DebateX Club Membership Management System

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Definition, Investigation and Analysis

Introduction of the Club

"DebateX Club" is one of the running clubs of Little Angels' College. It was established in the year 2015 after the successful organization of LA-MUN(Little Angels'- Model United Nations), which inspired students to improve their debating and public speaking skills along with being able to think in a different way. The club president is Mr. Aditya Joshi and the Vice President is Mr. Drishya Baral.

Defining the Problem

The members list and the event list are kept in an A4 sized paper in a printed form. fThe members list and event list are kept separately. The president keeps the member list and vice president keeps the event list. Since they only keep single copy of each list, one lacks the other list. As the human has no extreme ability to remind itself of everything, lack of one list creates and uneasy feeling and hence some decisions can't be taken immediately.

More problems occur if the list is lost or damaged. Again, a new list have to be printed via organizing a meeting and noting the present members. Who are absent are not in the new list, when they should be. It is clear that they have a hard time keeping a track of members and the events about to be organized.

Investigation of the Problem

To get the clear view of the problem they are facing, I got the chance to visit their club meeting as the president has misplaced his members list in his home. Also I created a simple questionnaire for them to fill which asked about the frequency of losing the list in a month, numbers of member joining the club and other problems they face.

S.NO	NAME	embers Lest: ADDRESS	CONTACT
1	Ashin Joshi	Baneshwor	984556250
2	finjo Doma Sheipa	Maharaj gunj	9840021304
3	Sabring Shresthy	Bishalnagar	9818581077
4	Swav Shakya	Saldobato	9803860975
5	Drishya Baral	Satdobalo	9808059613
6	Chowang lama	Boudha	9860182817
7	Doski Hamaguchi	Naxal	9849532934
8	Amish Sharma	Hattiban	9812251911
9	Prachi Aryal	Dharan	9813370797
10	Sanyak Shrestha	Pepsi° Coda	9815060070
11	Prashout Tamang	Sunakothio	9841339903

Observations

The way of keeping members list

The attendance of member is taken after the members gather in the hall. Everyone writes their name in an empty paper. And in the end it's submitted to the president. The events are organized by the discussion of the members in the club. Events yet to organize are kept in a different paper. Later all the papers are printed by the president after he uses his laptop to save the data to keep it secure, which is time consuming.

Numbers of members joining (from the questionnaire)

The questionnaire was handed to president and vice-president, at the end the result turned out to be 1 to 2 students joining the club. Since the average number was 1.50 so I took it to be 1 member per week. However this never meant that it was so. They also wrote that none would join for weeks.

Frequency of losing the list (from the questionnaire)

It turned out that the president and vice-president had some hard schedules maintaining between their personal and club life. They included that they would rush off to somewhere and misplace the list. It increases the number of club meetings being more inappropriate and more boring.

DebateX Club Membership Management							
Name:							
Position: List Kept:							
How many member	ers usually joir	n the club in a w	reek period?				
Are you satisfied v	vith the curre	nt system?					
-yes	-no						
If you are dissatisf you rate it?	ied. from scal	e of 1 to 10. Ho	w much would				

any suggestions to further improve the new system?			
hat do you	expect from	the new s	ystem?

DebateX Club Membership Management Name: Aditya Toski
Position: President LIST KEPT: Members How often do you lose your list? once a month How many members usually join the club in a week period? nearly two members Are you satisfied with the current system? If you are dissatisfied, from scale of 1 to 10. How much would you rate it? Any suggestions to further improve the new system? + Make it simple but systematic What do you expect from the new system? Resource marragement and easines & in a more shrkushe want

Signature: A Joshi

	DebateX Club Membership Management
Name: Position List Kep	T L
	ften do you lose your list? Timber a month
How	many members usually join the club in a week period? Some where near 2.
Are	ou satisfied with the current system?
-yes If yo	u are dissatisfied. from scale of 1 to 10. How much would you rate it?
Any	Proper management of resources.
Wh	at do you expect from the new system? Much more systematic
TZ Sign	Shart :
5,61	

Interview Script

I used voice recorder of my phone to record the conversation. It was done with his consent.

Me: So Aditya can you tell me about how you keep records of your club?

Aditya: We currently don't use any technical or systematic way of record keeping. The details of members and events are kept by me and Drishya(vicePresident) in a paper.

Me: How does this system creates trouble for you?

Aditya: It is hard to keep the track of where I keep my list and maybe same happnens to drishya too. It is also painful for members to attend a irregular meeting that is insignificant. The members also have suggested us to create a systematic way of recording data. Till date we haven't been able to keep records properly due to our business in studies and club activities.

Me: Do you or Drishya uses laptop?

Aditya: We both do.

Me: If I am to create the software for you, for your easiness, who would be more likely to use it?

Aditya: I would use it. Drishya has a ill computer. And he also has a hard time as he has much more work than me.

Me: What things would you like to see in the new system?

Aditya: Not much but whatever you make, make a good one. I don't need fancy pro looking software but one that is easy to use. And it should be manually operated. It should keep record of members and events. It would reduce the problem for others.

Me: Thanks Aditya. I will surely do my best to create the system fitting your need.

Aditya: Please do show me when you are done. I might have some suggestions and uneasiness.

Analysis of the interview

The system seemed to be dependent on 2 people (president and vice-president). Moreover it was a paper system, not even a file. It surely heard to be unsystematic.

They are computer literate so training them won't be hard, as they are experienced.

The designed won't be mattered as they don't need fancy software, instead the work can be done in organizing the software properly.

Inefficiency in the current system

Duplication: Same data had to be copied time to time, if the list is lost. It is really irritating for the people to do same thing again and again.

Separate list: As the list are kept separately the data held is only limited to the list kept. If one wants to know the other data, it involves long distance communication. Moreover it creates a gap in the data that the user holds.

Insecure filing system: There was no logical way in which the files were kept. Such random way of data keeping and filing invites much more new troubles.

User Requirements

User must have these requirements:

- 1. Have basic knowledge of computer.
- 2. Understands English.

My client is a student so he posses these requirements.

Hardware Requirements

Processor: Intel Pentium 4 or higher. (To make the system go well)

Mouse: Any mouse will work. (To navigate and make choices)

Keyboard: Any keyboard will work. (To enter data or remove data)

Hard disk: The internal hard disk of the pc. (To store data)

RAM: 256MB or greater. (For sufficient memory)

Software Requirements

Windows: Vista / XP / 7 / 8. Doesn't work in Mac or Linux

Microsoft Access

Requirement Specification

After all the observations, the following requirements were listed:

- 1. System should be systematic
- 2. User friendly
- 3. Password Protected

- 4. Data should be kept properly
- 5. Manually operated

Benefits Intended for the user

- 1. Should be time saving.
- 2. Easy to use.
- 3. Less boring.

Limitations of the New System

- 1. Won't run on Mac or Linux as it created from Visual basic.
- 2. Won't be able to print list of members and events.

Design

After my successful investigation and observation of the current system, I started designing of the new system. The only way to access the system is by logging in with the username and password. Else the user cannot use the system. Once he has successfully entered the correct data in the login page, he can add or remove members, create and remove events and change passwords too.

Agreements with the Client

- 1. It should be User friendly
- 2. It should be manual.
- 3. It should be better in the terms of serve rather than the design.
- 4. It should rate the Members. (This agreement was cancelled. I asked my friends and teachers about the rating, and hence I was told that it was a lot of AI matter. At last this term was cancelled)

Output Design

Search

Search by ID	S	Search	
Search by Name	S	Search	
Search by Address	S	Search	
Search by Contact	S	Search	
Remove	Edit		

Removes selected data

Edits selected data

Members Joining Events Interface

	Event ID		(Event ID	is entered here)					
ID		Memb	er_Name	Member_Class	Strean	n	Contact_Number	Address	
	Membe	ers in cu	irrent Even	t					
									l
R	emove						Join member		

Button to remove members

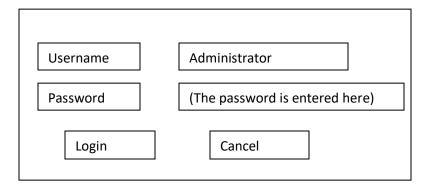
button to add new member to event

Purpose

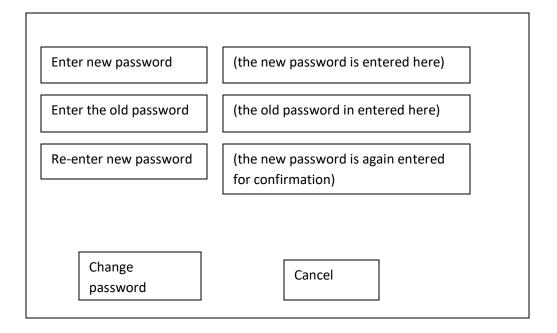
- 1. Provide easy and friendly interface.
- 2. Search every data within the database.

Input Design

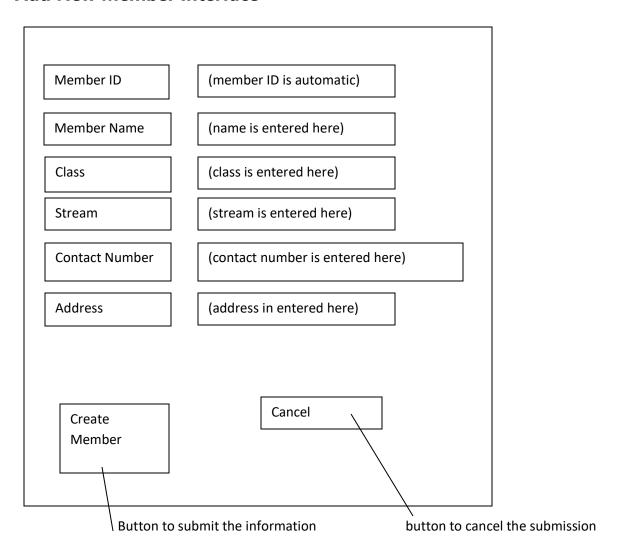
Login Interface



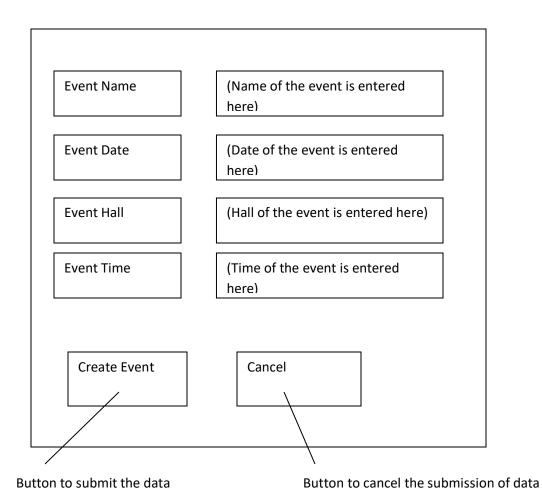
Change Password Interface



Add New Member Interface

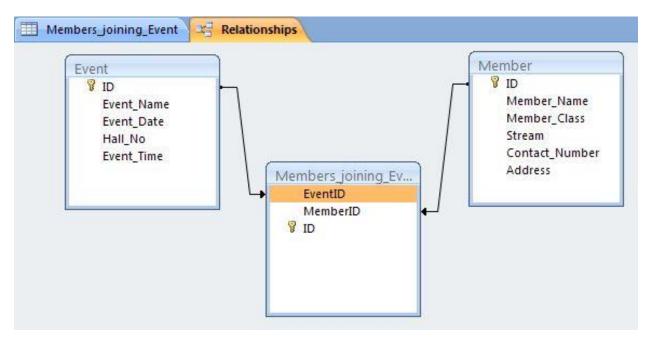


Create Event Interface



Data Structures

The software requires 3 total databases to work. Their ER relation is shown in the picture.



The Table Event and Table Member has many to many relation.

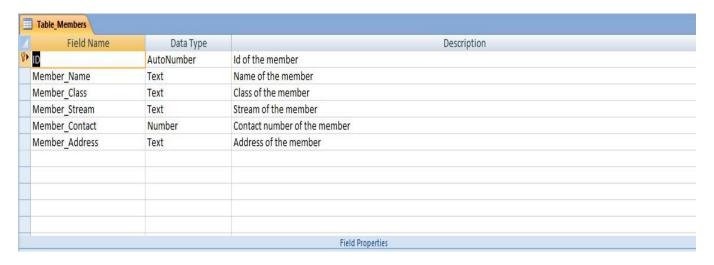
The table Event has a 1 to many relation with the table Members_joining_Event.

The table Member has 1 to many relation with the table Members_joining_Event

Details of the fields for each table are given below

Tables:

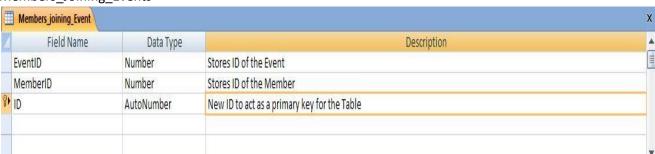
Table_Members



Table_Event



Members_Joining_Events



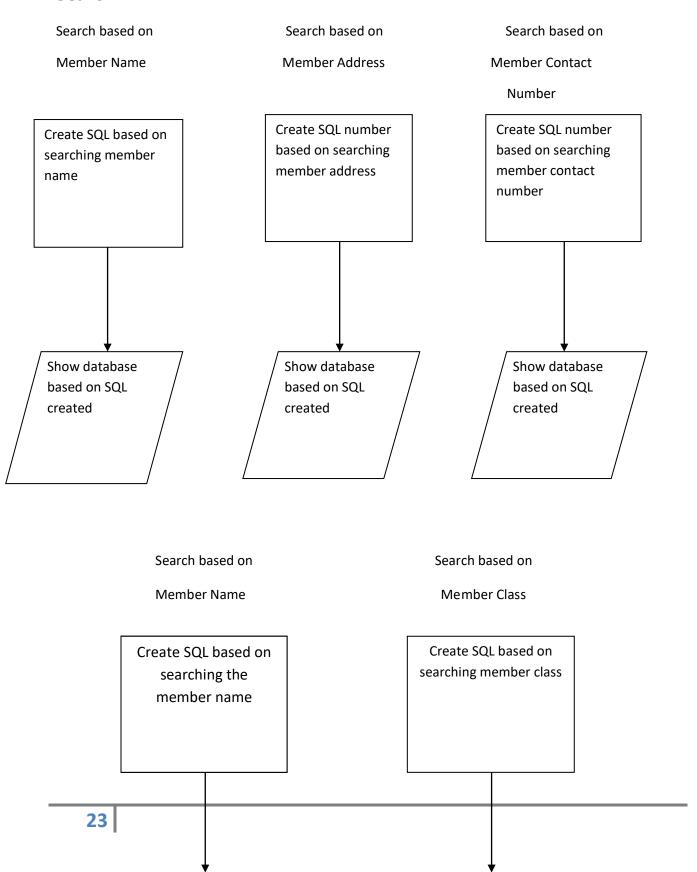
Flat File

Since the system is designed for a single user, therefore there is only 1 password. Storing the password in a relational database is unnecessary.

Field Name	Туре	Description	Example
Username	Text	Stores Login Credentials (username)	"username"
Password	Text	Stores Login Credentials (password)	"Abasdfcaskdj23\$49859@:"

Flowcharts

Search

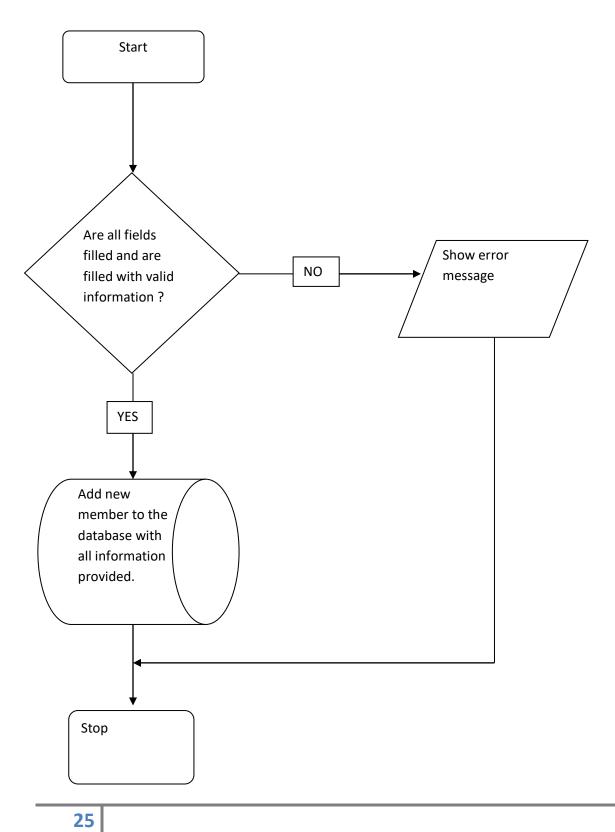


Show
database
based on
SQL created

Show database based on SQL

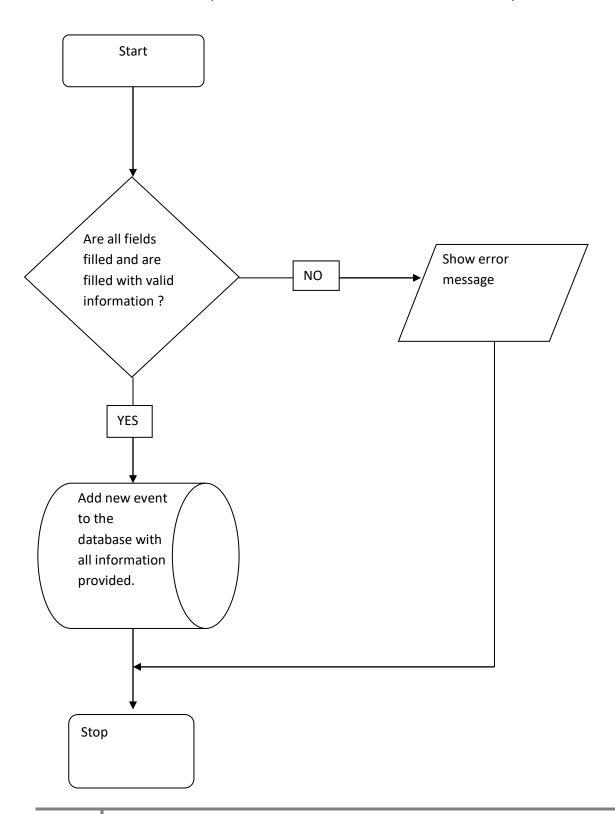
Add New Member

Add new member form will help user to add new member with all valid information provided.

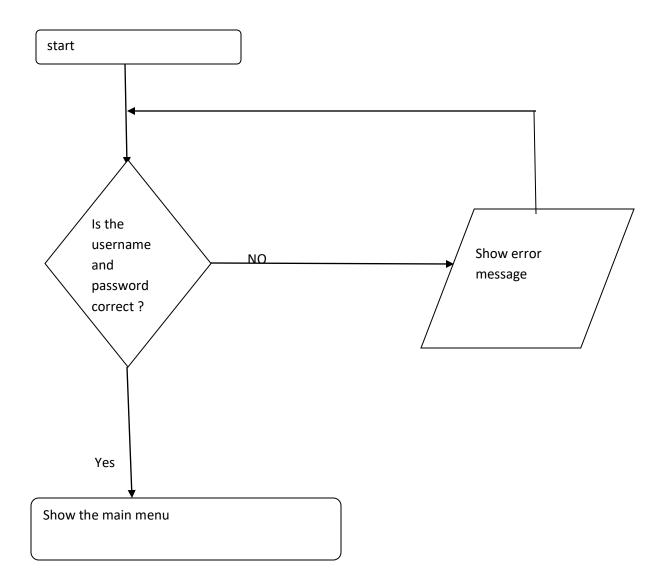


Add New Event

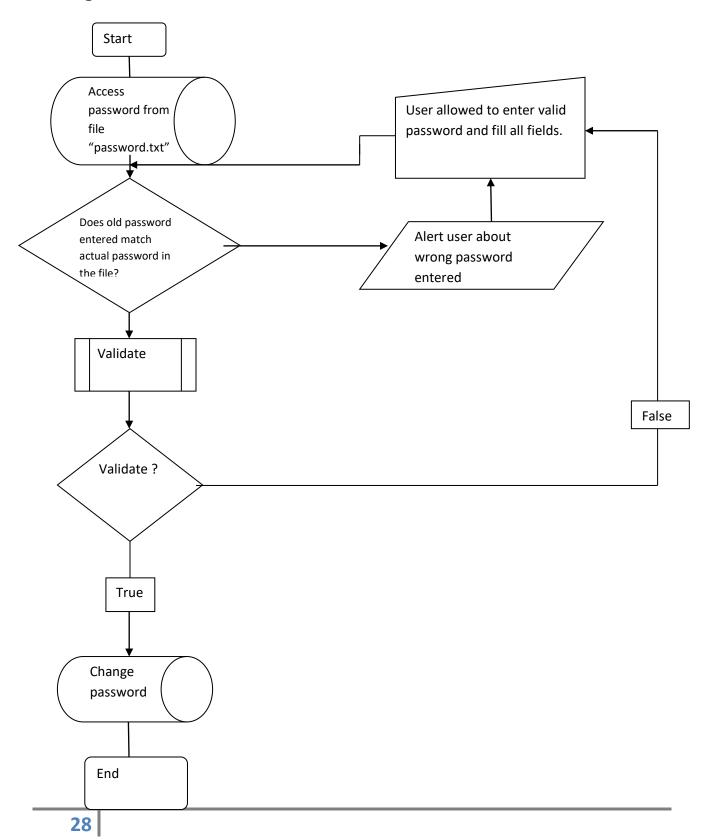
Add new event form will help user to add new event with all valid information provided.



Login



Change Password



Testing Plan

Before the implementation of system, tests were carried out to ensure that the system was bug free. Moreover it would ensure that the work done would actually be fruitful or not. The testing was carried out to ensure the bugs to be found and then removed.

Various normal, extreme and abnormal inputs were used to check that the expected results were achieved or not.

Normal Data- Valid data is input to check whether it is accepted or not.

Extreme Data- Data out of range is input to see whether validations apply or not.

Abnormal Data- Invalid data are input to see if it's accepted or not.

Test Plan

;	1.	Login	Check if user can login with wrong password.	Enter wrong password and click	Password: Abcxyz	Error Message
	2.	Change password	Check if password can be changed by entering wrong old password	Enter wrong password but right password and right confirmation password	Old password: apple New password: hyolmo Confirmation password: hyolmo	Error Message
:	3.	Change password	Check if password can be changed by entering different words on new password and on confirmation but correct password in old password	Enter right old password but wrong new password and confirmation password	Old password: hyolmo New password: hyolmo Confirmation password: hyolmo	Error Message
•	4.	Change password	Check if password can be changed by leaving all fields empty	All fields are left empty		Error Message
	5.	Add member	Check if it accepts a blank field	One field is empty but others are filled		Error Message
	6.	Add	Check if user is	Enter all the data	Member Name:	Added in database

	member	already added in the database	in fields and click Create Member	Amis Sharma Member Class: A2 Member Stream: Science Contact: 9845786595 Address: Baluwatar	
7	'. Add event	Check if event can be created with empty fields	Enter nothing in the fields and click create event		Error Message
8	3. Add event	Check if event can be created with wrong data	Enter name as number and date as string	Event name: 7654435 Event Date: tommorw Event Hall: A Event time: 10000	Error Message
9). Search Member	Check if member can be searched with empty fields	No data is entered		Error Message
1	0. Search Member	Check if member can be searched with wrong entries	ID field has name entered	ID : Amis	Error Message
1	1. Join Member	Check if member can be joined in an event	Field has event and name selected	EventID:2 Member Amis	Successful
1	2. Remove	Check if member can be removed when selected	A data is selected	Finjo	Succesfull
1	3. Remove	Check if member are removed when none are selected	No data is selected		Error Message

Software Development

I used VB6 for the creation of the software as it is easy to use and known to me. Being user friendly, it also has good development environment. There has been used of references and controls in the development phase.

For the database I used Microsoft Access as it is used widely and best known database software. It has been used to show the relation of tables and create the tables.

The table below shows the forms and controls used in VB6 for designing the software

Login

Click	cmdOK	Command button	Validates the password and username and shows the main menu based on the validation
Click	cmdCancel	Command button	Cancels the validation of the username and password and stops the program

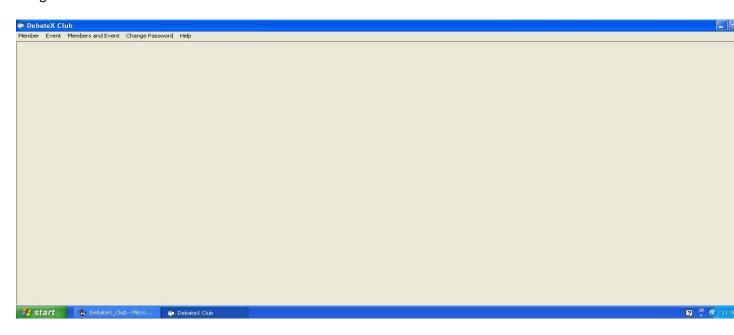
Design View



MDI Menu

Click	Member	MDI form	Loads Form related to member
Click	Event	MDI form	Loads form related to events
Click	Members and Event	MDI form	Loads form related to members joining events
Click	Change Password	MDI form	Loads form related to changing password
Click	Help	MDI form	Loads help file and about the software

Design View



Menu Design (Child of MDI form)

The major forms are child of the main form. Child forms of the parent form Menu are listed here:

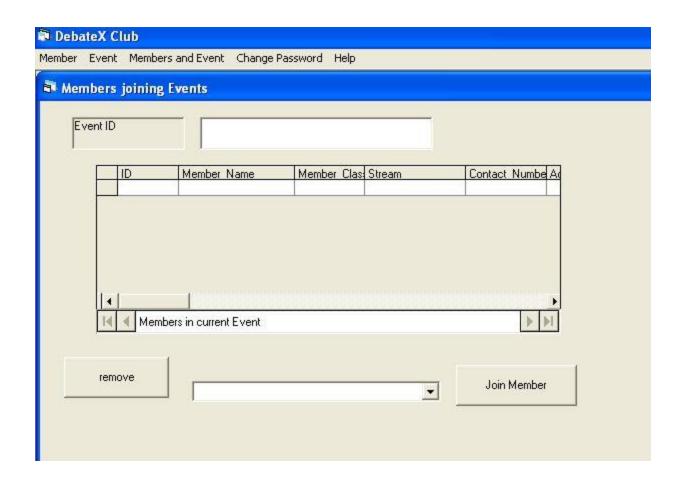
Member	Add member	Add	Add new member form is displayed(New_members.frm)
	Search Member	Search	Searches the member based on desire of the user(Form1.frm)
	View Member	View	Shows the list of all the members In the database and can be removed or edited from here(View_all_members.frm
Event	Add Event	Add	Add new event form is loaded(Event_Create.frm)
	View Event	View	Events can be edited or deleted(Remove_Events.frm)
Members and Event		View	Shows members involved in events and can be added in events or removed(Member_Events.frm)
Change Password		Help	Opens form where user can change the password(CHANGE~1.frm)
Help	About	Help	Shows the user manual(Help_About.frm)
	Contact Developer	Help	Shows user the developer's contact (Contact_Developer)

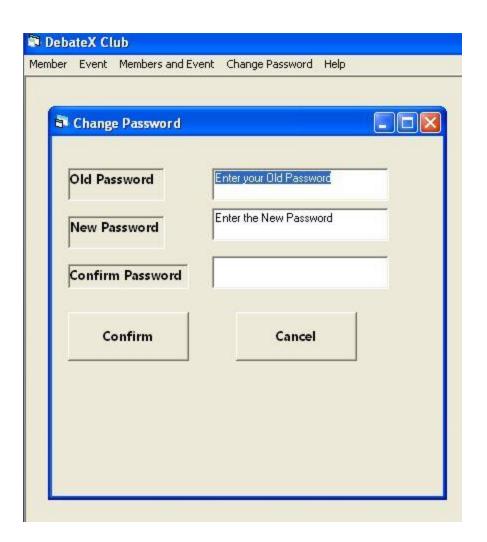
Menu Design View



Menu during Runtime









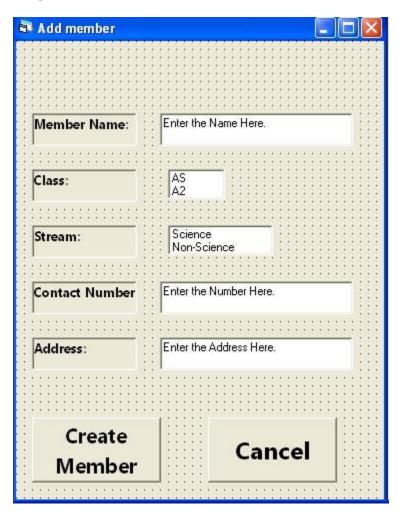
New_Member (New_members.frm)

Load	New_Member	Form	Creates a database connection and updates the list of members
Click	New_members_confirm_click	Command button	Adds new member to the database that was entered previously

Other functions in this Form

result1	Validates the name entered in the form
result4	Validates the contact number entered in the form
result5	Validates the address entered in the form

DesignView



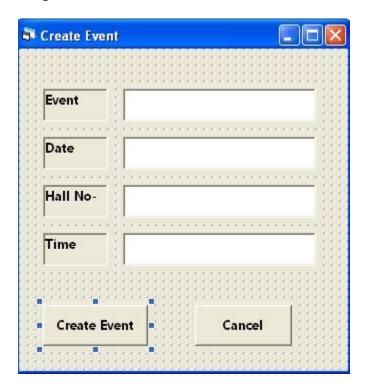
Event_ Create (Event_Create.frm)

Load	Event_Create	Form	Creates a database connection and updates the list of events
Click	Event_create_ok	Command button	Stores data to the database that was entered

Other functions used in this form

eventresult1	Validates the string entered in the field
eventresult2	Validates the date entered in the field
eventresult3	Validates the number entered in the field
eventresult4	Validates the time entered in the field

Design view



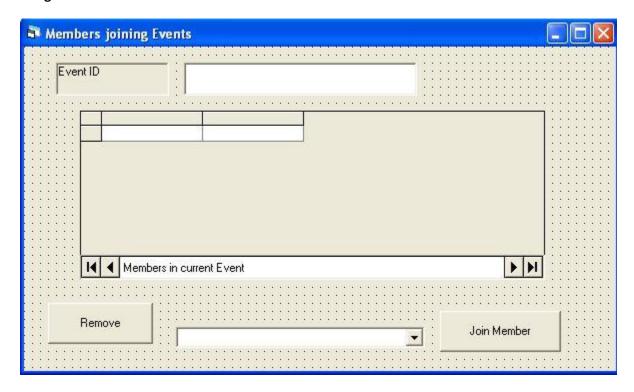
Member_Events(Member_Events.frm)

Load	Member_Events	Form	Connects to database connection to show the data
DataGrid	ME_grid	Datagrid	Shows the details of the member that are in event
TextField	EventID	Field	Field to enter the desired number of event id so it can show the member involved
Adodc	Ado_join	Ado type	Select data in the datagrid and shows message
Click	Opt_add_remove	Combo box	Shows the member that are complement in an event i.e. not involved in the selected event
Click	Join_member	Command Button	Adds member to the event who were not involved initially
Click	remove_member	Command Button	Removes member who are involved in the event

Other functions or modules used:

Event_ID_Change	Shows the member that are in event
remove_all_members_from_combo	Removes all the data that are in the combo to
	clear the box
Join_member_Click	Adds a member to an event by validating it
remove_member_Click	Removes the member from the event by
	validating it

Design view



Change Password

As the title suggests, it is for the user to change the password to login to the system. The username is however unchangeable as discussed with the client.

Click	Change_password_button	Command Button	Changes the password by validation and looking the old password to the flat file
Click	Change_passwrod_cancel	Command Button	Cancels the password change

Other sub-procedures and functions used:

<u> </u>	Contains validation rule of the changing password and reading the password from flat file

Data Structure Design

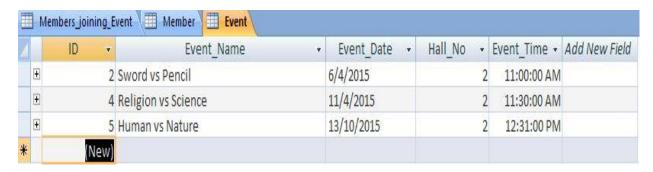
Table Design

Event

Design View

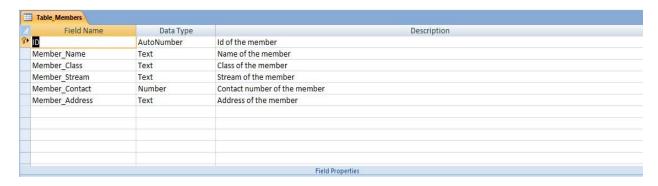


Datasheet view

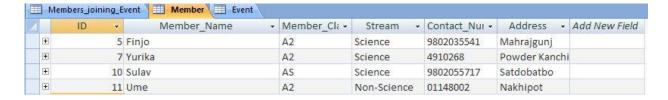


Member

Design view



Datasheet view



Members_joining_Event

Design View



Datasheet View



Testing of the System

Test 1: Login

I entered wrong password "abcxyz"

Expected result: error message



Result



Test Successful

Test2: Change password

I entered the old password "apple", new password "hyolmo" and confirmation new password "hyolmo"

Expectation: Error message



Test3: Change Password

I entered the wrong old password "apple" and then entered new passwords "hyolmo" and "hyolmo"

Expectation: Error Message



Test4: Change password

I left all the fields empty

Expectation: Error Message



Test5: Add Member

I left Name Empty and filled the other fields with correct data.

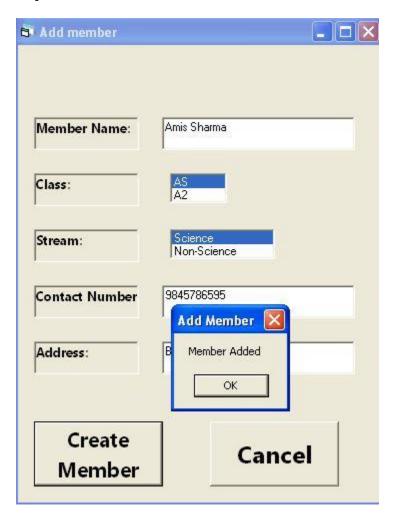
Expectation: Error Message



Test6: Entering same data twice

I entered "Amis Sharma", "A2", "Science", "9845786595", "Baluwatar" twice.

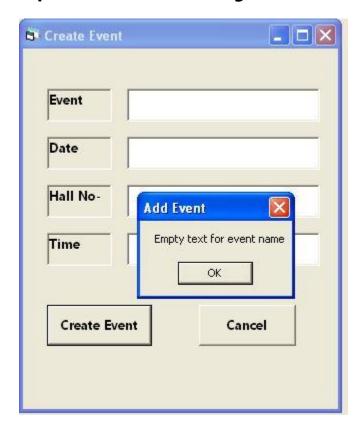
Expectation: Add in database twice



Test 7: No data entered

I entered no data in the fields

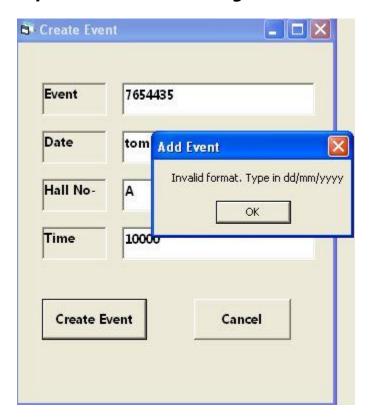
Expectation: Error Message



Test 8: Wrong data entered

I entered all the wrong data.

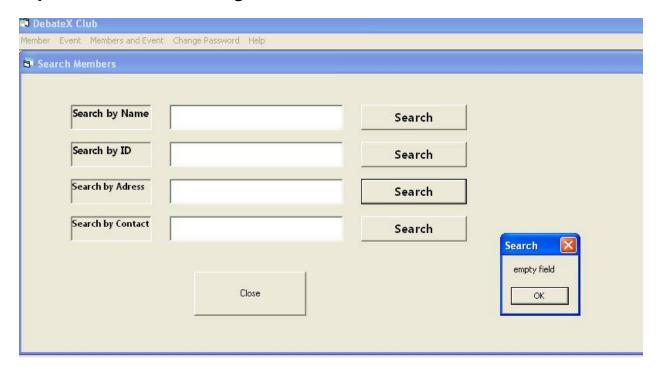
Expectation: Error Message



Test 9: No data Entered

I entered no data in the fields, however the search by name shows the result as it was planned this way with consent of the client.

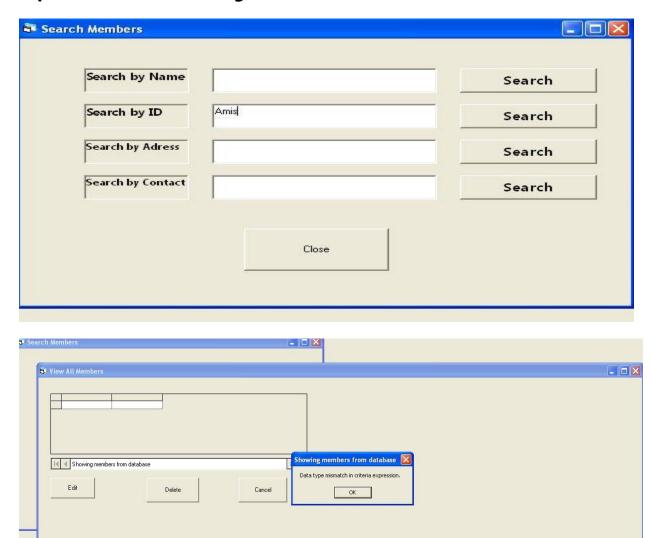
Expectation: Error Message



Test 10: Wrong data in search field

I entered Name in ID field.

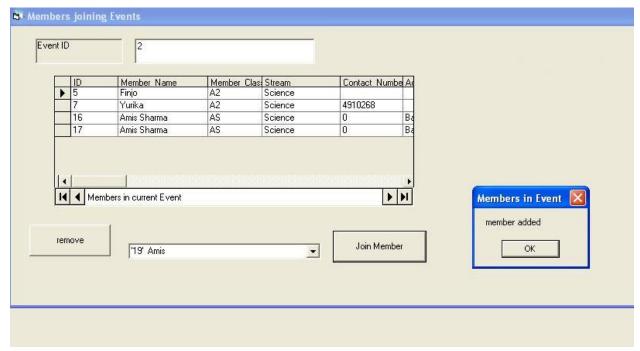
Expectation: Error Message



Test 11: Join Member

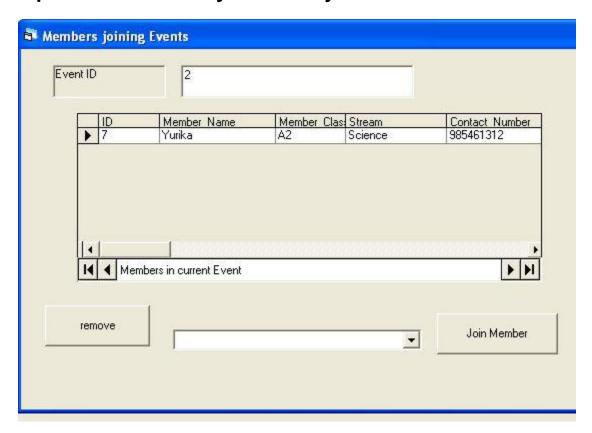
I enter "Amis" in Event ID 2.

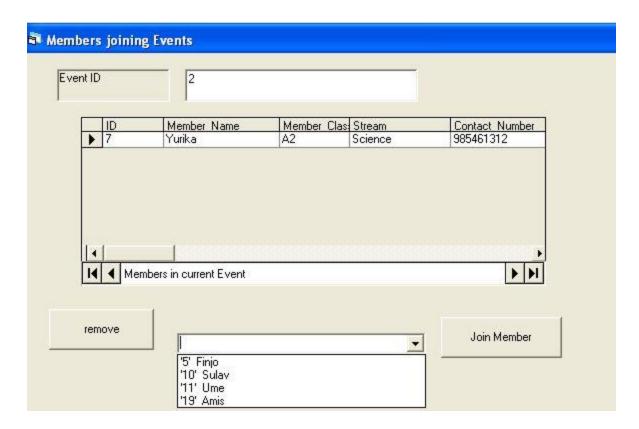
Expectation: Success



Test 12: Removing a member from an event

I remove "Finjo" from the event ID 2. Expectation: Successfully remove finjo





Result: Successful, the combo box shows the complement of the members in the event

Evaluation of the system

The system is now implemented in the DebateX club. The software is developed as per as wish of the client.

Agreement done with the client has been considered and the software has been provided to him.

The system was told to be made manual so most of the part of the system is manual. The software is plain in view, no colors or extra images and logos are not added, however it is easy to use. (page 15)

The software can search all the data that are not easily remembered by the human brain. And can edit it through searching. (page 24)

There were no agreements that the user must be able to prepare reports from it, so this software cannot prepare and print reports. However, the system has reached the satisfaction limit for the user.

Requirements for the system is low so it should be running easily on most of the computers, however it won't work on Mac and Linux.

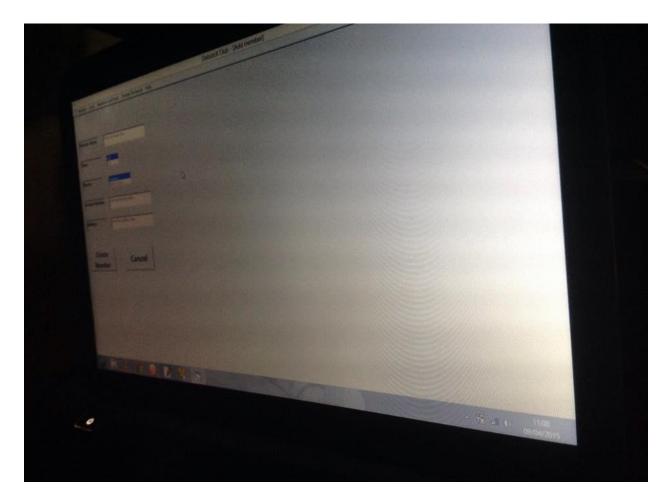
The Debate X Club management software has been fully implemented in keeping track of its members and events. There have been no major problems in operating the software. I have found it to be easy and straightforward and so have the members of the clob.

The log in system has proved to be quite effective as members can be up-to-date about forthcoming events or events/sessions that they have missed. Also, since one cannot post or after anything without being logged in, spreading of false information that could be spread due to misunderstandings or pranks has been prevented.

The software has proved to be a tremendous improvement to our club and in the process helped us make our student lives less hethic and more systematic. I fully appreciate the effort by our software designer Mr. Sherpa and am looking forward to further expanding our club to include Debate Chat Sessions and Debate Advice Corner where our members can interact through technology to further sharpen their skills.

Thank you.

Yours truly, Ashin Joshi (President) Sahringhamed Sahri



The system being run in the client's laptop