

Table of Contents

INTRODUCTION	3
REFERENCED SYSTEMS	
DESIGN OF SWE OUTREACH WEB PORTAL	
ARCHITECTURE	23
SWE OAWP AT RUNTIME	20
ACTIVITY DIAGRAMS	44
USE CASE DIAGRAMS	46
SEQUENCE DIAGRAMS	47
TESTING	52
FUTURE WORKS	60

Section 1: Introduction

1.1 SOCIETY OF WOMEN ENGINEERS

Society of Women Engineers (SWE) is a 67-year-old non-profit organization, established in 1950. It is an educational and service organization in the USA and has over 33,000 members in about 100 professional sections and 300 student sections across the USA. SWE boosts women to succeed and advance in the engineering domain by aiding them with training and development programs, networking opportunities, scholarships, outreach and advocacy activities. SWE is true blue towards its mission of "Stimulate women to achieve full potential in careers as engineers and leaders, expand the image of the engineering profession as a positive force in improving the quality of life, and demonstrate the value of diversity" (ref. http://societyofwomenengineers.swe.org/about-swe). The vision of SWE is to play vital role in the success of women in engineering and technology. The primary goals of SWE are professional excellence, globalization and advocacy. The scope of SWE's programs ranges from K-12 outreach and university segments to proficient advancement in the working environment. SWE is one of the highly organized institutions with legitimate echelons instated for its members. SWE is composed at the local, territorial, national, and global levels. Every district holds a yearly territorial meeting, and there is a yearly gathering for the Society in general. Neighborhood areas have projects and occasions identified with SWE's central goal. After every outreach event and information session, SWE members at different levels conduct different types of surveys. These surveys are manual and cover a wide range of participants from students to parents, and from teachers to volunteers. Once participants complete their surveys, results are gathered and posted along with feedback from members. These results are then analyzed with infographics and used for research, analysis, promotions and marketing.

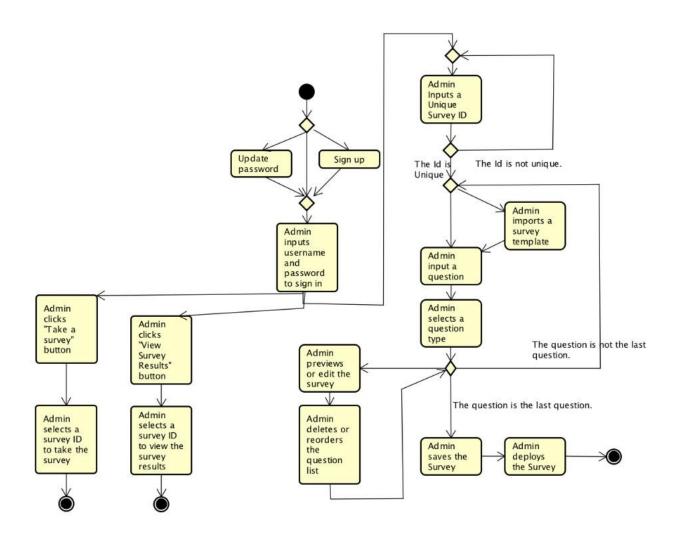
1.2 OUTREACH ASSESSMENT WEB PORTAL

This project is an effort to ease the current SWE outreach assessment process. The Project involves formulation of a Multi-Machine Adaptable Web portal using Microsoft powered development framework, Amazon powered NoSQL Database - Dynamo DB and Google powered Infographics. The high level features of this system are Role Based- Survey Administration, Role Based- Users Administration, Role Based- Feedback Management, Role Based- Infographics.

Section 2: Referenced Systems

System # 1

AUTOSWE – This system was developed by YongJi Li (May 2016). This is an Android based mobile app. This app is built upon AWS Mobile SDK and AWS Dynamo DB. This app helps SWE members in creating, deploying and taking the surveys of SWE events. The following is an activity diagram of AutoSWE: -

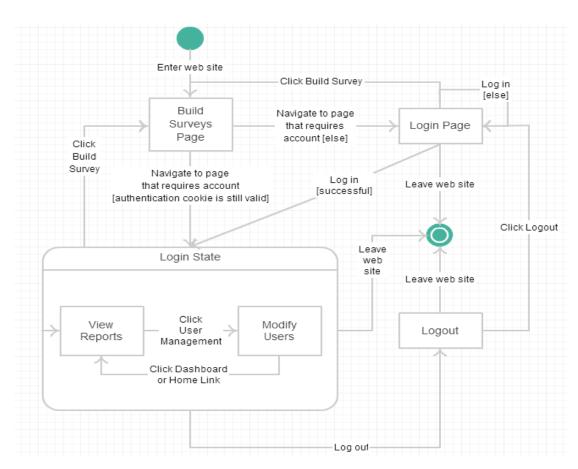


System # 2

A Similar kind of system was developed as a project for CS5364 (2014-2015). Features of this system are

- 1. User Management
- 2. Paper Survey Generation
- 3. Report Viewer

Underneath is the state chart diagram of the existing system which gives a high level view of the system.



However, this system makes an attempt to address basic necessities of SWE but somewhere falls short. And following were the type of issues that were blocking the smooth functioning of the system:

- Admin Login Crashes.
- UI bugs.
- Lack of User Access Controls.
- Report Viewer Bugs.

Section 3: Design of SWE Outreach Assessment Web Portal

3.1 DESIGN FRAMEWORK

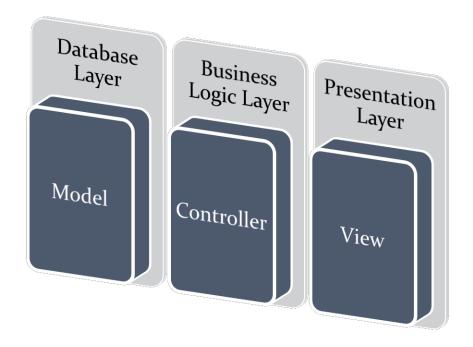
SWEN OAWP is basically a web platform from which SWE members can generate and issue paper and/or electronic surveys, get and post feedback, and view feedback in form of graphical reports depending upon their access privileges.

Access privileges can be controlled by Outreach Administrator. So, all this mechanism has 3 basic internal design layers: -

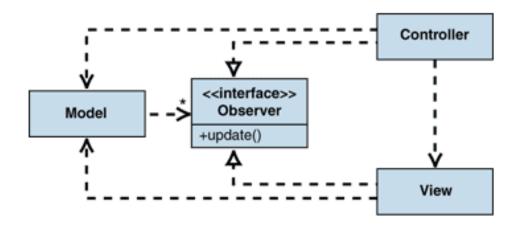
- Presentation Layer
- Logical Layer
- Database Layer

Technology which is efficiently satisfying requirements of this SWE OAWP is Model-View-Controller design patterns.

- Model: Model (in MVC) can be said as the first definition of the entire software system. It encapsulates the behavior and data of the application domain. It interacts with the controller for performing any course of action and interacts with views to display information. In our project, Model plays vital role in abstraction of database layer.
- Controller: Controller is the logical of module entire software system where actual algorithms are implemented. It contains all the business logic in SWE OAWP and handles interactions with users.
- View: The view manages the display of information. In SWE OAWP, views will be managing presentation layer.



In SWE OAWP, we are using Active MVC Design.

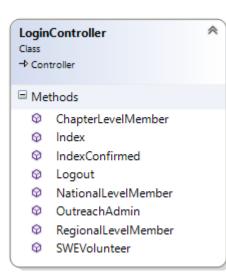


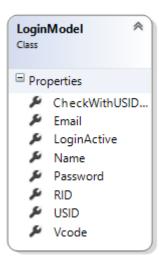
In SWEN OAWP, we are using AWS based Dynamo DB. It is a NoSQL and cloud based database. It has high durability, availability and synchronous replication across multiple datacenters.

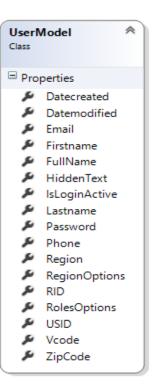
3.2 SWE OAWP DESIGN

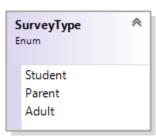
3.2.1 Class Diagram

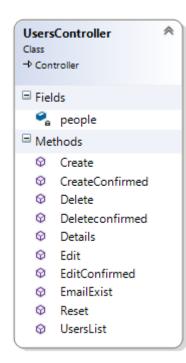
Following are the classes and methods in SWE OAWP.

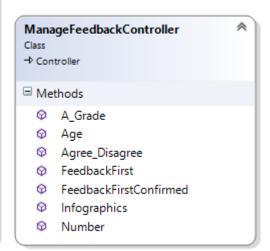


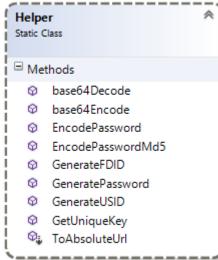


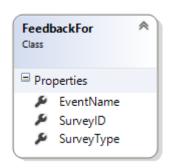


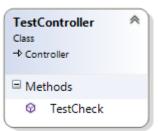


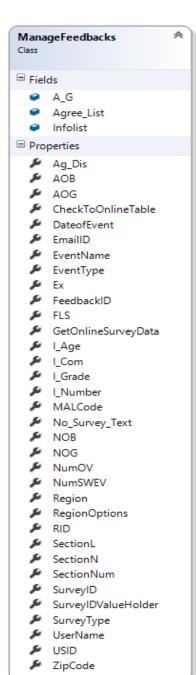


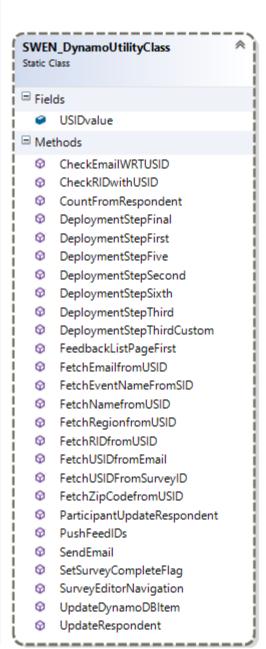








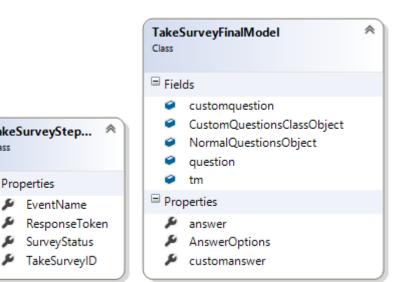


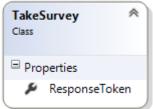


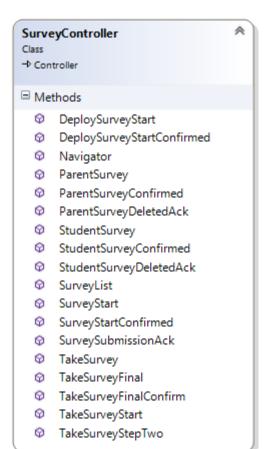




USID







TakeSurveyStep...

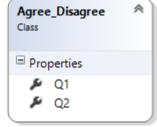
EventName

SurveyStatus

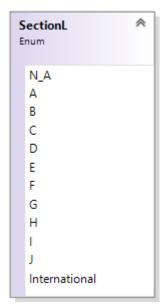
TakeSurveyID

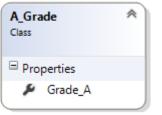
Class

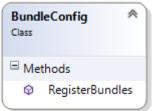
□ Properties

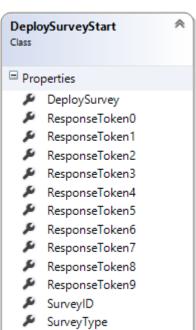


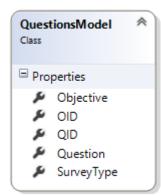


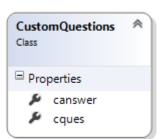








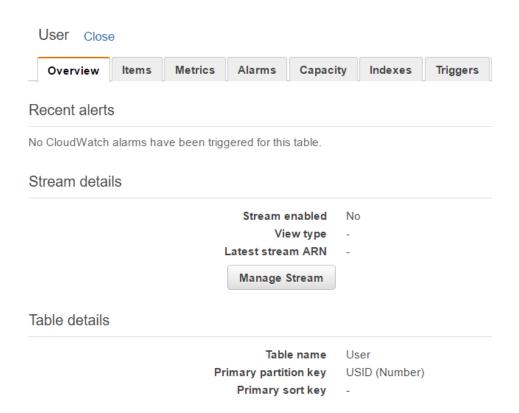


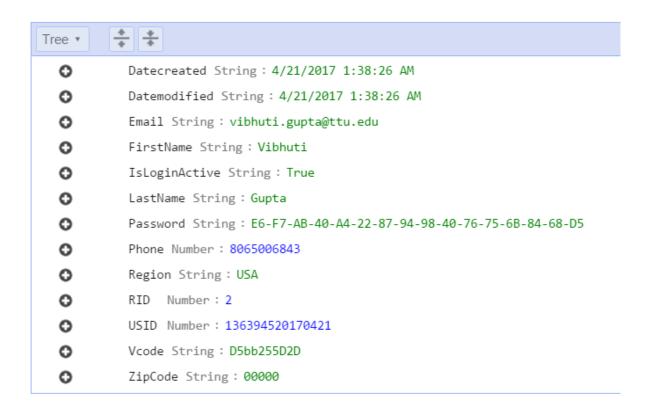


3.2.2 AWS Dynamo DB Design

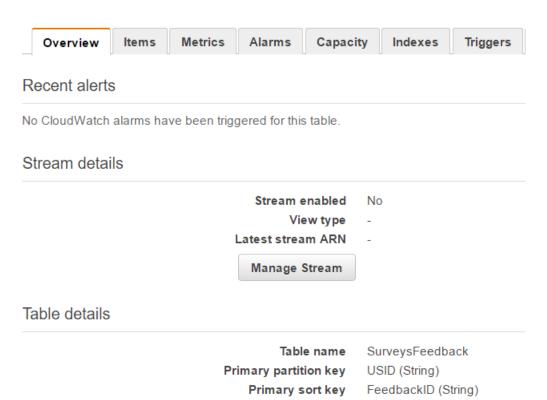
Data Table: User

AWS Dynamo DB is the No SQL Database; that means that table structure is never permanent. Partition Keys (and Sort keys) are the primary key of tables. At the time of table definition, declaration partition (and Sort Key) is mandatory. The rest of the attributes may change according to the item characteristics.



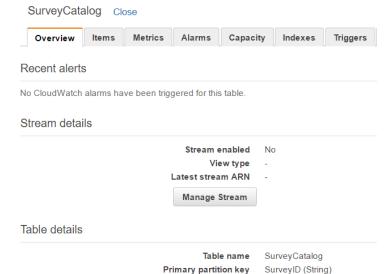


Data Table: Surveys Feedback





Data Table: Survey Catalog



Primary sort key

Tree ▼ Item {55} 0 CQ1 String: Null 0 CQ2 String: Null 0 String: Null CQ3 String: Null 0 CQ4 0 String: Null CQ5 0 EventName String: Mano-Parent-Survey 0 01 String: True 0 010 String: false 0 010_Q1 String: false 0 010 Q2 String: false 0 010_Q3 String: false 010_Q4 String: false 0 0 011 String: false 0 01_Q1 String: True 0 01 Q2 String: false 0 01_Q3 String: false 0 01_Q4 String: false 0 01 Q5 String: false 0 01 Q6 String: false 0 String: False 0 02 Q1 String: False 0 02 Q2 String: false 0 02 Q3 String: false 0 02 Q4 String: false

02_Q5 String: false

0

0 02_Q6 String: false 0 03 String: False 0 03_Q1 String: False 0 04 String: True 0 04_Q1 String: True 0 04_Q2 String: false 0 05 String: False 0 05_Q1 String: False 0 05_Q2 String: False 0 05_Q3 String: False 0 06 String: True 0 06_Q1 String: True 0 07 String: False 0 07_Q1 String: False 0 07_Q2 String: False 07_Q3 String: False 0 0 07_Q4 String: False 0 07_Q5 String: False 0 08 String: True 0 08_Q1 String: True 0 08_Q2 String: True 0 08_Q3 String: False 0 09 String: False

09_Q1 String: false

09_Q2 String: false

09_Q3 String: false

0

0

0

O9_Q4 String: false

SurveyID String: Mano-Parent-Survey

SurveyType String : Parent

USID Number: 133374520170421

Data Table: Respondent

Respondent Close



Recent alerts

No CloudWatch alarms have been triggered for this table.

Stream details

Stream enabled No

View type -

Latest stream ARN -

Manage Stream

Table details

Table name Respondent

Primary partition key SurveyID (String)

Primary sort key ResponseToken (String)



▼ Item {7}

♣ EventName String: C\$

01_Q1 String: This event helped me understand what engineers do.

01_Q1_A String: Strongly Agree

O4_Q1 String: This event helped me understand why there are so few women in engineering.

O4_Q1_A String : Agree

ResponseToken String: 444@44444.com

SurveyID String : C4

Data Table: ObjectivesDB

ObjectivesDB Close

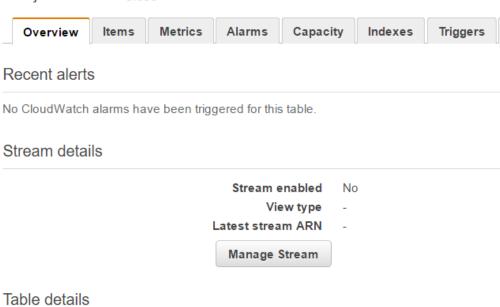


Table name ObjectivesDB

Primary partition key OID (String)

Primary sort key SurveyType (String)



▼ Item {3}

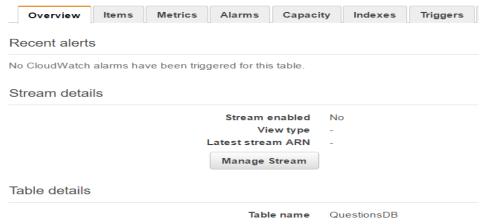
Objectives String: Develop PEP's understanding of what engineers do.

OID String: 01

SurveyType String : Parent

Data Table: QuestionsDB

QuestionsDB Close



Primary partition key
Primary sort key

QuestionsDB QID (String) SurveyType (String)



Data Table: Roles

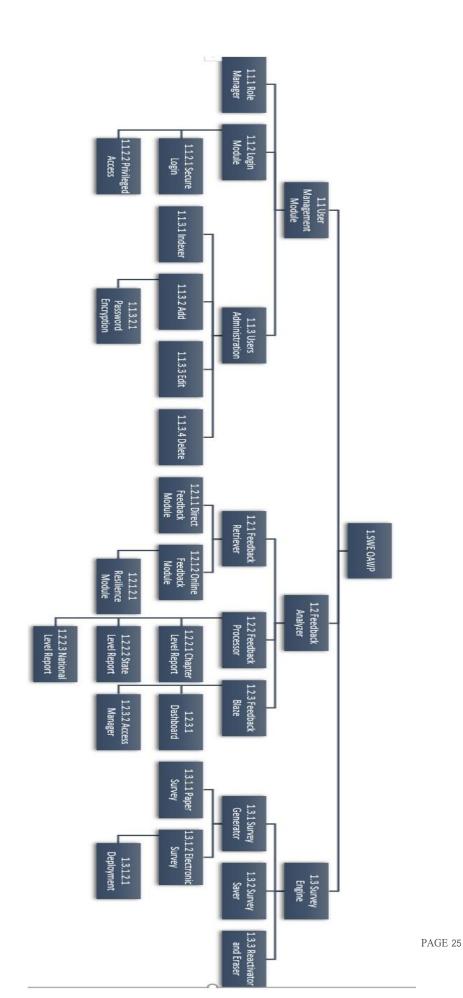
RID	RoleType
3	Regional SWE Comittee Member
2	National SWE Comittee Member
4	Chapter SWE Comittee Member
1	Outreach Admin
5	SWE Member Volunteer

Section 4: Architecture

Below is standard underlying Architecture of SWE OAWP.

- 1.1 SWE OAWP: Society of Women Engineers Online Assessment Web Portal.
- 1.2 User Management Module: Module developed to manage SWE member's access to the portal.
 - 1.2.1 Role Manager: Module under 1.1 to manage roles of SWE Members.
 - 1.2.2 Login Module: Module under 1.1 to validate entry of user for secure access.
- 1.2.2.1 Secure Login: Module under 1.1.2 to cross check entered password with encrypted password.
- 1.2.2.2 Privileged Access: Module under 1.1.2 to check for particular role of user.
- 1.2.3 Users Administration: Module to administer SWE Member users in repository.
 - 1.2.3.1 Indexer: Lists all the existing users.
 - 1.2.3.2 Add: Add user to repository.
- 1.1.3.2.1 Password Encryption: Encrypt password using MD5 and salt.
 - 1.1.3.3 Edit: Edit any existing user.
 - 1.1.3.4 Delete: Delete any existing user.
- 1.2 Feedback Analyzer: Module under 1.0 to manage feedback processing and exhibition.
 - 1.2.1 Feedback Retriever: Module to receive data from survey.
- 1.2.1.1 Direct Feedback Module: Module which will enable SWE members to feed in survey.

- 1.2.1.2 Online Feedback Module: Module which will receive data from electronic surveys taken by general public.
- 1.2.1.2.1 Resilience Module: Module which will handle network latencies, interrupts and exceptions.
- 1.2.2 Feedback Processor: Module which will process the data gathered by retriever module.
- 1.2.2.1 Chapter Level Report: Module which will generate Chapter Level Report data.
- 1.2.2.2 State Level Report: Module which will generate State Level Report data.
- 1.2.2.3 National Level Report: Module which will generate National Level Report data.
 - 1.2.3 Feedback Blaze: Module which will exhibit the data.
 - 1.2.3.1 Dashboard: Platform on which data will be shown in graphical form.
 - 1.2.3.2 Access Manager: Module which will control access to dashboard.
 - 1.3 Survey Engine: Module under 1.0 to manage surveys.
 - 1.3.1 Survey Generator: Module under 1.3 to generate surveys.
- 1.3.1.1 Paper Survey: Module to generate softcopies of surveys e.g. *.pdf,*.doc/x. Future work.
 - 1.3.1.2 Electronic Survey: Module to generate online surveys.
- 1.3.1.2.1 Deployment: Module under 1.3.1.2.1 to deploy online surveys to general public.
 - 1.3.2 Survey Saver: Module under 1.3 to save surveys.
- 1.3.3 Reactivator and Eraser: Module to deactivate/reactivate and remove surveys.



Section 5: SWE OAWP at Runtime

1. Home.

Society of Women Engineering Home About Contact

Society of Women Engineering Outreach Assesment Web Portal

Learn more »

GOALS

Society of Women Engineers is a non-profit organisation. It helps in empowering women to succeed and advance in the field of engineering. SWE offers training and development programs, networking opportunities, scholarships, and outreach and advocacy activities. According to the mission line of SWE "Stimulate women to achieve full potential in careers as engineers and leaders, expand the image of the engineering profession as a positive force in improving the quality of life, and demonstrate the value of diversity." And Vision is "To be key to the success of women in engineering and technology." Primary Goals of SWE are: Professional excellence, Globalisation, Advocacy. SWE offers support at all levels, from K-12 outreach programs and collegiate sections to professional development in the workplace.

Learn more »

Outreach Assesment Web Portal

After-event surveys are most common type of feedback practice which SWE teams use. These surveys need to be filled by all the participants. Also, these surveys cover wide range of participants from Students to Parents, and from Teachers to Volunteers. Surveys include open-ended questions, multiple choice questions, agree/disagree, true/false and so on. After that, responses are collected and results are analysed. These results are very useful in marketing, maintaining records, getting sponsors. This project is an effort to ease the current SWE outreach assessment process. Project involves formulation of a web portal using Dot net supported technologies. The high level features of this system will be Survey Administration, Users Administration, Feedback Management, Infographics

Learn more »

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2. About

Society of Women Engineering Home About Contact Take Survey SWE Member Log in

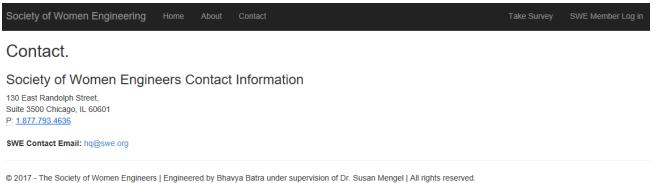
About.

More about Society of Women Engineers

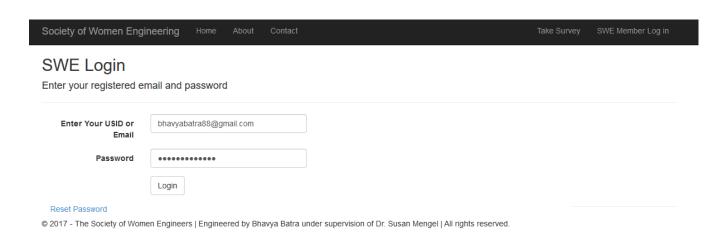
For more than six decades, SWE has given women engineers a unique place and voice within the engineering industry. Our organization is centered around a passion for our members' success and continues to evolve with the challenges and opportunities reflected in today's exciting engineering and technology specialties. We invite you to explore the values, principles, and priorities that guide our initiatives and learn how together, WE can continue to make a lasting impact on the future.

Learn more »

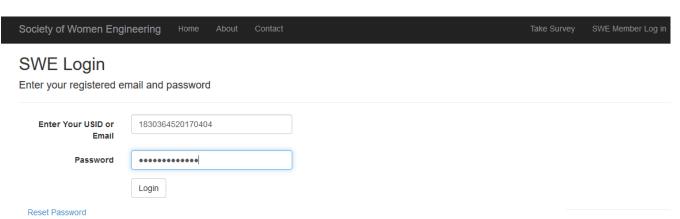
3. Contact



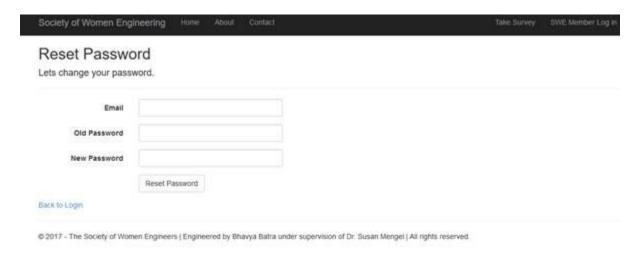
- 2217 The doctory of violent Engineers | Engineered by Bhavya Batha ander supervision of Br. Odsan Menger | 77
 - 4. SWE Member Login
 - Login from Registered Email Address



Login from User ID

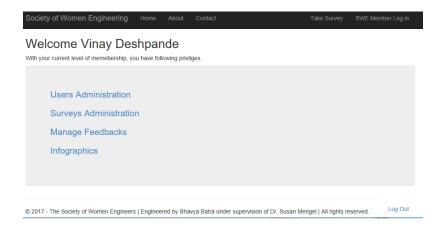


Reset Password

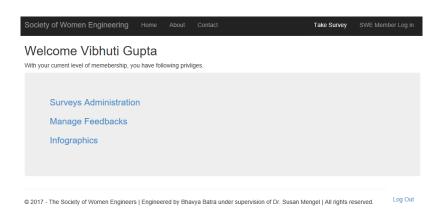


5. SWE Dashboard

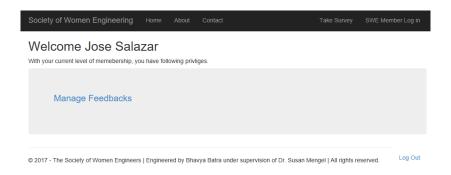
• SWE Outreach Administrator Dashboard



SWE National, Regional, Chapter Level Member Dashboard



• SWE Volunteer Dashboard

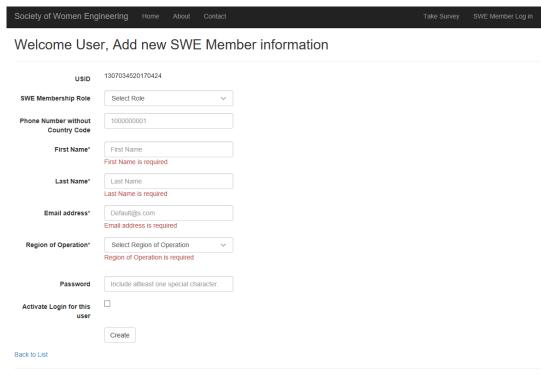


6. Users Administration

• SWE Members Catalog

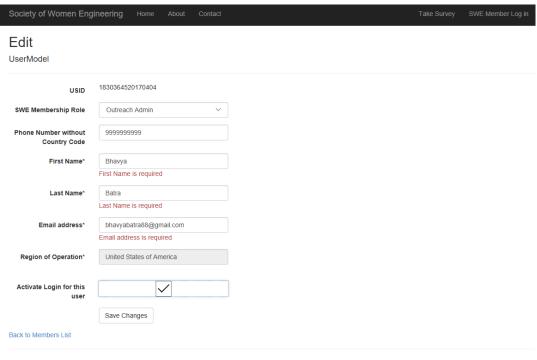
Society of Wome							Ta	ake Survey S	SWE Membe	er Log in
Add new SWE Member		Catalog	3						to your Da Log Out	shBoard
USID	First Name*	Last Name*	Email address*	Region of Operation*	SWE Membership Role	Phone Number without Country Code	Datecreated	Datemodified	Activate Login for this user	
136394520170421	Vibhuti	Gupta	vibhuti.gupta@ttu.edu	USA	2	8065006843	4/21/2017 1:38:26 AM	4/21/2017 1:38:26 AM	✓	Edit Reset Password Details Delete
1139244520170411	Test	User	t@s.com	USA	2	4567456788	4/11/2017 11:40:11 AM	4/11/2017 4:35:05 PM	\checkmark	Edit Reset Password Details Delete
1147534520170411	New	User	new@user.com	TX	3	999999999	4/11/2017 11:48:13 AM	4/11/2017 11:48:13 AM	\checkmark	Edit Reset Password Details Delete
149404520170421	Vidya	eswarappa	vidya.eswarappa@ttu.edu	RI	4	8066206961	4/21/2017 1:51:42 AM	4/21/2017 8:56:17 AM	\checkmark	Edit Reset Password Details Delete
133374520170421	Manohar	Kotapati	manohar.kotapati@ttu.edu	USA	2	8067025872	4/21/2017 1:35:50 AM	4/21/2017 1:35:50 AM	✓	Edit Reset Password Details Delete
153414520170421	Jose	Salazar	Jose.salazar-iii@ttu.edu	TX	5	8067733097	4/21/2017 1:55:35 AM	4/21/2017 1:55:35 AM	✓	Edit Reset Password Details Delete

Add new SWE Member

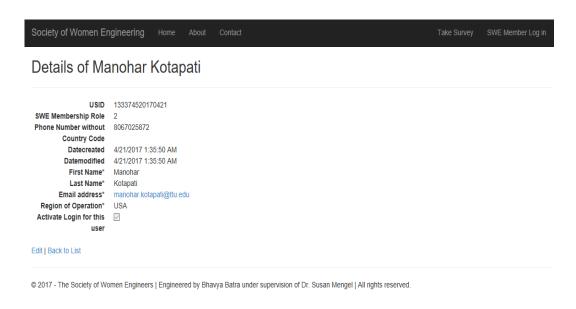


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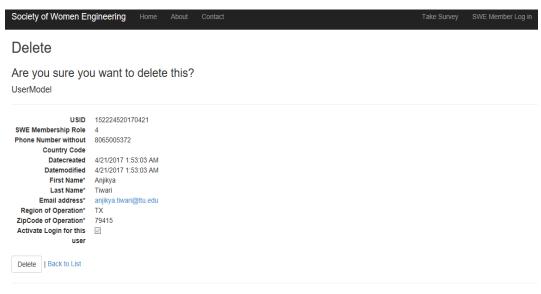
Edit Users



• View Details of Users



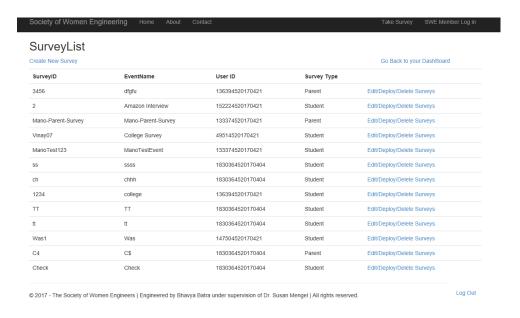
Delete User account



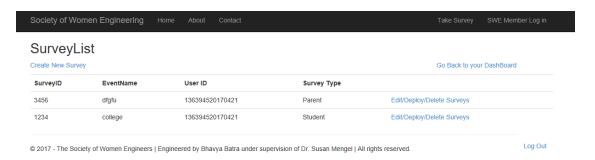
7. Surveys Administration

Survey List –

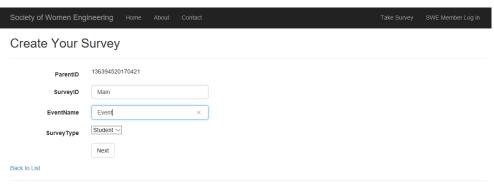
Admin View



Member View

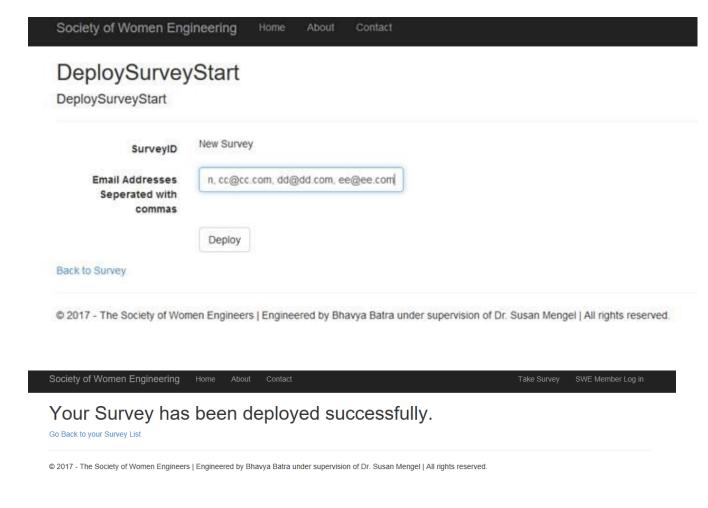


Create Survey



Society of Women Engineering Home About Contact	Take Survey SWE Member Log in
StudentSurvey	
You are working on Student Survey	
SurveyID Main	
SurveyofType Student	
EventName Event	
Develop students understanding of What engineers do.	
Before this event, I knew what an engineer did.	
After this event, I know what an engineer does.	
Engineers are innovative.(They come up with new ideas and inventions.) \qed	
Engineers are creative.	
Engineers do work that is hands-on.	
Engineers work in many different kinds of career fields.	
Change negative attitudes about engineering careers.	
Before this event, I was interested in becoming an engineer.	
After this event, I am interested in becoming an engineer. $\hfill\Box$	
Open Ended Questions	
Do you consider today's event as an A-Grade event ? [Strongly Agree = A Grade, Strongly Disagree = D Grade]	
Did you like most of the part about the event today?	
If you were in charge, would you like to change this event?	
Would you recommend that other kids participate in events like this?	
Demographic Questions ☑	
I am (Gender):	
How old are you?	
With what races or ethnicities do you most identify?	
What grade are you going to?	
Custom Questions 🗹	
First Question	Event?
Second Question	Null
Third Question	Null
Fourth Question	Null
Fifth Question	Null
Save Survey Save and Deploy Survey Delete Survey	
Back to List	
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Deploy Survey



• Edit /Delete Survey

Society of Women Engineering Home About Contact	Take Survey	SWE Member Log in
StudentSurvey You are working on Student Survey surveyID Vinay07 SurveyofType Student EventName College Survey		
Develop students understanding of What engineers do.		
Before this event, I knew what an engineer did. $\ \ \ \ \ \ \ \ \ \ \ \ \ $		
After this event, I know what an engineer does.		
Engineers are innovative.(They come up with new ideas and inventions.)		
Engineers are creative.		
Engineers do work that is hands-on.		
Engineers work in many different kinds of career fields.		
Change negative attitudes about engineering careers. □		
Before this event, I was interested in becoming an engineer. $\ oxdot$		
After this event, I am interested in becoming an engineer.		
What grade are you going to? ☐		
Custom Questions ✓		
First Question Engine		
Second Question Engine		
Third Question Null		
Fourth Question Null		
Fifth Question Null		
Save Survey Save and Deploy Survey Delete Survey		

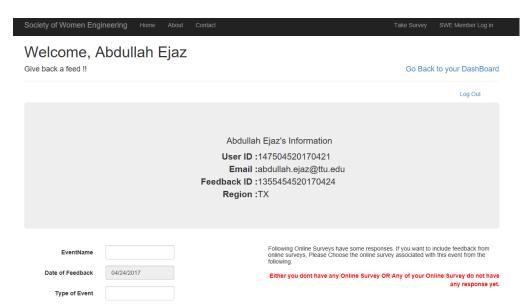
8. Manage Feedbacks

• Admin\National Level Member View

Society of Women Engi	neering Home Abou	ut Contact			Take Survey SWE	E Member Log in	
Welcome, B	Bhavya Batra	а			Go Back to vo	our DashBoard	
ONO BUOK U 1000					GO Buok to ye		
						Log Out	
		User ID : Email :	Batra's Informal 183036452017(bhavyabatra88(135053452017(0404 @gmail.com			
EventName	Check		Following Online Surveys have some responses. If you want to include feedback from online surveys, Please Choose the online survey associated with this event from the following.				
Date of Feedback	04/24/2017		Link Online Sur	vey Report for this Feedbac	k 🗹		
Type of Event			SurveyID	EventName	Survey Type	•	
Number of Girls	0		○ss	SSSS	Student		
Number of Boys	0		○ ch	chhh	Student		
Average age of Girls	0		○ C4	C\$ Check	Parent		
Average of Boys	0		Cileck	CHECK	Student		
Section Number/ MAL Code Region	N_A V N/A V Feedback Region V						

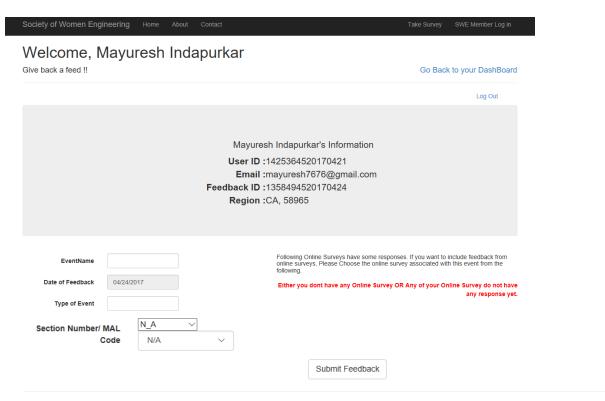
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Regional Level Member View





• Chapter Level\ SWE Volunteer View



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9. Infographics

• Outreach Admin/ National Level View

Infographics Go Back to your DashBoard Log Out								
Section Number/ MAL Code	Feedback ID :	Date of Feedback	Region	Feedback for ZipCode*	Before/After Event Infographics	A-Grade from Parents Infographics	Number of Boys/Girls Infographics	Age of Boys/Girls Infographics
C5	303574520170417	04-17-2017	AR	78990	View Infographics	View Infographics	View Infographics	View Infographics
C5	311094520170417	04-17-2017	AR	78990	View Infographics	View Infographics	View Infographics	View Infographics
A1	1956104520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	1956544520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	1957144520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	1957554520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	1958174520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	1958364520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	1958514520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	1959044520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	1959154520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics

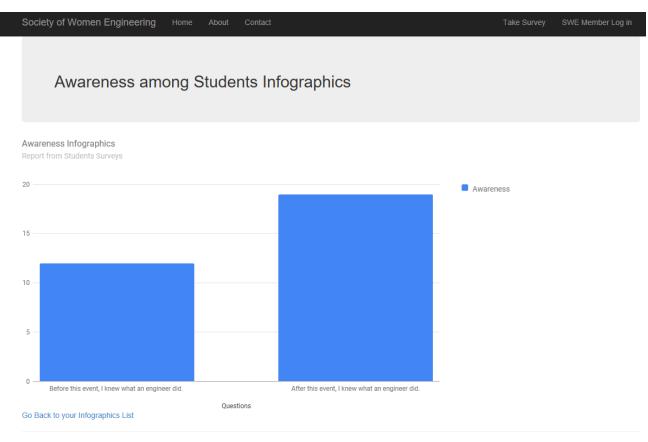
• Regional Level View

aphics View Infographics
aphics View Infographics

Chapter Level View

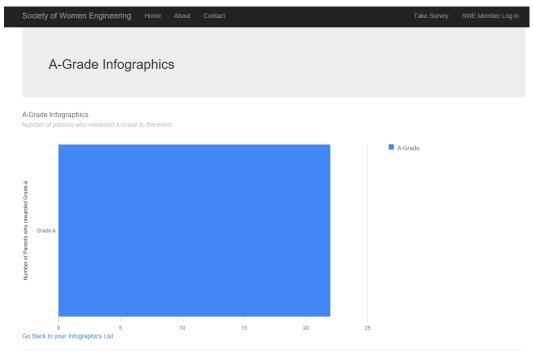
A1	2005494520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
N_A	2006004520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
N_A1	2006144520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A2	2006394520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	2006564520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	2007094520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics
A1	2007204520170422	04/22/2017	TX	79415	View Infographics	View Infographics	View Infographics	View Infographics

• Before/After Event Infographics



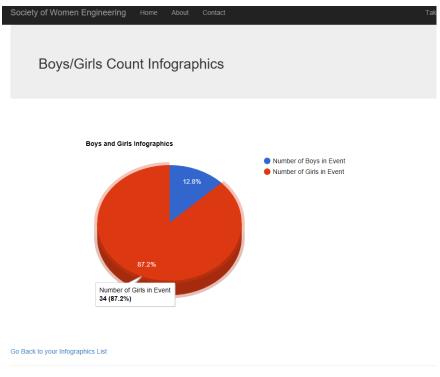
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• A-Grade from Parents Infographics

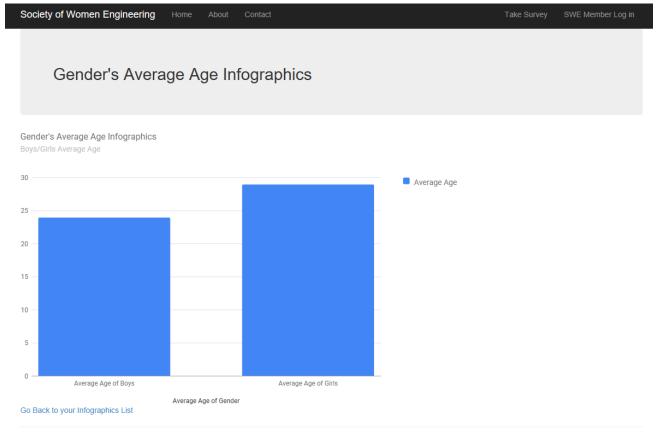


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Number of Boys/Girls Infographics

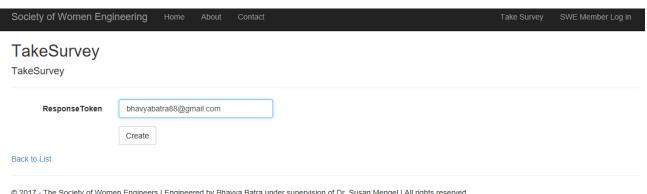


Age of Boys/Girls Infographics



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10. Take Survey



Society of Women Engineering Home About Contact Take Survey SWE Member Log in

TakeSurveyStepTwo

Create Nev

Survey ID	Survey Conducted For Event	Your Survey Status	
3456	dfgfu	Pending	Open Survey and Submit
2	Amazon Interview	Pending	Open Survey and Submit
Mano-Parent-Survey	Mano-Parent-Survey	Submitted	
1	Event 1	Pending	Open Survey and Submit
Vinay07	College Survey	Pending	Open Survey and Submit
ManoTest123	ManoTestEvent	Submitted	
ss	SSSS	Submitted	
ch	chhh	Submitted	
1234	college	Submitted	
Main	Event	Pending	Open Survey and Submit
3	Career Fair	Submitted	

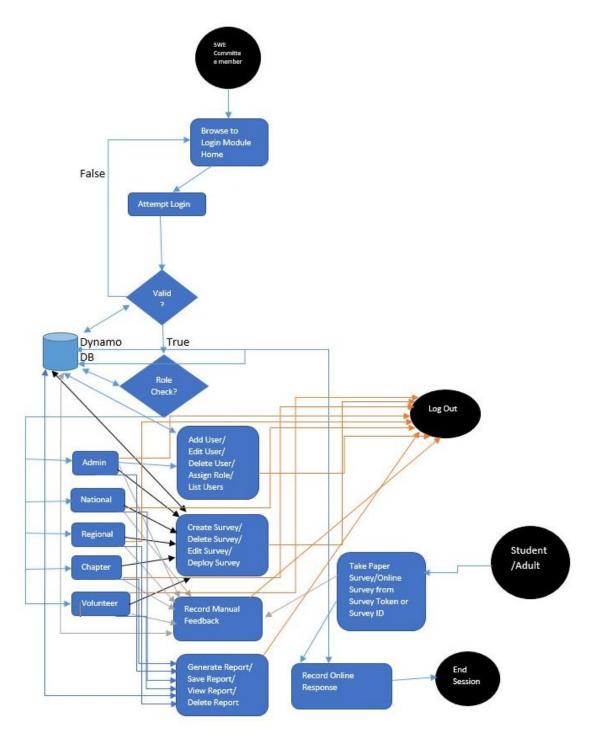
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Society of Women Engineering Home About Contact	Take Survey	SWE Member Log in
TakeSurveyFinal Create New		
question	answer	
Engineers work in many different kinds of career fields.	Agree	~
Engineers work in many different kinds of career fields.	Strongly Agree	~
Engineers do work that is fun.	Agree	~
Before this event, I knew what an engineer did.	Disagree	~
Engineers do work that allows them to help their community and/or society.	Strongly Agree	~
Engineers are creative.	Agree	~
After this event, I am interested in becoming an engineer.	Disagree	~
Engineers are innovative. (They come up with new ideas and inventions.)	Strongly Agree	\checkmark
My confidence in problem-solving is improved.	Disagree	~
Engineering is a good career choice for women.	Strongly Disagree	-
Submit Survey Edit Details Delete		

Society of Women Engineering Home About Contact Take Survey SWE Member Log in

This Survey is Submitted.

Section 6: Activity Diagrams



6.1 LOGIN

Login activity flow diagram describes login activity of members and how they will land on different home pages once login credentials and role membership is validated.

6.2 Role Manager

This is flow of control until the platform where user with the admin role could manage the roles of SWE Members. It is responsible for user's landing on correct role page if user login is active.

6.3 Users Administration

This is continuation of Administrator activity from its Admin home page where s/he can add, omit and emit, list member users.

6.4 Surveys Administration

This section enables committee members to create, delete, update and deploy the surveys.

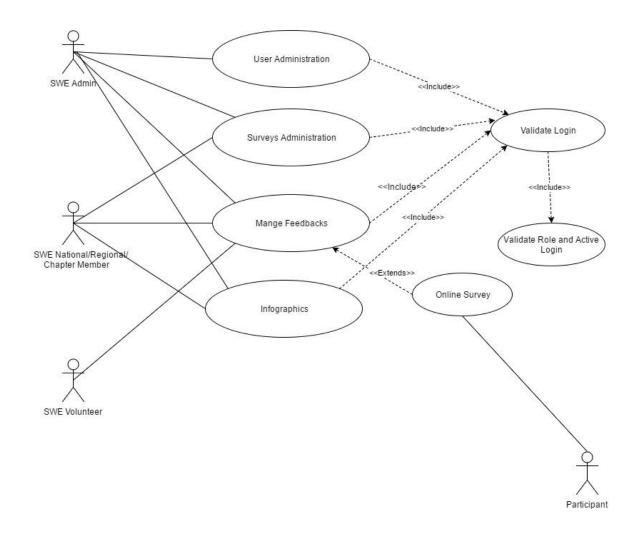
6.5 Feedback Management

This section enables members and participants to record feedback of generated surveys whether manually or online.

6.6 Infographics

In this section, user with appropriate privileges can view graphical reports on Gender Ration, A-Grade, Average Age and awareness increase.

Section 7: Use Case Diagram



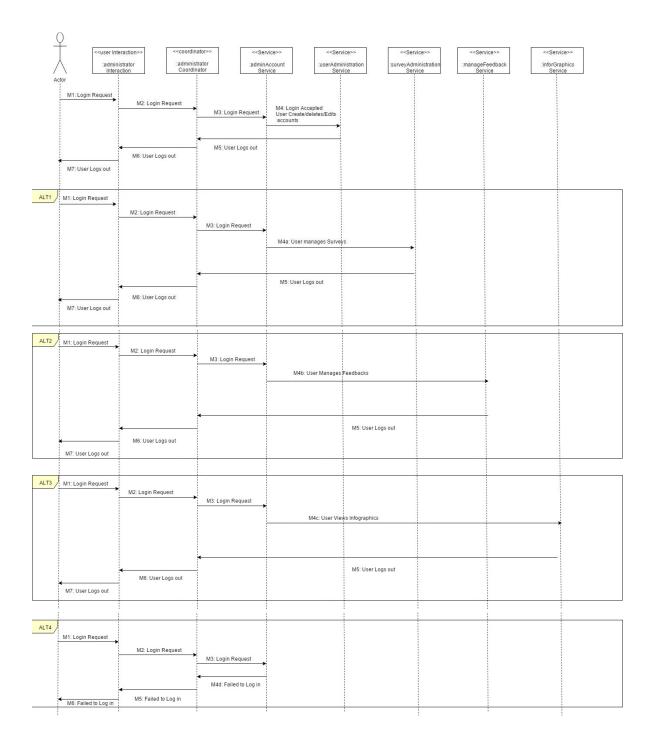
SWE OAWP broadly has four category of actors: -

- 1. SWE Admin Use cases for any SWE Admin Are User management, Survey Management, Feedback Management, Reporting Management.
- 2. SWE Committee member Use cases for any SWE Committee member are Survey Management, Feedback Management and Infographics.
- 3. SWE Volunteer The candidates doing volunteer work for SWE will have access to provide feedback after session.
- 4. Survey Participants Survey Participants can take online Student/Adult survey depending upon age.

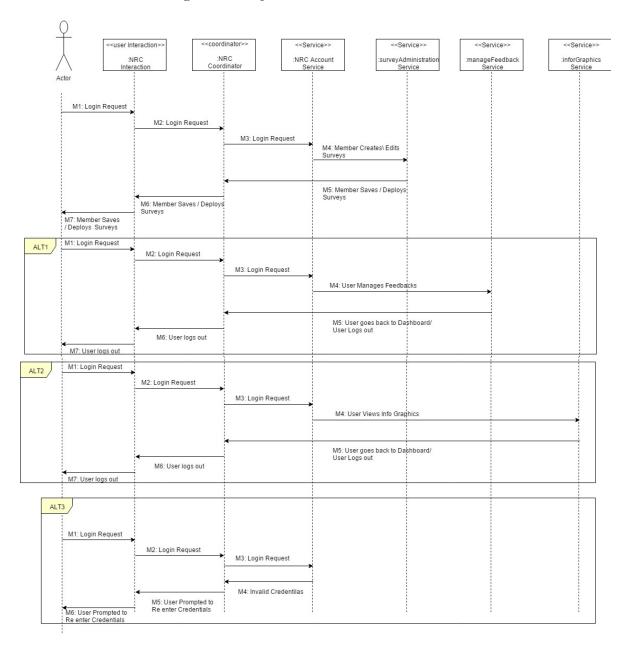
Section 8: Sequence Diagrams

SWE OAWP broadly has four category of actors and their sequence diagrams are as follows:

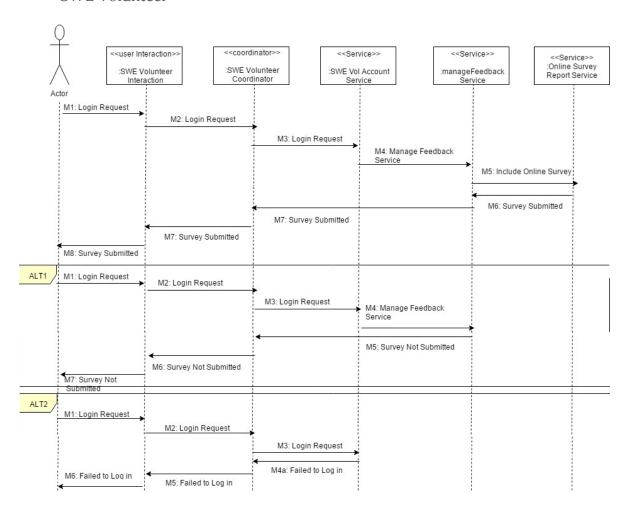
• SWE Outreach Admin



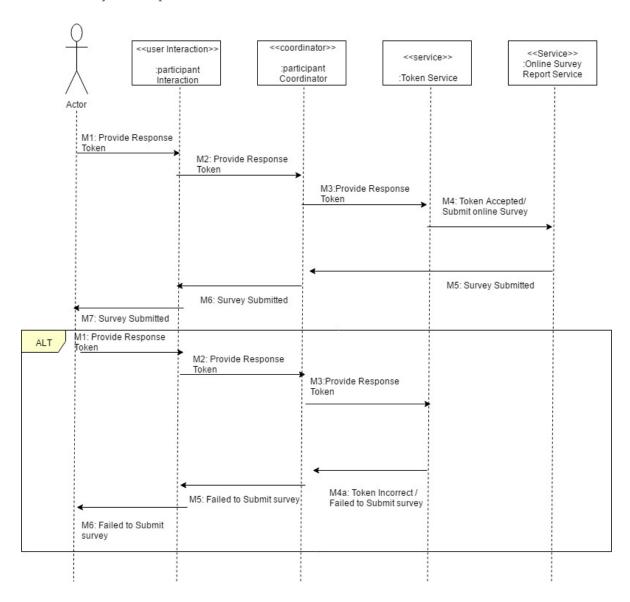
• SWE National/Regional/Chapter Level Members



SWE Volunteer



• Survey Participants



Section 9: Testing

We have performed thorough unit testing and role based usability testing. Candidates were selected from varied domains and assigned with different roles: -

#Number	Tester Name	Assigned Role	Department
1	Vinay Deshpande	Outreach Admin	CS
2	Manohar Kotapati	National Level Admin	CS
3	Vibhuti Gupta	National Level Admin	CS
4	Abdullah Ejaz	Regional Level Admin	CS
5	Phani Cherukuri	Regional Level Admin	CS
6	Vidya Eswarappa	Chapter Level Admin	CS
7	Anjikya Tiwari	Chapter Level Admin	CS
8	Jose Salazar	SWE Volunteer	Law
9	Gaurav Vinayaka	SWE Volunteer	CS
10	Mayuresh Indapurkar	SWE Volunteer	Data Science
11	Tania Singh	Participant	Law
12	Sara Khan	Participant	Law
13	Arun Jegarkal	Participant	CS
14	Vinay Deshpande	Participant	CS
15	Bhavya Batra	Participant	CSSE

These candidates then ran set of test cases and recorded their results, following are the attached results.

Results of Testing by Manohar Kotapati

Test Case No.	Test cases for National Level Administrators (Please Execute following test cases for 5-10 times)	Expected Results	Actual Results	Status
1	Login with your User ID Provided .	Successful login	Login successful	Pass
2	Login with your Email Provided.	Successful login	Login successful	Pass
3	Put incorrect password for your login	Unsuccessful login	Unsuccessful login - Login Failed Message	Pass
4	You should see Survey administration, Manage Feedback and Infographics links.		Able to see Survey administration, Manage Feedback and Infographics links.	Pass
5	Click on Survey Admin and create a "Student" survey. Select minimum 3 and maximum 5 head topics and then any number of questions in those topics.	Survey Should be created deployed successfully. It may take some time.	Survey Created	Pass
6	Deploy Survey to following users:-sara.khan@ttu.edu tania.singh@ttu.edu arun-kumar.jegarkal@ttu.edu bhavyabatra88@gmail.com vinay.deshpande18@gmail.com	Survey Should be created deployed successfully. It may take some time.	Deployed to 5 users. But took more time.	Pass
7	Click on Survey Admin and create a "Parent" survey. Select minimum 3 and maximum 5 head topics and then any number of questions in those topics.	Survey Should be created deployed successfully. It may take some time.	Parent Survey Created	Pass
8	Deploy Survey to following users:-sara.khan@ttu.edu tania.singh@ttu.edu arun-kumar.jegarkal@ttu.edu bhavyabatra88@gmail.com vinay.deshpande18@gmail.com	Survey Should be created deployed successfully. It may take some time.	Deployed to 5 users. But took more time and Outlook new mail pop-up getting arrived with email id 444@44444.com	Pass
9	Go back to survey List.	You should be able to see your surveys.	Feedback Submitted+A1:F9+D10:D11	Pass

10	Go to Manage Feedback and put random values for data. Select any survey with answers if available and submit feedback.	Feedback should be submitted successfully.	Able to see Survey List	Pass
11	Go Infographics Section. You should be able see all the graphs for all states (if data available for other states.)	All graphs should be visible.	Couple of time Got Login failed error even the user is logged in	Pass
	Random Tests.			
12	Create random surveys			
13	add and delete other surveys which are not deployed		able to delete, add surveys	
14	don't include online surveys even if exist.			

Results of Testing by Vibhuti Gupta

Test Case No.	Test cases for National Level Administrators (Please Execute following test cases for 5-10 times)	Expected Results	Actual Results	Status
1	Login with your UserID Provided .	Successful login	Successful login	Pass
2	Login with your Email Provided.	Successful login	Successful login	Pass
3	Put incorrect password for your login	Unsuccessful login	Unsuccessful login	Pass
4	You should see Survey administration, Manage Feedback and Infographics links.		Yes	Pass
5	Click on Survey Admin and create a "Student" survey. Select minimum 3 and maximum 5 head topics and then any number of questions in those topics.	Survey Should be created deployed successfully. It may take some time.	Yes	Pass
6	Deploy Survey to following users :- sara.khan@ttu.edu tania.singh@ttu.edu arun-kumar.jegarkal@ttu.edu bhavyabatra88@gmail.com vinay.deshpande18@gmail.com	Survey Should be created deployed successfully. It may take some time.	Yes	Pass
7	Click on Survey Admin and create a "Parent" survey. Select minimum 3 and maximum 5 head topics and then any number of questions in those topics.	Survey Should be created deployed successfully. It may take some time.	Yes	Pass
8	Deploy Survey to following users :- sara.khan@ttu.edu tania.singh@ttu.edu arun-kumar.jegarkal@ttu.edu bhavyabatra88@gmail.com vinay.deshpande18@gmail.com	Survey Should be created deployed successfully. It may take some time.	Yes	Pass
9	Go back to survey List.	You should be able to see your surveys.	Yes	Pass
10	Go to Manage Feedback and put random values for data. Select any survey with answers if available and submit feedback.	Feedback should be submitted successfully.	Yes	Pass
11	Go Infographics Section. You should be able see all the graphs for all states (if data available for other states.)	All graphs should be visible.	Yes-Fail a couple of times, but then succeeded.	Pass
40	Random Tests.			
12	Create random surveys		Voc	Dace
13	add and delete other surveys which are not deployed		Yes	Pass
14	don't include online surveys even if exist.			

Results of Testing by Joe Salazar

Test Case No.	Test cases for SWE Volunteers (Please Execute following test cases for 5-10 times)	Expected Results	Actual Results	Status
1	Login with your User ID Provided .	Successful login	Successful Login	Pass
2	Login with your Email Provided.	Successful login	Successful Login	Pass
3	Put incorrect password for your login	Unsuccessful login	Unsuccessful Login	Pass
5	When you login, you land on your dashboard.	You should see Feedback Management and your name on the top.	Exactly as expected	Pass
6	Click on Feedback Link and submit feedback with random numbers. You can select any values, enter any values. Select any section codes. Select any section numbers. And submit feedback. (Please submit random 50 feedbacks.)	Your feedback should be submitted successfully every time.	50+ Successful Submissions	Pass
7	Logout	Logout should be successful	Successful log out	Pass

Results of Testing by Vidya Eswarappa

Test Case No.	Test cases for National Level Administrators (Please Execute following test cases for 5-10 times)	Expected Results	Actual Results	Status
1	Login with your UserID Provided .	Successful login	login successful	PASS
2	Login with your Email Provided.	Successful login	login successful(welcome page)	PASS
3	Put incorrect password for your login	Unsuccessful login	unsuccessful login with error message	PASS
4	You should see Survey administration, Manage Feedback and Infographics links.	Menu List	Menu List as Expected	PASS
5	Click on Survey Admin and create a "Student" survey. Select minimum 3 and maximum 5 head topics and then any number of questions in those topics.	Survey Should be created deployed successfully. It may take some time.	survey is created	PASS
6	Deploy Survey to following users:-sara.khan@ttu.edu tania.singh@ttu.edu arun-kumar.jegarkal@ttu.edu bhavyabatra88@gmail.com vinay.deshpande18@gmail.com	Survey Should be created deployed successfully. It may take some time.	survey deployed successfully for the provided email id.	PASS
9	Go back to survey List.	You should be able to see your surveys.	Surveys created are present in survey list.	PASS
10	Go to Manage Feedback and put random values for data. Select any survey with answers if available and submit feedback.	Feedback should be submitted successfully.	Feedback submitted successfully	PASS
11	Go Infographics Section. You should be able see all the graphs for all states (if data available for other states.)	All graphs should be visible.	Graphs are visible as expected.	PASS

	Random Tests.		
12	Create random surveys		
13	add and delete other surveys which are not deployed	able to add and delete surveys before deployment	PASS
14	don't include online surveys even if exist.		

Results of Testing by Vinay Deshpande

Test Case	Expected Result	Actual Result	Status
Login Positive Credentials	Successful Login with User Administration, Survey Administration, Manage Feedback and Infographics.	Logged in Successfully with User administration, Survey Administration, Manage Feedback and Infographics.	Pass
Login Negative Credentials	Error Screen.	Login in Failed, Please try to Log in Again	Pass
Test all the links and navigation to SWE.org.	No links should be broken.	All the Links navigate to SWE.org	Pass
After Login, go to User Administration and create national level users, regional level users, chapter level user and swe volunteer accounts. Add random information. Manohar Kotapati - National Level Volunteer Vibhuti Gupta - National Level Member Phani Chekuri - Regional Level Member Abdulha - Regional Level Member vidya - Chapter Level Member Anjikya - Chapter Level Member Joe Salazar - SWE Volunteer gaurav-Swe volunteer	Every user should get created successfully.	All The users created Successfully	Pass

Go to Survey Administration -> Create a Student Sruvey -> Select min 3 max 5 random objectives and then select any number of questions in those objectives. (including custom questions) and then deploy. Survey to :- sara.khan@ttu.edu tania.singh@ttu.edu arun- kumar.jegarkal@ttu.edu bhavyabatra88@gmail.com	Deployment should Succeed.	The Surveys are deployed successfully.	Pass
After getting few responses go to feed back section and enter random values.	Include online feedback of reported data	The Feedbacks have been recorded successfully	Pass
Go to infographics section and check all graphs are showing	all graphs should be displayed successfully.	Graphs renders accurate results	Pass
Random Tests.	Test Navigation, button .	All the buttons, links and indentation of data is perfectly in working condition	Pass
add other more users apart from above.	Add users	users Added Successfully	Pass
delete users	The user should be deleted from the database	The user is deleted from the database also deleted user is not a part of the member list	Pass
add and delete surveys	The survey should be added and deleted from the survey list	The survey added and deleted from the survey list	Pass
try reseting a password for and user apart from list.	The password should be reset	The Password has been reset successfully	Pass
			Pass
Number of Test Cases	Number of Test Cases	Number of Test Cases	
	Passed	Failed	
14	14	0	

Results of Testing by Tania Singh

Test	Status
Login to participant panel.	Success
Visible List of Submitted and pending	Success
Surveys.	
No link to open Submitted Surveys.	Success
Opened pending surveys successfully.	Success
Answered Dropdown and Custom	Success
Questions successfully.	
Survey Submitted Successfully.	Success
Survey Status changed from pending to	Success
submitted.	

Results of Testing by Arun Jegarkal

Test	Status
Login to participant panel.	Pass
Visible List of Submitted and pending	Pass
Surveys.	
No link to open Submitted Surveys.	Pass
Opened pending surveys successfully.	Pass
Answered Dropdown and Custom	Pass
Questions successfully.	
Survey Submitted Successfully.	Pass
Survey Status changed from pending to	Pass
submitted.	

Section 10: Future Works

- 1. **Change Management Model:** Objectives, Roles, User access controls, Questions.
- 2. **Paper Survey Generation** for latest file formats.
- 3. Live Infographics.
- 4. **Collaborative graphs** and downloadable formats.
- 5. UX/UI Design.
- 6. **One click Link** for participants using dedicated Email Relay Server.
- 7. **International Level Members** Dashboard.
- 8. Upload Email address from excel, csv.