IT314 : Software Engineering

Group 16

Online Survey System

Under The Guidance of:
Prof. Saurabh Tiwari

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Contents

1 Problem Statement

Online Survey System Project is a web-based application, the main aim of the project is form a platform to form a platform to collect the viewpoints of related people about certain issues using the internet. Along with launching surveys, it is capable of giving email notifications. It can be implemented in any organization or college for carrying out surveys of any kind.

2 Elicitation Techniques

2.1 Brain Storming

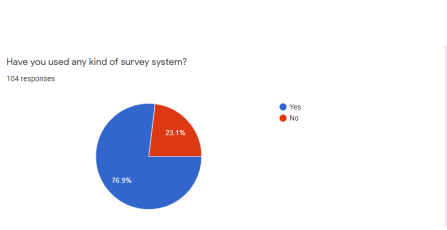
It included discussion among the team members on how what features the web site should have, we first created an list of ideas for the web site then discussed as a team whether to accept or reject the idea.

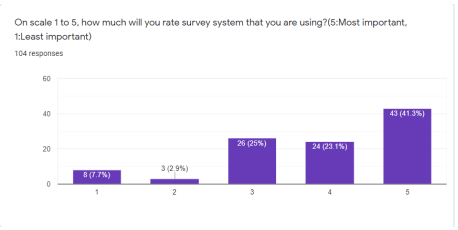
2.2 Interview

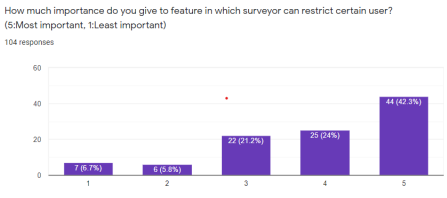
We divided the group into two parts and tried to simulate an interview, one team asked question and the other team answered. This helped immensely in creating list of ideas.

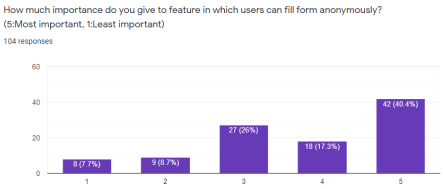
2.3 Survey

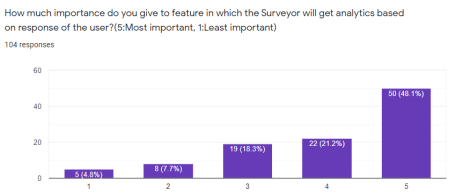
We took a survey to identify what users want and for what purpose they use existing survey system. We also tried to identify what users liked or disliked about the current survey system this helped in identifying more requirements. Around 104 users filled the survey.











2.4 From existing survey system

We took ideas from existing survey system like google forms, survey monkey etc., we identified what features we liked and what we disliked about the particular system.

3 Functional Requirements

- Sign Up and Login for users and anonymous login is also possible.
- Surveyors should be able to make a new form.
- Surveyors can stop accepting responses from the form anytime he/she wishes.
- Surveyors could add images/video/gifs/links/audio as a question or as options.
- The survey can be made public, and then this survey will be visible on the main page, and anyone can click on the link to give a survey.
- Option should be available to the surveyor for a different type of question, for eg. multichoice, single choice, long question, radio-buttons, and check-boxes.
- Can add/remove/edit any response at any time if the surveyor has permitted.
- A link should be provided to each form, which can be shared and be used to give a response.
- User can see the response on his/her form by his/her own cloud space
- Surveyors could set conditional sections where further questions are displayed based on previous responses.
- Multiple admins for the single survey.
- Form creators could block/blacklist certain users from filling out the form.
- Surveyors could share the survey link using different platforms e.g. Whatsapp, Telegram, Email.
- Users can also use mobile phones to access the website, the website will also be mobile-friendly.
- There will also be a feedback section where users can give their valuable feedback for the improvement of our platform.

4 Non Functional Requirements

Security

- User's personal information is not accessible to anyone other than the user itself.
- The survey data should only be visible to the surveyors who have created the survey.
- The user will be prompted to fill in Captcha while submitting their response. This will make sure that the response is from a Human.

Reusability

- Different templates can be provided to the users. So that they can directly use these templates.

Reliability

- Responses from the user should be reliably stored on the cloud.
- In case of any failure, the data should be safe in the cloud.

Performance

- Performance should generally be very smooth, and the system should work well even under intense load.

Scalability

- The web application should work smoothly, even when a large number of users are using the website simultaneously.

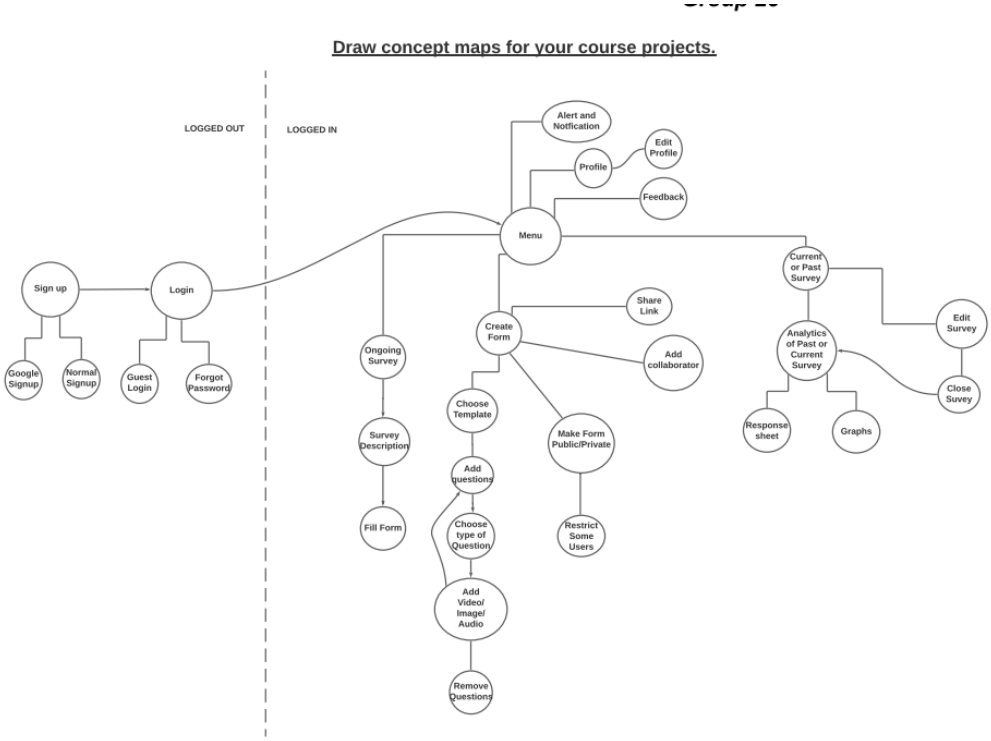
Maintenance

- Changes in the software should be made according to feedback received, users can also submit details of bugs they found during their use of the software.

User interface

- The website should be easy to use and intuitive.

5 Concept Map



6 SDLC

We have used iterative life cycle in which complexity of the system is increased with every iteration. The reason for choosing iteration is that our requirement is more or less fixed and we can increase complexity as we learn new things eventually. Because we were learning and implementing at the same time this life cycle was best for us, as we can initially create a simple version and include new functionalities in the next iteration. Testing also become very easy as we were only testing an iteration at a time.

7 Stakeholders and Actor

Stakeholders

- Surveyor
- User
- Developer

Actor

- Surveyor
- User
- Backend Server
- Google authentication server

8 Features

User

- Sign Up- New users can create new accounts.
- Google Login- The user can use his/her google account to log into the website.
- Normal Login- Can use normal username and password to log into the main page.
- Change Profile Details- Users can change their profile details such as Name, DOB, Password etc.
- Fill survey- Can fill surveys made by surveyors. View open survey- Users can see all existing open surveys.
- Search open survey- Users can search any open surveys.
- Use shareable link- Users can use links shared by the surveyor to directly fill the survey.
- Can get invited- User can get invited to fill a survey created by surveyors.

Surveyor

- Sign Up- New surveyors can create new accounts.
- Google Login- The user can use his/her google account to log into the website.

- Normal Login- Can use normal username and password to log into the main page.
- Change Profile Details- Users can change their profile details such as Name, DOB, Password etc.
- Create Survey- Surveyor can create a new survey.
- Can add questions- Surveyors can add different types of questions to the new survey, questions can be multiple choice, single choice, text etc. questions can also have image, audio or video.
- Edit existing Survey- Surveyor can edit existing survey, he/she can add new question, remove old question and can also edit existing question.
- Close Survey- Surveyor can close a survey, after which a user cannot fill the survey.
- View response sheet and analytics- Surveyors can see response sheets filled by users and can also see analytics based on that.
- Can create links- Surveyors can create a sharable link, which users can use to fill surveys.
- Can invite users- Surveyors can invite users to fill their survey. Can make survey private- Surveyor can make survey private, and this survey can only be filled by users who've got an invite from surveyor.
- Can make surveys public-Surveyor can make surveys public, and it will be visible to all users.
- Contributors- Surveyors can add contributors to the form.

9 Use Case

Login Actors- Surveyor, user and backend server.

- Description- Login log the user and surveyor into the web page.
- Precondition- Users and surveyors should have an account before using login or they can choose guest login.
- Postcondition-Login directs users and surveyors to themain page from where they can access other functionalities.

Google Login

- Actors - Surveyor, User and Backend server
- Description- As a option of login user/surveyor can login through Google
- Precondition- User/Surveyor must have a google account to login
- Postcondition- Login directs users and surveyors to the main page from where they can access other functionalities

Profile

- Actors - Surveyor, User and Backend server
- Description - Surveyor and user can see their Profile
- Precondition - Surveyor/User should have account before and also logged in to our website
- Postcondition - Surveyor/User could see their Profile

Update Profile

- Actors-Surveyor, User and Backend server
- Description- The user can update the existing profile.
- Precondition-The user should have an account and must have logged in.
- Postcondition-The updated profile will be visible to the user and stored in the backend server.

Notification and Alert

- Actors- Surveyor, User and Backend server
- Description- If anyone invites to fill up the survey form then it will notify the surveyor or If one surveyor shares the contributor link to join and contribute in the survey form and if s/he accepts the requests then it will notify the surveyor.
- Precondition- User/Surveyor must have an account
- Postcondition- User/Surveyor can see the Notification if any event happens described above

Feedback

- Actors-User and backend server
- Description- The users gives the feedback about the use of survey forms to the the backend server
- Precondition-Users must have filled or used the survey form before
- Postcondition-The feedback will be stored in backend database

Fill form

- Actors-User and backend server. Description- Fill form let user fill the survey.
- Precondition-The user must be logged into the webpage and either the form should be public or if it is private then the user must have an invitation from the surveyor.
- Postcondition-The response will be stored in the backend database.

Edit form

- Actors-Surveyor and backend server
- Description- The user can edit the form after the form is created.
- Precondition-The user must have logged in and have created the form.
- Postcondition-The edited form will be stored in the backend database.

Create Form

- Actors- Surveyor and backend database.
- Description- The surveyor can create a new form, in which he/she can add questions of different types.
- Precondition-The surveyor must be logged into the webpage.

- Postcondition- After creating the form the form will be stored in the backend server, if it is public survey then it would be visible to all the users otherwise it will be visible to users who've got an invitation from surveyor.

Close Survey

- Actors- Surveyor and backend database.
- Description- A surveyor can close open surveys.
- Precondition- The survey should be open.
- Postcondition- The survey will be closed, and users won;t be able to fill form once the survey is closed.

Add Collaborator

- Actors- Surveyor and Backend server. Description- The surveyor can add collaborators to his/her form, the collaborators can make change to the survey.
- Precondition- A form must be created before adding a collaborator.
- Postcondition-Notification will be sent to the collaborator, and he/she will be able to make changes to the form.

Restrict User

- Actors- Surveyor and backend database.
- Description- The surveyor can restrict several users from filling the form.
- Precondition-The user has logged in but has not filled the form.
- Postcondition- The restricted user information will be saved in the backend server.

Add/Edit/Remove Question

- Actors- Surveyor, Backend System
- Description- Surveyor can Add/edit/remove question that s/he had created
- Precondition- The surveyor must have an account
- Postcondition- Surveyor can choose Templates and other features after creating survey form

Data Analytics

- Actors - Surveyor, Backend System
- Description - Surveyor can look at the responses of its survey in the text form if possible or in a chart form if possible.
- Precondition - Surveyor should be the creator of the form or contributor of the form and should be logged in before.
- Postcondition - Surveyor could see the responses of the survey.

Retrieving Response Sheet

- Actors- Surveyor, Backend System

- Description- Surveyor can see the Graphical analysis as well as s/he can see the excel sheet as a part of analysis
- Precondition- Surveyor must have created survey form for which s/he wants to analyze
- Postcondition- After seeing analysis surveyor can close survey

10 Use Case Diagram