Software Requirements Specification

for

Online Invitation preparation

Version 1.0 approved

Prepared by,
Bharath S – 19Z308
Dharun Bharathi S – 19313
Gowtham S – 19Z316
Mahesh Boopathy M – 19Z330
Shashaank R – 19Z347
Surtik S – 19Z351

PSG College of Technology

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This document describes the software requirements of an Online Invitation Preparation (OIP) for events or parties or a function. It is intended for user and maintainer of the OIP. These requirements were created in response to organize an event or a function.

It will explain the different functional requirements of the system, the interfaces of the system, what the system will do or how the system will interact with the external users, the constraints under which it will operate. It also gives us the view about what are the users expectations. The end users will be able to use this SRS as a tool to see if the constructing team will be constructing the system to their expectations. If it is not to their expectations the end users can specify how it is not to their liking and the team will change the SRS to fit the end users' needs.

1.2 Document Conventions

The document is prepared using Microsoft Word 2019 and has used the font type 'Times'. The fixed font size that has been used to type this document is 12pt with 1.15 line spacing. Sectional headings use 'Times' font with 18pt and sub-sectional titles use 'Times' font with 12pt.It has used the bold property to set the headings of the document and key points in the document as a highlighting option. Standard IEEE template is the template used to organize the appearance of the document and its flow.

1.3 Intended Audience and Reading Suggestions

The intended audience of this document would be the OIP system administrator and the project team to refer and analyze the information. Also, it could be used by potential developers, design engineers, testers, etc. Readers are suggested to know basics of SRS and the outline of how the OIP system works. The end users are suggested to use this SRS as a tool to see if their expectations are met and modify if any changes are required by informing the team.

1.4 Product Scope

- This OIP allows the user to upload their own template and free flow to edit as comfortable to user's will.
- The product scope for the users is only available for those who sign-up earlier.
- This product can be extended to related visiting card systems if required in future.
- The authorized use of the user details database in the backend is restricted to the administrator.

1.5 References

- SRS Template:
  IEEE Template → https://web.cs.dal.ca/~hawkey/3130/srs_template-ieee.doc
- Roger S Pressman, Software Engineering - A Practitioner's Approach, McGraw Hill International Edition, Singapore, 2015.
- SRS Development Guiding steps from the following website - https://relevant.software/blog/software-requirements-specification-srsdocument/
- Creating Use case diagrams using **Star UML platform**.

2. Overall Description

2.1 Product Perspective

Online invitation preparation provides a group of works with interface environments to create an invitation for numerous occasions. The application gives the user the option to add their own pictures and various customization options. It has the necessary functions to further share the invitation or download it.

2.2 Product Functions

Event Name	***Action by user***	***External responses***	***Internal Data and State***
Application Opens	User opens application	Application main screen is displayed with a option to select the occasion	System will listen for when that button is pushed
Select occasion & i/p credentials	Selects the appropriate occasion and inputs his credentials (eg. Date & time of event)	Application will display a screen showing various templates and option to upload own pictures	System will listen for which options are pushed.
Format invitation	Users can change font style, wordings, color & size of text and also add quotes	Users will be shown a preview of their customization	System will check for given customization and prepare pdf invitation that can be shared or downloaded

Download & Share	Users can either download or share their invitation in pdf format	The invitation will be downloaded or shared through e-mail according to the option selected	System will end the program if user wishes to do so

The Functions of the online invitation preparation are as follows:

- Application Opening:

  The user on opening the application is displayed with a login/signup screen to enter into his/her profile.

- Occasion selection:

  Given a list of choices of occasions the user is prompted to choose a particular occasion to create invitation for and prompted to give the details such as date and time of the event.

- Choose Template and Add Pictures:

  Allows the User to choose from different templates and design of invitation and are given the option to add their own pictures.

- Format the invitation:

  Allows the user to change the font style, words, size and colour of texts to let the users to further customize their invitation to their own liking. The user can also select from various quotes in the application and add it to the invitation if they choose to do so.

- Invitation Download and share:

  The User can download or share the invitation. The invitation is downloaded in the PDF format and can be shared through their E-Mail.

2.3 User Classes and Characteristics

- **Admins**- Must be able to access the database, choose occasion and template and should be able to download the invitation.
- **Client/User -** Able to login and signup, choose occasion, choose template, format the invitation and change styles, download and share the invitation

2.4 Operating Environment

- A machine capable of running Windows XP and 512mb free ram after the OS has been started.
- For Linux it is a similar 512mb free ram after the OS has been started.
- Basic text field entry and typing skills are assumed by all users

2.5 Design and Implementation Constraints

The following software & hardware equipment are required for implementation and for the design:

1. Visual Studio Code and the Coding language used is Django
2. Microsoft Word for documentation purposes.
3. Keyboard and a mouse will be required for interaction with the application.
4. Also ensuring certain constraints like reusability, maintainability, testability, safety would enhance the software application.

2.6 User Documentation

• Documentation is mainly intended for database administration for understanding how to handle database entry and editing.

• They are expected to understand whatever database administration program they prefer that supports reading and editing databases.

• Basic knowledge on operating some applications on windows medium would help the end users.

2.7 Assumptions and Dependencies

- The system is storing all the data at one place but the access is restricted among its users as per prior knowledge about the requirements.
- Basic text field entry and typing skills are assumed by all users.
- The function to share the invitation through mail requires the User to be connected to the internet
- Basic knowledge on operating some applications on windows medium would help the end users.

3. External Interface Requirements

3.1 User Interfaces

- **Welcome screen:** This screen displays the Login for the application which get the Id and password form user and verify it or sign up to create new account. After login is successful it requests to select an option for occasion.

- **User credentials:** This screen request for the information that is to be displayed in the invitation. Which accept an array of string form the user until he Enter the command 'EXIT'.

- **Template:** This screen displays the available templates for the invitation or to upload the pictures that the user desire to make the it as the background of the invitation

- **Format:** In this screen the user Change the font style, position, color, size and also allows to add quotes in the Invitation

- **Download:** This screen allows the user to download or share the invitation that is created in the software.

3.2 Hardware Interfaces

There are no such hardware interfaces, just a windows-based computer that support the use of key board and mouse for entering the data /details and navigation is required.

3.3 Software Interfaces

Front end - Django is used to create web page for the software in which the login, selecting the occasion, selection of template, format invitation and download are available for the user to Interact.

Back end -Django is used to create the back end of the software which link with the front end of software

- Login screen back end get the ID and password from the user and verify it. If Id and password are valid, software moves to the next screen or If ID and password is invalid software asks to re-enter the details.

- Selecting the occasion and the details are obtained from the user and are used to create the invitation.

- Template screen various template available are shown and user chose the any one out of it to create the invitation.

- Format screen font style, size, color or add quotes in the invitation.

- Download screen the completed invitation can downloaded to the device from the software or shared to other devices.

3.4 Communications Interfaces

- The communication between web page and the program is established by Django.

- Data and the inputs that are provided in the web page are transfer to the program to manipulate the information and create the output that is to be displayed on the output screen.

4. System Features

The following are the main features for online invitation preparation.

4.1 Sign up

4.1.1 Description and Priority:

The user enters the needed details to create an account in this application. This feature has a high priority user without an account cannot use this application.

4.1.2 Stimulus/Response Sequences

The user has to enter the following details

1.username

2.email address

3.password

4.phone number

Once the details are validated and an account is created an email saying the same is sent to the respective account confirming the successful creation of the account.

4.1.3 Functional Requirements

REQ-1: A database to store the valid user credentials
REQ-2: A program that accepts, validates, stores the user credentials and send sthe confirmation mail

4.2 Login

4.2.1.1 Description and Priority

The user has to enter the username or email id and the password that has been given during the signup phase. The credentials are validated and the user is given access to the application if the credentials are valid else needs to re-enter the credentials. This feature has a high priority.

4.2.1.2 Stimulus/Response Sequences

The user has to enter the following details

1.username or email address

2.password

Once the credentials are validated depending on whether the details are correct or not the user shall be given access to the materials of the application, in-case the login details don't matchup his/her request for login may be rejected after which the user has to re-enter the details correctly.

4.2.1.3 Functional Requirements

REQ-1: The database in which the user credentials are stored
REQ-2: A program that accepts the credentials entered and validates. If details are right the program lets the user in and if the details don't match the user is requested to enter the credentials again

4.3 Enter option for occasion

4.3.1.1 Description and Priority

The user is requested to provide the details of the occasion for which the invitation is to be made. This feature has a high priority in this application.

4.3.1.2 Stimulus/Response Sequences

The user has to manually select/enter the occasion. The application program accepts, analyses and personalizes the application based on the choice of the user.

4.3.1.3 Functional Requirements

REQ-1: The database in which the possible occasions are stored
REQ-2: A program that displays, accepts the users input and ushers the user to the next phase of the application

4.4 Template choices

4.4.1.1 Description and Priority

The user can choose the template pertaining to the user's choice of occasion. He/she can work (add, edit or recreate designs) with the same. This is a high priority feature.

4.4.1.2 Stimulus/Response Sequences

The user has to select a template to start designing his/her invitation. The application program accepts the choice of template and updates all the designs or changes made to the template by the user.

4.4.1.3 Functional Requirements

REQ-1: The database in which the templates are stored

REQ-2: A program that displays choice of template and accepts the user's choice of template

4.5 Format

4.5.1.1 Description and Priority

This feature of the application allows the user to make design-oriented changes to the template like re organizing, adding new designs according to his/ her wish. This has high priority.

4.5.1.2 Stimulus/Response Sequences

The user can make design changes to the pre-existing templates using this feature. Every change is stored and kept track of every time the user saves the changes

4.5.1.3 Functional Requirements

REQ-1: A program that detects changes made to the template, stores the changes and keeps track of all the changes

4.6 Changing styles

4.6.1.1 Description and Priority

This feature of the application allows the user to make changes to the template's default styles. This has a lower priority.

4.6.1.2 Stimulus/Response Sequences

The user can make stylistic changes to the pre-existing template using this feature. Every change is then saved when the user hits the save button

4.6.1.3 Functional Requirements

REQ-1: A program that detects changes made to the template, stores the changes and keeps track of all the changes

4.7 Invitation download

4.7.1.1 Description and Priority

After the user has finished editing the invitation card the user can now download the invitation card in pdf format. This feature has a low priority as the user can take screen shots and the application does not force the user to use this feature

4.7.1.2 Stimulus/Response Sequences

The user after the editing and saving phase can choose to download the invitation are not. If the user wants to download, he/she clicks the download option and the invitation card in pdf format is stored in the local machine in the name and location specified by the user.

4.7.1.3 Functional Requirements

REQ-1: A program that can convert the final template into the pdf format and save it in the user's machine

REQ-2: A database to store a copy of the invitation

4.8 Share through mail

4.8.1.1 Description and Priority

After the user has finished editing the invitation card the user can now choose to share the template to another person/group in pdf format using a valid destination mail id. This has a lower priority.

4.8.1.2 Stimulus/Response Sequences

The user after the editing and saving phase can choose to send the invitation via mail to another person/group. If the user wants to send through mail, he/she clicks the send through mail option and the invitation card in pdf format is generated and is ready to be sent to a valid email addresses.

4.8.1.3 Functional Requirements

REQ-1: A program that can convert the final template into the pdf format

REQ-2: A program that accepts the mail id, validates it and sends a copy

4.9 Logout

4.9.1.1 Description and Priority

When the user wants to leave or move out of the application the user can logout. This is of high priority.

4.9.1.2 Stimulus/Response Sequences

The user hits the logout button when he/she wants to leave the application. The user is then sent back to the login/signup page.

4.9.1.3 Functional Requirements

REQ-1: A program that accepts the logout request and sends the user back to the login page.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- **Speed -** The usage experience should be smooth and fast. The speed of the system should not affect if the number of users increased. The system's response time should also be very short for the user's data access requests. Search and loading functionalities should be faster for a better end-user experience.

- **Scalabilty -**The system should be scalable to support a large user base.

- **Performance statistics** - Performance for data entry is dependent upon the programming language used and the machines implementing the application. This should be negligible. The biggest drag on performance will be accessing the database. We are keeping our queries simple to counter the slow execution of queries.

5.2 Safety Requirements

The user must enter their fields with correct specified data type (Option for the occasion, user credentials, format, etc.) to prevent any data integrity constraints that may lead to small crashes or wrong results in the system.

5.3 Security Requirements

Security is used to ensure login details as confidential and it is not stored anywhere. The user can see their data only when they enter their information in the respective fields. System Administers are trained on customer privacy.

5.4 Software Quality Attributes

- **Correctness:** Satisfy the Online Invitation preparation operations precisely to fulfil the end user objectives.

- **Efficiency:** Enough resources to be implemented to achieve the particular task efficiently.

- **Flexibility:** Flexible enough to provide space to add new features and to handle them conveniently.

- **Integrity:** Focus on securing the user information and avoid data losses as much as possible

- **Portability:** Should be able to have modifications to support the software run in machines that have any environment (operating system).

- **Usability:** Provide user manual to every level of users.

- **Quality Assurance:** We will all be responsible for quality assurance. We will cross check the system implementation with the System Requirements to verify system accuracy.

- **Maintainability:** After each revision the system will be analyzed and compared with the system requirements designated by the client. We will than try to break the program with test cases.
- **Testability:** Able to be tested to confirm the performance and specifications
- **Robustness:** Strength of the system to handle the system functions accurately and maintain the database without facing unexpected failures.
- **Reliability:** Specify the factors that are required to establish the reliability of the software system at the time of delivery.
- **Availability:** The system shall be available during normal Online Invitation preparation.
- **Reusability:** What is the ability to use the available components of the system in the other system as well.
- **Documentation:** All final documents will be reviewed for spelling errors, broken links, and any other issues that affect the quality of the document. Any errors found in either the system or supporting documents will be fixed at the time errors are found.

5.5 Business Rules

- Each person can make one or more Invitation Cards by using their login Id's.
- Each person can make only one Invitation Card at a time.
- Each person can make Invitation Card only through their Login Id's.

6. Other Requirements

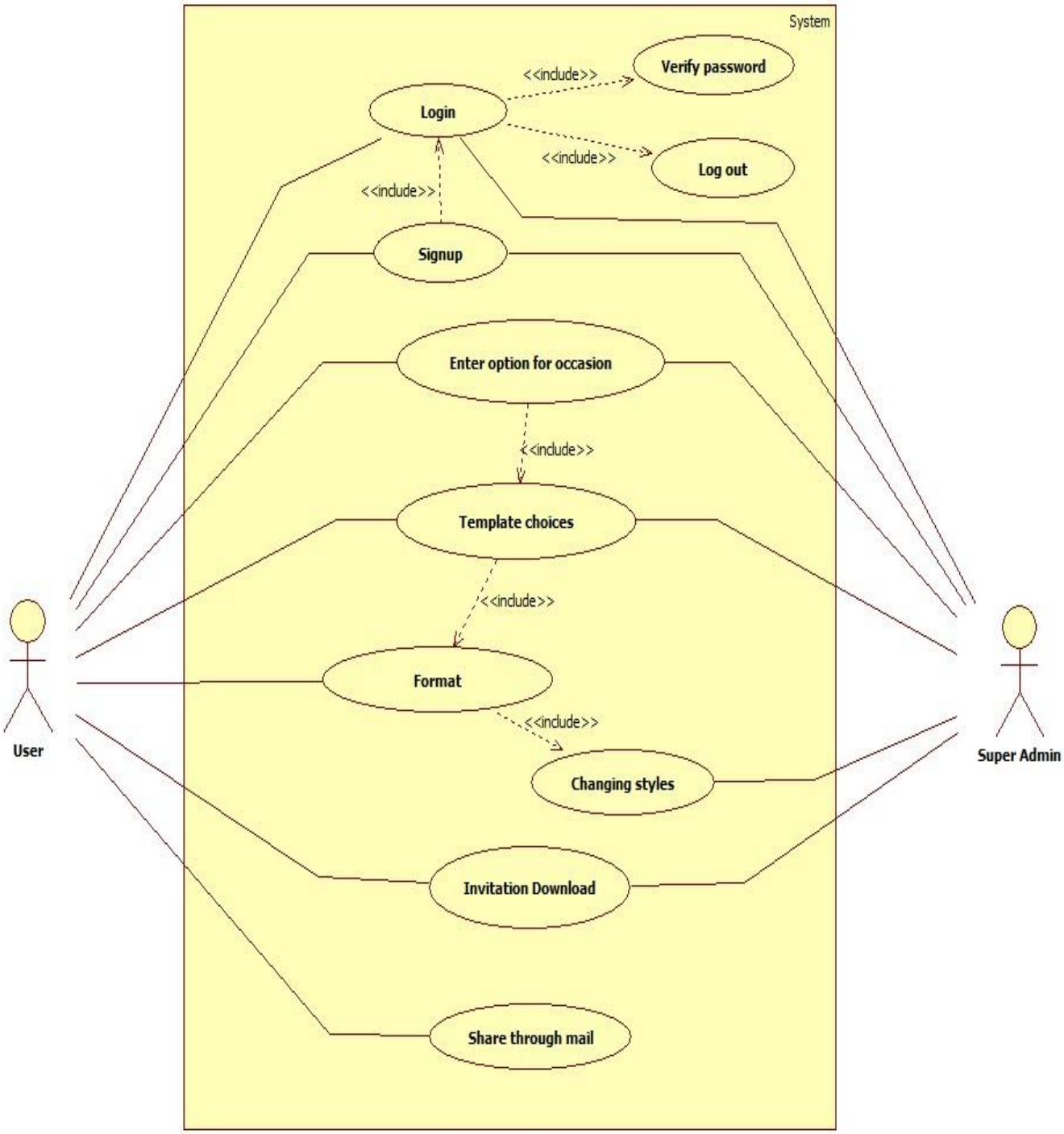
- This project supports existing infrastructure requirements and provides specific recommendations for hardware and network solutions based on existing and projected user needs.
- Application requirements, data resources, and people within an organization are all important in determining the optimum hardware solution.
- It shows the components of the system, the services they provide and the way they communicate to bring about the system functionality.

Appendix A: Glossary

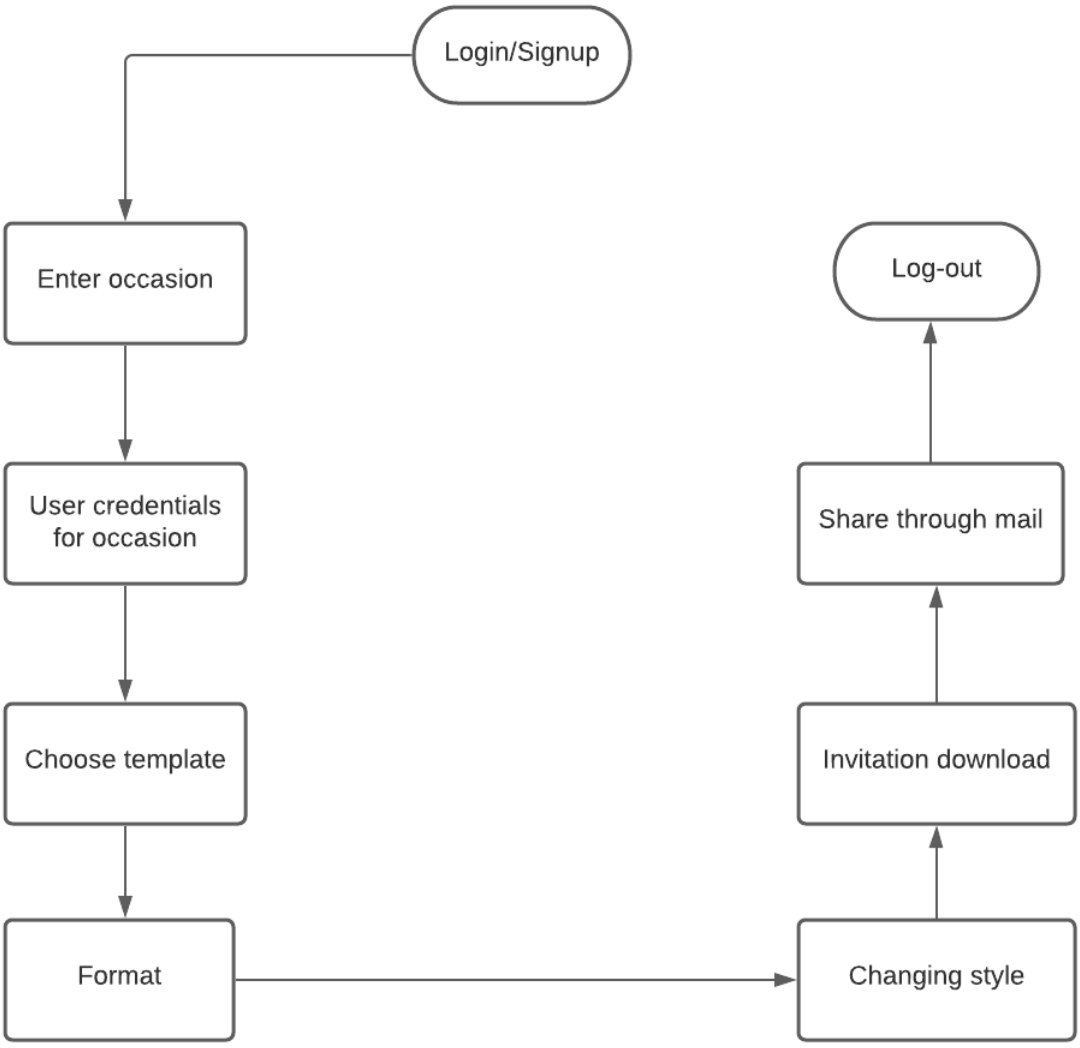
1. **OIP** – Online Invitation Preparation
2. **SRS** – Software Requirement Specifications
3. **OS** – Operating System
4. **IEEE** – Institute of Electrical and Electronic Engineers
5. **End User -** Customers who are willing to plan their travel through the *S*ystem.
6. **Admin / Administrator** – People who manage the database and look over the actual travel implementation

Appendix B: Analysis Models

Use Case Diagram:



Simple Activity Diagram of user:



Appendix C: To Be Determined List

1. Memory size of the database – may vary according to number of choices we provide for users.
2. Frequency of backing up data of the database for safety purposes.