Gmail

Software Engineering (Lovely Professional University)

Gmail.com

System Requirements Specification Document

CSE320

SOFTWARE ENGINEERING

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System Requirements Specification

1. Introduction

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references and overview of the SRS. The aim of this document is to gather and analyze and give an in-depth insight of the complete **Gmail.com software system** by defining the problem statement in detail. Nevertheless, it also concentrates on the features provided to the users to make complete use of the website. The objective of SRS document is to understand the functionalities and features of the website. The detailed requirements of the **Gmail.com** are provided in this document.

1.1 Purpose

The purpose of the document is to collect and analyze all assorted ideas that have come up to define the system, its requirements with respect to users. Also, we shall predict and sort out how we hope this product will be used to gain a better understanding of the project, outline concepts that may be developed later, and document ideas that are being considered, but may be discarded as the product develops.

In short, the purpose of this SRS document is to provide a detailed overview of our software product, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our user, team and audience see the product and its functionality. Nonetheless, it helps any designer and developer to assist in software delivery life cycle (SDLC) processes.

1.2 Scope

Primarily, the scope pertains to the E-Mail product features for making Gmail.com project live. It focuses on the company, the users and applications, which allow the users to send and receive mails to each other and allows company to keep check on the user activities.

This SRS is also aimed at specifying requirements of software to be developed but it can also be applied to assist in the selection of in-house and commercial software products. The standard can be used to create software requirements specifications directly or can be used as a model for defining an organization or project specific standard. It does not identify any specific method, nomenclature or tool for preparing an SRS.

1.3 Overview

The remaining sections of this document provide a general description, including characteristics of the users of this project, the product's hardware, and the functional and data requirements of the product. General description of the project is discussed in section 2 of this document. Section 3 gives the functional requirements, data requirements and constraints and assumptions made while designing the Gmail.com. It also gives the user viewpoint of product. Section 3 also gives the specific requirements of the product. Section 3 also discusses the external interface requirements and gives detailed description of functional requirements. Section 4 is for the non-functional requirements of the software which comes without saying of the owner.

2. Overall Description

This document contains the problem statement that the current system is facing which is hampering the growth opportunities of the company. It further contains a list of the stakeholders and users of the proposed solution. It also illustrates the needs and wants of the stakeholders that were identified in the brainstorming exercise as part of the requirements workshop. It further lists and briefly describes the major features and a brief description of each of the proposed system.

The following SRS contains the detail product perspective from different users. It provides the detailed functionalities of Gmail with user characteristics permitted constraints, assumptions and dependencies and requirements subsets.

3. Functional Requirements

This section of the document contains the different kind of features used in making Gmail.com. It includes the features like signup, login, delete, compose, drafts etc.

3.1 Login or Signup

This functionality is required to create an account or if you have one then, you can enter the Gmail by logging in.

3.1.1 The user must make an account by giving some of their personal details.

3.1.2 Input the details like name, gender, password, mobile no., location to create an account.

3.1.3 The details will be stored in the database with other users.

3.1.4 After creating the account or if user already have an account, the user should login to the Gmail by giving email id and password which was entered during signing up.

3.1.5 The user is now entered in Gmail and can send and receive mails.

3.2 Compose

This functionality is used to send the email to the other users.

3.2.1 Click on the compose button.

3.2.2 A dialog box will pop up on the screen.

3.2.3 Enter the email id of the user to whom you want to send the mail, enter the subject of mail if you want to, and enter the text.

3.2.4 User can also attach any kind of file like pictures, videos, zip etc. (Should not exceed 25 MB limit).

3.2.5 Click on the send button to send the email to other users.

3.3 Archive

This functionality is used to hide the emails from the inbox section of the Gmail.

3.3.1 User should move the cursor to the mail they want to archive.

3.3.2 The archive button will appear, then click on the archive button.

3.3.3 The mail will be removed from the inbox.

3.3.4 The user can view the mail in the All Mails section.

3.4 Spam Mails

This functionality is used to mark some suspicious mails as spam.

3.4.1 User should have to click on the mail which they want to mark spam.

3.4.2 Click the spam button on the toolbar of the Gmail.

3.4.3 The mail will be shifted to the spam folder in the Gmail.

3.4.4 The software will sometimes automatically mark some emails as spam.

3.4.5 The software will also sometimes block the user who sends the spam messages.

3.5 Email Tabs

This functionality is used to differentiate between primary, social and promotional emails.

3.5.1 Emails like promotions, ads etc. are considered as promotional emails.

3.5.2 Emails from different social media platforms, or notifications from different companies are considered as social emails.

3.5.3 Emails from different users or from the websites in which you are signed in, are considered as primary emails and considered as most important emails.

3.5.4 The software will first analyze the emails and then it will automatically decide that in which category the email should be considered.

4. Non-Functional Requirements

These are the requirements that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors.

4.1 Performance

4.1.1 The product shall be based on web and must be run from a web server.

4.1.2 The product shall take initial load time depending on internet connection strength which also depends on the media from which the product is run.

4.1.3 The performance shall depend upon hardware components of the client/customer.

4.2 Security

4.2.1 The customer's web browser shall never display a customer's password. It shall always be echoed with special characters representing typed characters.

4.2.2 The customer's web browser shall never display a customer's credit card number after retrieving from the database. It shall always be shown with just the last 4 digits of the credit card number.

4.2.3 The system's back-end servers shall never display a customer's password. The customer's password may be reset but never shown.

4.2.4 The system's back-end servers shall only be accessible to authenticated administrators.

4.2.5 The system's back-end databases shall be encrypted.

4.3 User Interface

4.3.1 The user interface for the software shall be compatible to any browser such as Internet Explorer, Mozilla or Netscape Navigator by which user can access to the system.

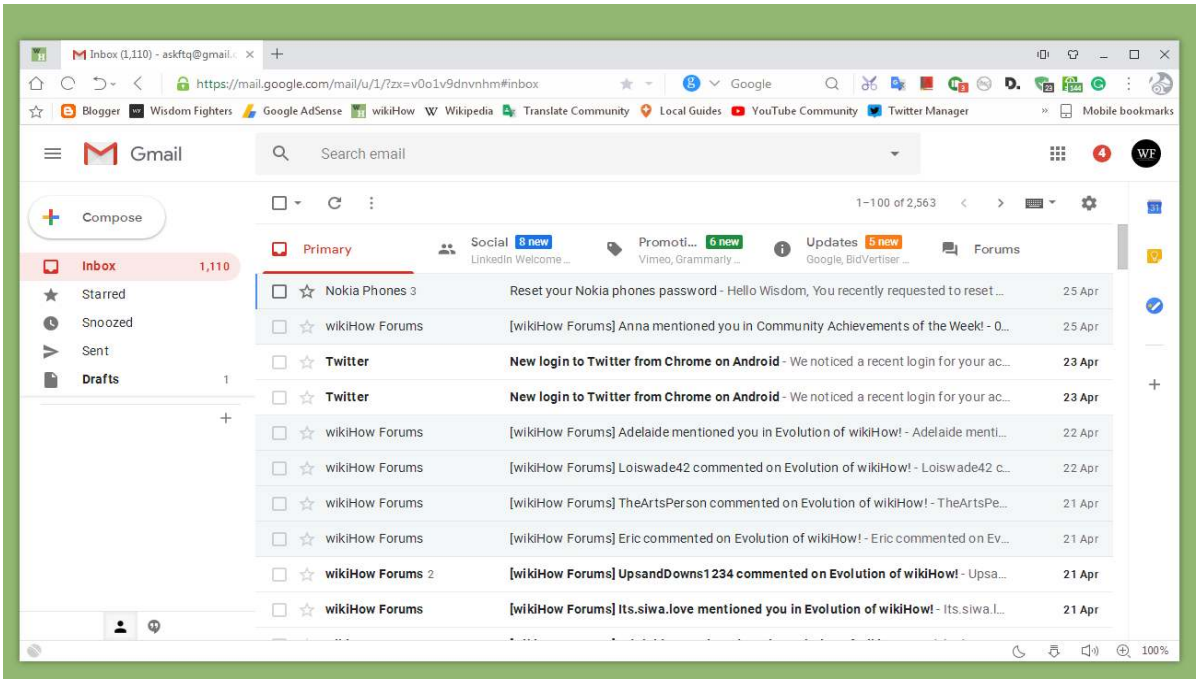
4.3.2 The user interface shall be implemented using any tool or software package like Java Applet, MS Front Page, EJB etc.

4.4 Reliability

4.4.1 The system provides storage of all databases on redundant computers with automatic switchover.
4.4.2 The reliability of the overall program depends on the reliability of the separate components.
4.4.3 The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes.
4.4.4 Thus, the overall stability of the system depends on the stability of container and its underlying operating system.

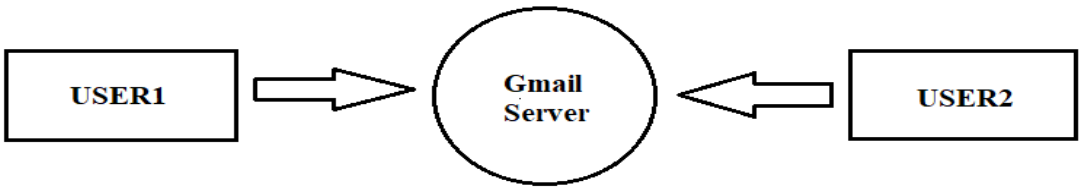
4.5 Availability

4.5.1 The system should always be available, meaning the user can access it using a web browser, only restricted by the down time of the server on which the system runs.
4.5.2 In case of a of a hardware failure or database corruption, a replacement page will be shown.
4.5.3 Also, in case of a hardware failure or database corruption, backups of the database should be retrieved from the server and saved by the administrator.
4.5.4 Then the service will be restarted. It means 24 X 7 availability.



5. DATA FLOW DIAGRAMS

LEVEL 0



LEVEL 1