
**Chapter 5: Conclusion** 19
**References** 20

# LIST OF FIGURES


| Figure Number | Figure caption | Page No. |
|---|---|---|
| 3.1.1 | Data Flow Diagram | 14 |
| 3.2.1 | Entity-Relationship diagram | 15 |

# Chapter 1: PROJECT OVERVIEW

## 1.1 Introduction

Video conferencing is a method of communicating between two or more locations in which sound, vision and data signals are conveyed electronically to enable simultaneous interactive communication. The communication can take place in a special video conferencing studio, or on a normal home computer equipped with a webcam or even a video call on a modern 3rd generation mobile phone. Besides the audio and visual transmission of meeting activities, allied video conferencing technologies can be used to share documents and display information on whiteboards.

## 1.2 System Purpose

The purpose of the conferencing website is to organize and create our events efficiency; through this website, we can create events and list them in a sequence. We can also share the event details to the respective audience. On this platform, user can also review the past details of the meeting and also get all the details of the meeting and take the details of the event that is going to occur in future and get all the notifications on that website about the event.

## 1.3 System Scope

The functional scope of the system is represented in four different aspects of the system; Gallery Module, Conference Scheduling Module, Conference Joining Module, Meeting Summary.

### 1.3.1 Gallery Module

The scope of the Gallery Module is to have all the highlights of the events & conferences held on the platform. It also has posters of the upcoming events in the form of cards. This gives user a pictorial idea of all the details of upcoming events.

### 1.3.2 Conference Scheduling Module

The scope of the Conference Scheduling Module is to schedule or create conference or event. This section requires user to fill details like event name, size of conference and allows them to select time of their choice.

### 1.3.3 Conference Joining Module

The scope of the conference joining module is to provide user an interface to join the event or conference. This is a simple module consisting of conference joining feature.

### 1.3.4 Meeting Summary Module

The scope of the meeting summary module that it consists of the list of all upcoming and previous events or conference. Users can take the summary of all the events with the help of this section.

# Chapter 2: REQUIREMENTS

## 2.1 External Interfaces

### 2.1.1 System Interfaces

- The system will interact with the registered user for the purpose of event scheduling.
- The system data needs will be supported by a connection to central database.

### 2.1.2 User Interfaces

- The system will consist of four modules; Gallery, Conference Scheduling, Conference Joining, Meeting Summary.

## 2.2 Performance Requirement

The local system should be capable of running a **web browser** such as Chrome, Firefox, Edge, etc. The user's system should have a good **internet connectivity**. The system **response time** should be no longer than 1.0 seconds in order to keep up with the actions given by the user. As the company begins to acquire more customers, the system must be able to **scale in speed, size, and versatility** in order to accommodate the rising needs of the customer basis.

## 2.3 Design Constraints

The system will be constrained by operating system of the host system and will need to be able to function on the different internet servers.

- The system will need to function on major internet operating software including Internet Explorer, Firefox, Chrome, Safari, Opera, and Android.
- The system will be constrained operating system of the host computer which is Windows.

### 2.3.1 User Modules

- Registration
- Login
- Schedule Conference
- View Gallery
- Join Conference
- View Conference Summary
- Logout

## 2.4 Functions

### 2.4.1 Functions Requirements

- The system will contain a Conferencing Website that will provide information to the public and registered user about the conferences being held in the past and in future. This information will include Venue, Date, Time, Agenda, etc.
- The system will contain a module for the user to join the meeting and also the gallery for checking upcoming events.
- The registered user can also schedule event and send an invitation to his/her target audience. After his/her event scheduling is done, automatically a poster will be shown in the gallery of website and event summary will also be there of the audience.

#### 2.4.1.1 Software Requirements

- IDE: Visual Studio Code
- Operating System: Windows 7/8/10/11
- Language: HTML, CSS, PHP, JavaScript
- Framework: Bootstrap
- Server: MySQL workbench, XAMPP Server

#### 2.4.1.2 Hardware Requirements

- 4 GB RAM or higher
- 1 GB of available disk space or higher
- Pentium processor 1 or higher

### 2.4.2 Non-Functions Requirements

- Good Performance
- Excellent Response Time
- Scalable
- Usability
- Secure
- Reliability
- Serviceability
- Data Integrity

# Chapter 3: PRELIMINARY DESIGN

## 3.1 Data Flow Diagram

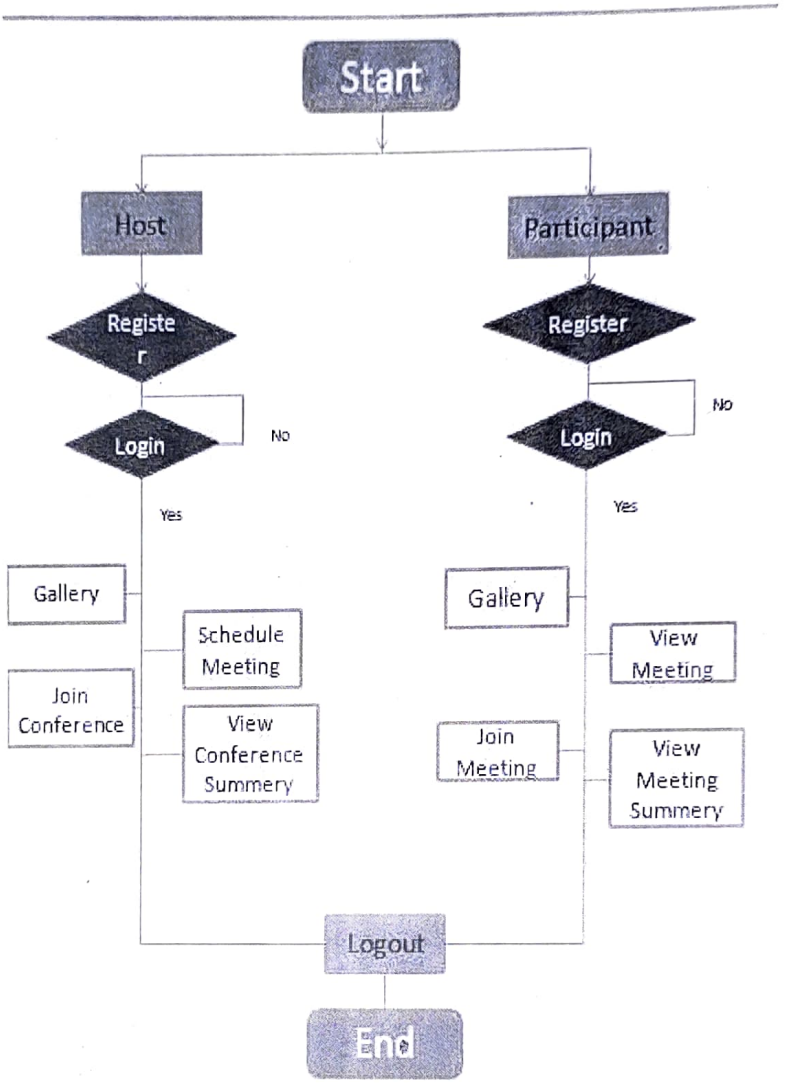


Fig. 3.1.1

## 3.2 Entity-Relationship Diagram

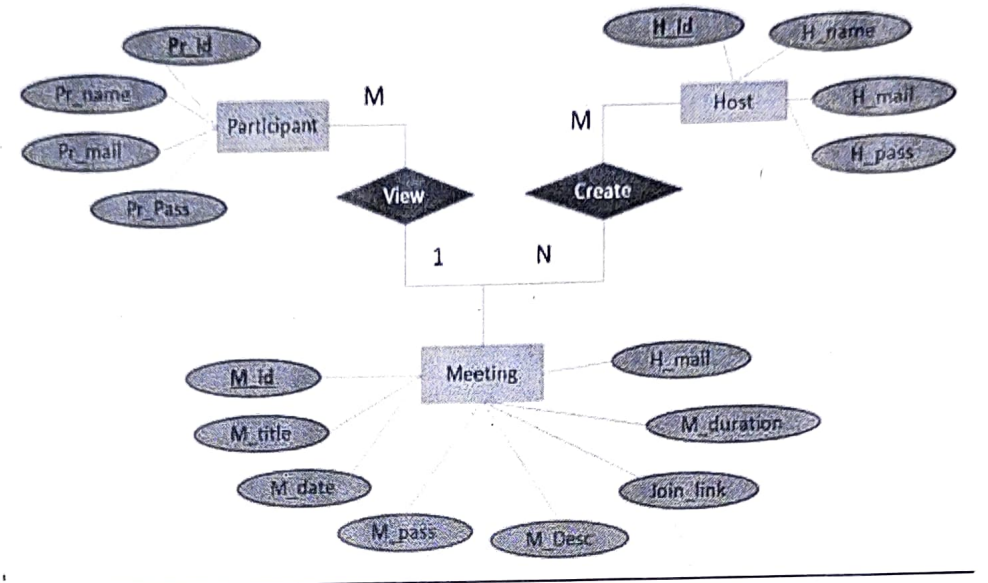


Fig. 3.2.1

## 3.3 Tools & Technologies

### 3.3.1 HTML

HTML(Hyper Text Markup Language) is a markup language that is used to create documents on the World Wide Web incorporating text, graphics, sound, video, and hyperlinks.

### 3.3.2 CSS

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable. CSS handles the look and feel part of a web page. Using CSS, you can control the colour of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colours are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

### 3.3.3 JavaScript

JavaScript is a client-side scripting language, which means the source code is processed by the client's web browser rather than on the web server. This means functions can run after a webpage has loaded without communicating with the server. For example, a JavaScript function may check a

web form before it is submitted to make sure all the required fields have been filled out. The JavaScript code can produce an error message before any information is actually transmitted to the server.

### 3.3.4 Bootstrap

Bootstrap is the most popular HTML, CSS and JavaScript framework for developing a responsive and mobile friendly website. It is a front-end framework used for easier and faster web development. It includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many others. It can also use JavaScript plug-ins. It facilitates you to create responsive designs.

### 3.3.5 XAMPP

XAMPP is a cross-platform web server that is free and open-source. XAMPP is a short form for Cross-Platform, Apache, MySQL, PHP, and Perl. XAMPP is a popular cross-platform web server that allows programmers to write and test their code on a local webserver. It was created by Apache Friends, and the public can revise or modify its native source code. It includes MariaDB, Apache HTTP Server, and interpreters for PHP and Perl, among other computer languages. Because of XAMPP's simplicity of deployment, a developer can quickly and easily install a WAMP or LAMP stack on an operating system, with the added benefit that common add-in apps like WordPress and Joomla can also be loaded.

### 3.3.6 PHP

PHP (Hypertext Pre-processor) is a widely-used open-source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. PHP scripts can range from simple one-line commands to complex functions. Some PHP-based websites generate nearly all webpage content dynamically using a series of PHP scripts. While early versions of PHP were not object-oriented language, PHP3 introduced support for classes, including object attributes and methods. Developers can create custom object libraries and import them into various PHP pages, similar to a compiled language.

### 3.3.7 MYSQL

MySQL is an open-source relational database management system. It is based on the structure query language (SQL), which is used for adding, removing, and modifying information in the database. Standard SQL commands, such as ADD, DROP, INSERT, and UPDATE can be used with MySQL. MySQL can be used for a variety of applications, but is most commonly found on Web servers.

# Chapter 4: FINAL ANALYSIS

## 4.1 Benefits of Video Conferencing

- Sharing of presentations
- It allows immediate, full two-way communication of content; verbal, pictorial objects etc.
- Greater access to experts/specialists (nationally and internationally)
- More productive use of time (eliminates wasted travel time) and significant travel cost savings.
- Reduced environmental impact through less travel and reduced pressure, stress and fatigue from travel.
- Facilitating short notice meetings between individuals in distant locations thus decisions can be made more quickly.
- Increased meeting attendance by participants who would otherwise be unable to join in
- Greater accessibility and allows geographical reach even to rural or remote locations.
- A conference session can be saved for future reference e.g., class notes can be saved and distributed via network for references by students (Alan, 2009).

## 4.2 Disadvantages of Video Conferencing

- It may lead to laziness with some students as they can have their classes while at home thus lacking self-discipline.
- Lack of interpersonal relationship between students and teachers or between students themselves.
- The technology may degrade the received images and sound. Body language can be lost if image movement is jerky. There can be a delay on the sound too.
- The atmosphere of a face-to-face meeting is lost.
- For meetings, videoconferences are more effective if the participants already know each other.
- The security may be compromised as one can hack onto a private VC session.

## 4.3 Application of Video Conferencing

### 4.3.1 Teaching

VC allows easy access to remote expertise. When the number of expertise is small, one lecture can teach various virtual classes at a go thus, travelling to various campuses is significantly reduced.

### 4.3.2 Meetings

Using VC leads to cost savings on travel, accommodation and staff time. Several sites can be linked

together. Having a set time and duration for a meeting encourages punctuality and focused discussion.

### 4.3.3 Data Sharing

Data sharing: Images from a personal computer (PC), such as spreadsheets, PowerPoint illustrations etc. can be shared to enhance a presentation.

### 4.3.4 Interviews

Cost savings can allow more candidates to be interviewed from remote locations. With data sharing, CVs can be viewed and discussed online.

### 4.3.5 Telemedicine

In rural areas, specialist medical help may not be available on hand. By linking to a regional centre, cottage hospitals and clinics can receive help in diagnosing patients' disorders.

### 4.3.6 Legal Work

VC helps reduce intimidation of vulnerable court witnesses. Particularly sensitive cases e.g., children or rape cases can be made more acceptable by separating the victims physically from the court.

### 4.3.7 Other Applications

- Remote staff training
- Thesis defence at another institution
- Supervision of students on work placements
- Within institutions, videoconferencing may benefit many different user groups such as:
    - Academics and researchers collaborating and teaching
    - Administrators and managers working with colleagues to find solutions
    - Students accessing external expertise, conducting research or staging interviews.

# Chapter 5: CONCLUSION

Video conferencing could lead the way for a dual approach, giving students more responsibility for their learning, working in groups, and doing educational tasks, all of which would benefit conventional teaching, but video conferencing provides an opportunity to implement them. It does not replace the use of print or other methods used in the conceptualization process. It can be used to encourage construction and its true use lies in encouraging dialogue and increasing the scope for dialogue. With the advancement and ease of availability of high speed and cheap internet connections, it is expected that video conferencing will increasingly become popular thus, leading to more interest and use of distance learning

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