# SOFTWARE REQUIREMENTS SPECIFICATION

*for*

# VIRTUAL REALITY TOUR OF MAJULI ISLAND ASSAM

**Version** 1.0

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# 1. Introduction

## 1.1 Purpose of the Document

This document provides a detailed description of the requirements for the Virtual tour of Kamalabari temple and how the user can access and experience its ecological, cultural and architectural heritage by using this system. It showcases the functional and non-functional requirements of the system along with the system constraints.

## 1.2 Document Conventions

| | |
|---|---|
| User | Any laymen users |
| Tour | Virtual reality model of Kamalabari temple, Majuli island |
| Constraints | Specifications which are required for this system to run |
| System | Software for this VR tour . |
| Desc | Description, information about the functions |

## 1.3 Project scope

The system is intended to provide an immersive 3D virtual tour of one of the satras in Majuli island - Kamalabari Temple/Satra.

This system shall provide the users the following:

- An immersive environment with support of navigation.
- An interface with UI which ensures its usability to laymen users.
- Interaction with the surroundings and to explore about the temple with the help of a few choices provided to him.
- Multimedia, representing rituals and special events (videos) and environment (audio) for enhanced experience.
- World-In-Miniature(Map) for location tracking and teleportation.

### 1.4 Target Audience

The target audience are people, interested in exploring the premises of the Kamalabari temple. Students, educators and cultural heritage enthusiasts interested in learning the ecological and cultural heritage of Majuli island. People with mobility challenges may find it useful in exploring the island from home.

# 2. Functional Requirements Hierarchy

F.1. Start tour
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F.3. Navigation
- F.3.1. Location awareness
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- F.3.3. Zooming
- F.3.4. Eye tracking

F.4. Description of locations

# 3. Functional Requirements

**R.1 Start tour**
**Input:** Start button
**Output:** Introduction video
**Desc**: Start button initiates the virtual tour by introducing the user to the ecology and history of Majuli island.

**R.1.1 Skip Introduction**
**Input:** User choice
**Output:** Island map
**Desc:** Allows the user to quickly go to the island map and skip the introduction

**R.1.2 Pause/continue tour**
**Input:** User choice
**Output:** Current state of the simulation
**Desc**: It will pause/continue the simulation

**R.1.3 Exit tour**
**Input:** User choice
**Output:** User location
**Desc**: Saves user current location and orientation and exits the application

**R.2 Multimedia**
**Desc:** The system shall provide support for multimedia content to enhance the user's experience.

**R.2.1 Volume control**
**Input:** Volume level
**Output:** Desired volume
**Desc:** Allows the user to adjust the audio volume as needed.

**R.2.2 Daytime control**
**Input:** Day or Night
**Output:** Day view or Night view
**Desc:** Allows the user to experience the desired view of the temple.

#### R.2.3 Ritual Videos

**Input:** Eye gazing
**Output:** Video of rituals
**Desc:** Allows the user to watch the rituals followed in the temple by looking at some specific spots.

### R.3 Navigation

#### R.3.1 Location Awareness

**Input:** Users Location
**Output:** View in minimap
**Desc:** Allows the user to know about the current location and the surrounding landmarks.

#### R.3.2 Teleportation

**Input:** Desired landmark
**Output:** 3d view of the landmark
**Desc:** Allows the user to click on the desired landmark , get teleported to the location and get a 360 degree view

#### R.3.3 Zooming minimap

**Input:** Desired zoom level
**Output:** Zoomed minimap
**Desc:** Allows the user to get a zoomin view of a specific spot.

#### R.3.4 Eye Tracking

**Input:** Eye gazing
**Output:** 3D view
**Desc:** Allows the user to look around the place by head rotation and gazing ,enhances the users experience

### R.4 Description of Locations

**Input:** Location
**Output:** Location Description
**Desc:** Allows the user to get information about the desired location.

# 4. Non-Functional Requirements

### Performance:

- Fast load time for all multimedia elements
- Real-time navigation with minimal lag

### Usability:

- Easy-to-use interface
- Clear and concise multimedia content
- Interactive navigation with clear visual cues
- Accessible and usable by people with disabilities

### Security:

- This system does not collect personal information.

### Maintainability :

- Easy to update and modify the content
- Clear error reporting and debugging system to resolve technical issues

### Compatibility:

- Compatible with a range of VR headset devices

### Accessibility:

- Includes alternative multimedia formats for people with disabilities

### Scalability:

- No scalability requirement

# 5. System Constraints

- Oculus Rift Head Mounted Display (HMD)
- A desktop computer with a high-end Intel Core i7 or equivalent processor
- Graphics card, such as the Nvidia GeForce GTX 970 or higher.
- A minimum of 8 GB of RAM .
- At least 250 GB of storage space, such as an SSD
- desktop computer with a USB 3.0 port for connecting the Oculus Rift
- a DisplayPort for connecting a monitor.
- The system should be operating on Windows 10 or higher and compatible with the Oculus Rift.