

Project Implementation Report

ARDOR

One-stop database for all activities of interest

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Project Summary:

An individual, especially someone who is new to Syracuse, needs to search extensively at various domains to gain information about places which host their favorite hobby or sport. There is no one-stop database providing such kind of information. Searching for these places using search engines like Google, various social media sites like Facebook, the university website or through friends/acquaintances, requires time and research as it involves multiple time taking tasks.

Ardor is designed to be a one-stop database system, which holds various types of data, pertaining to different hobbies/activities – both indoor (for example: badminton, taekwondo, chess, painting) and outdoor (for example: basketball, football, cricket).

This database will contain all the required information about an activity of interest. It will provide information such as - name of the organization providing access to the required activity, its location, timings at which the place is accessible, point of contact at the selected organization and the type of facility offered – free for public to access, requires fee, available on rent basis or training based facility. The working process of this system is as follows:

- Person creates a member account and searches for all the indoor and outdoor activities available. Each activity may be offered by multiple organizations.
- On selecting the activity of their interest, the member then chooses an organization based to the location and facilities offered.
- Every organization may have a separate point of contact for each activity or have one common point of contact for all the activities offered. The member can then contact the listed ‘Point of Contact’ at their chosen organization.
- The point of contact then provides all the required information to the member, about the facilities offered at the organization, timings etc.
- Based on the information gained from the point of contact, the member can then decide whether they would like to pursue their activity of interest, at a given organizational facility or not.
- Administrator is responsible for managing the member accounts as well as the POC (point of contact) accounts.

Entity and Attributes table:

Admin	Stores details of the users with administrative access.
Admin_ID (Primary Key)	The Admin ID is a unique user identification number. First Name Last Name Email ID Phone Number Login_Username Login_Password
Member	Stores all the details of the member. This user entity is the person who uses the database to search for activities.
Member ID (Primary Key)	Member ID is a unique user identification number. First Name Last Name Gender Email ID Phone Number Member_Category
	Whether the user is a student, citizen, tourist or others. This attribute will further aid in providing refined searches for the activities providing discount for students/tourists etc.

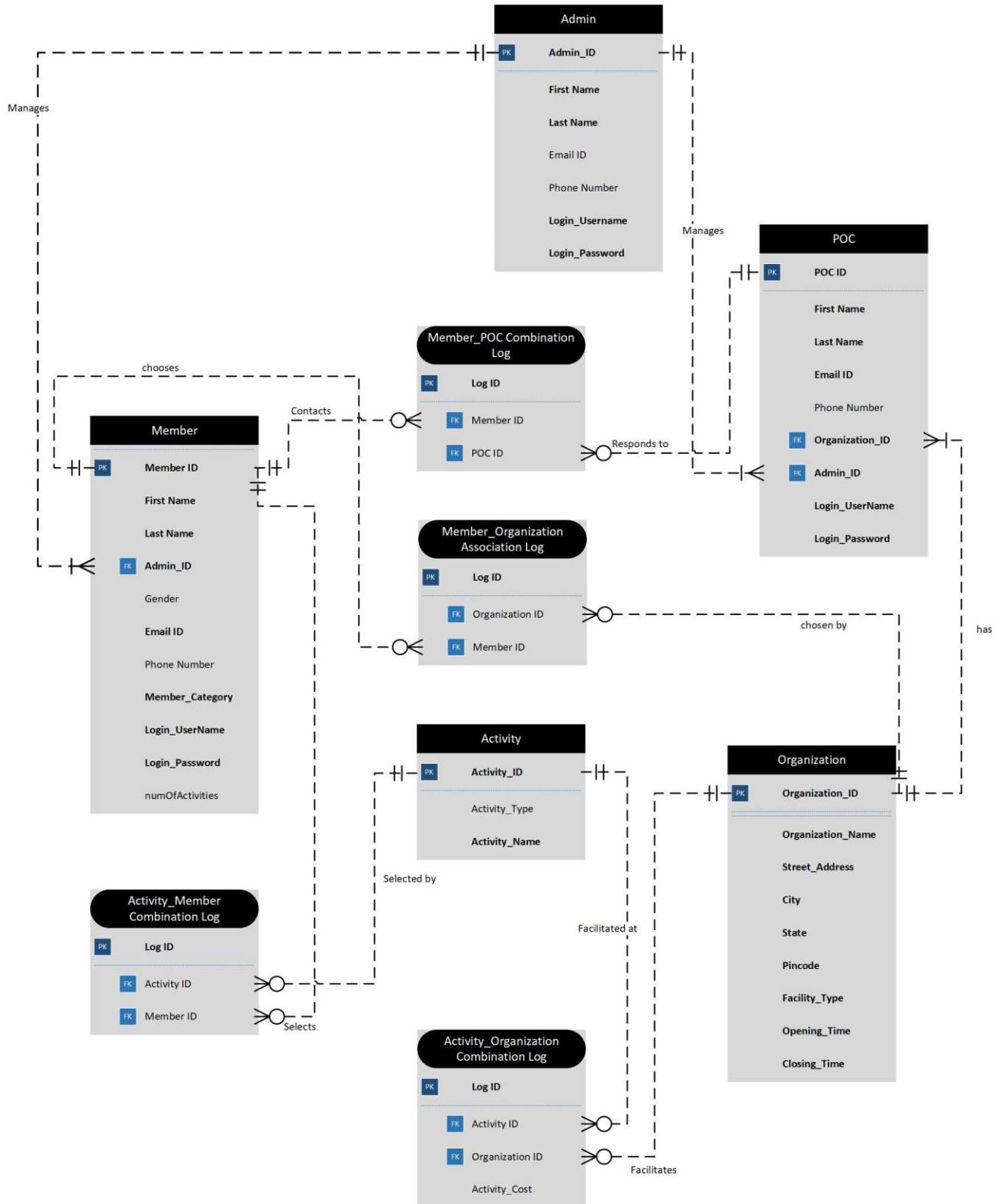
Login_Username	
Login_Password	
Admin_ID (Foreign Key)	This foreign key associated with the primary key of the Admin entity and contains the ID of the admin who manages this member account
numOfActivities	This attribute provides the count of activities taken up each of the member.
POC	Stores all the details of the point of contact pertaining to an organization.
POC ID (Primary Key)	POC ID is a unique user identification number.
First Name	
Last Name	
Email ID	
Phone Number	
Login_Username	
Login_Password	
Admin_ID (Foreign Key)	This foreign key associated with the primary key of the Admin entity and contains the ID of the admin who manages this POC account
Organization_ID (Foreign Key)	This foreign key associated with the primary key of the Organization entity.
Organization	Stores all the details of the organization facilitating activities of interest.

Organization ID (Primary Key)	Every organization has a unique identification number.
Organization_Name	
Street_Address	
City_Address	
State_Address	
Pincode	
Facility_Type	This attribute defines whether the facility provided is free for public, free for students, on a rent basis, on a membership fee basis or to be taken as a training.
Opening_Time	
Closing_Time	
Activity	Stores all the information pertaining to the activity
Activity_ID (Primary Key)	Every activity has a unique identification number.
Activity_Type	Activity type defines whether the activity is an indoor activity or an outdoor activity.
Activity_Name	Name of the activity. Example: Badminton, Chess etc.
Activity_Member Combination Log	Associative entity for activity and member entities. Stores combinations of members and the activities of their interest.
Log ID (Primary Key)	Every log identification number is unique in nature.
Activity ID (Foreign Key)	

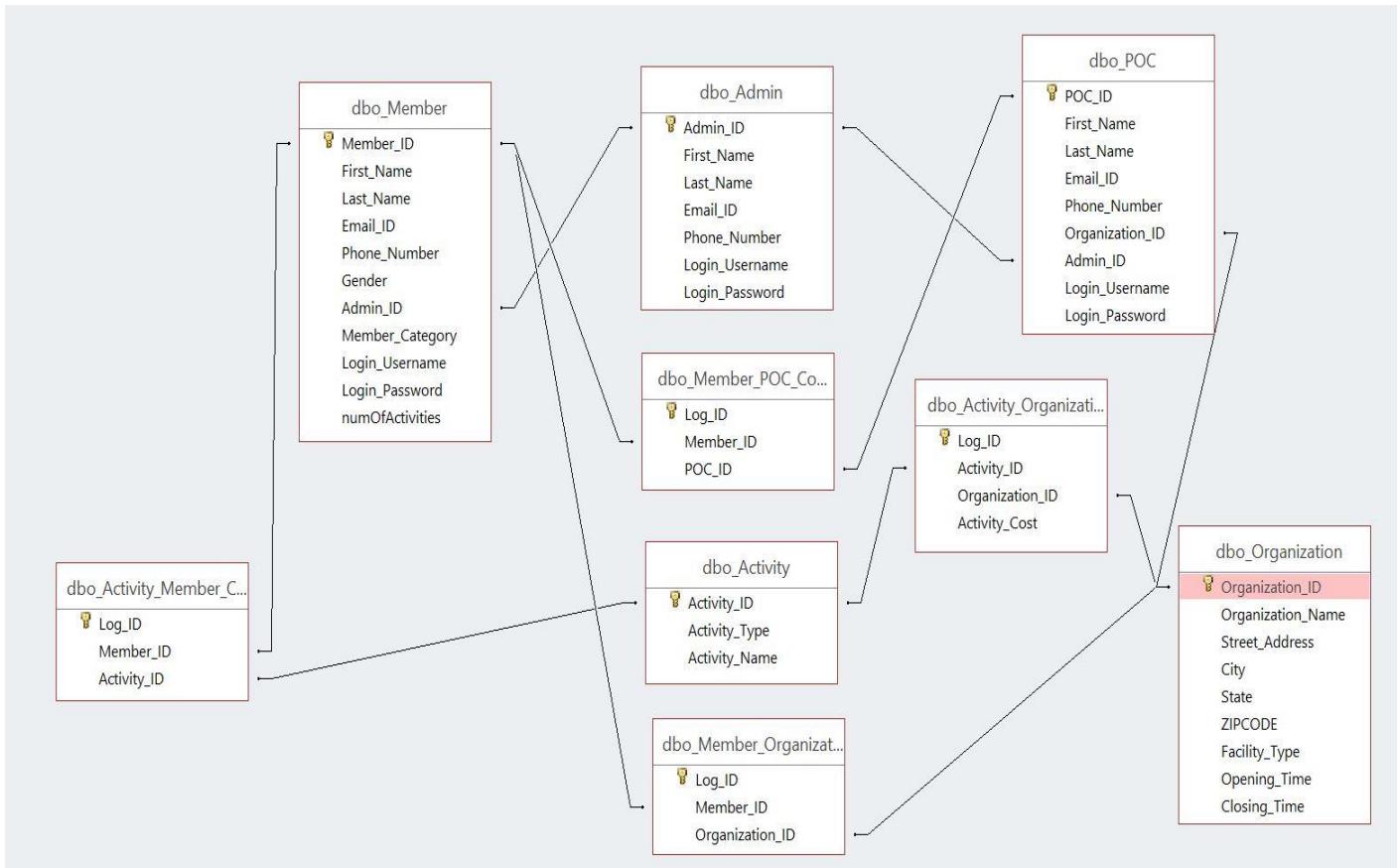
Member ID (Foreign Key)	This foreign key is associated with the primary key of the activity entity This foreign key is associated with the primary key of the member entity
Activity_Organization Combination Log	Associative entity for activity and organization entities. Stores combinations of organizations and the activities provided by the organizations.
Log ID (Primary Key) Activity ID (Foreign Key) Organization ID (Foreign Key)	Every log identification number is unique in nature. This foreign key is associated with the primary key of the activity entity This foreign key is associated with the primary key of the organization entity
Member_Organization Association Log	Associative entity for Organization and member entities. Stores combinations of members and the Organizations (organizations providing the activities the member is interested in)
Log ID (Primary Key) Organization ID (Foreign Key) Member ID (Foreign Key)	Every log identification number is unique in nature. This foreign key is associated with the primary key of the Organization entity This foreign key is associated with the primary key of the member entity
Member_POC Combination Log	Associative entity for POC and member entities. Stores combinations of members and the POCs (pertaining to the activities selected by the member in an organization).

Log ID (Primary Key)	Every log identification number is unique in nature.
POC ID (Foreign Key)	This foreign key is associated with the primary key of the POC entity
Member ID (Foreign Key)	This foreign key is associated with the primary key of the member entity

Entity Relationship Diagram in Visio:



Access – Relationship Diagram:



SQL Scripts for creating tables and inserting sample data:

Creating Tables:

Organization table:

```

CREATE TABLE Organization (
    Organization_ID INT PRIMARY KEY,
    Organization_Name VARCHAR(50) NOT NULL,
    Street_Address VARCHAR(50) NOT NULL ,
    City VARCHAR(20) NOT NULL,
    State VARCHAR(2) NOT NULL,
    ZIPCODE VARCHAR(10) NOT NULL,
    Facility_Type VARCHAR(50) NOT NULL,
    Opening_Time TIME NOT NULL,
    Closing_Time TIME NOT NULL,
    CHECK (Facility_Type IN ('Training Package', 'Hourly Rent', 'Membership/Monthly
charges', 'Free Public Access', 'Free Student Access'))
);
  
```

Activity table:

```
CREATE TABLE Activity (
    Activity_ID INT PRIMARY KEY,
    Activity_Type VARCHAR(20),
    Activity_Name VARCHAR(30),
    CHECK (Activity_Type IN ('Indoor', 'Outdoor'))
);
```

Admin table:

```
CREATE TABLE Admin (
    Admin_ID INT PRIMARY KEY,
    First_Name VARCHAR(30) NOT NULL,
    Last_Name VARCHAR(30) NOT NULL ,
    Email_ID VARCHAR(20),
    Phone_Number VARCHAR(20),
    Login_Username VARCHAR(20) NOT NULL,
    Login_Password VARCHAR(64) NOT NULL,
);
```

POC table:

```
CREATE TABLE POC (
    POC_ID INT PRIMARY KEY,
    First_Name VARCHAR(30) NOT NULL,
    Last_Name VARCHAR(30) NOT NULL ,
    Email_ID VARCHAR(20) NOT NULL,
    Phone_Number VARCHAR(20),
    Organization_ID INT NOT NULL,
    Admin_ID INT NOT NULL,
    Login_Username VARCHAR(20) NOT NULL,
    Login_Password VARCHAR(20) NOT NULL,
    CONSTRAINT POC_FK1 FOREIGN KEY (Organization_ID) REFERENCES
Organization(Organization_ID),
    CONSTRAINT POC_FK2 FOREIGN KEY (Admin_ID) REFERENCES Admin/Admin_ID)
);
```

Member table:

```
CREATE TABLE Member (
    Member_ID INT PRIMARY KEY,
    First_Name VARCHAR(30) NOT NULL,
    Last_Name VARCHAR(30) NOT NULL ,
    Email_ID VARCHAR(20) NOT NULL,
    Phone_Number VARCHAR(20),
    Gender VARCHAR(1),
    Admin_ID INT NOT NULL,
    Member_Category VARCHAR(30) NOT NULL,
    Login_Username VARCHAR(20) NOT NULL,
    Login_Password VARCHAR(20) NOT NULL,
    numOfActivities INT,
    CHECK (Member_Category IN ('Student', 'Tourist', 'Citizen/PR', 'Others')),
    CONSTRAINT Member_FK FOREIGN KEY (Admin_ID) REFERENCES Admin/Admin_ID)
```

)

Member POC Combination Log table:

```
CREATE TABLE Member_POC_Combination_Log (
    Log_ID INT PRIMARY KEY,
    Member_ID INT,
    POC_ID INT,
    CONSTRAINT Member_POC_Combination_FK1 FOREIGN KEY (Member_ID) REFERENCES
    Member(Member_ID),
    CONSTRAINT Member_POC_Combination_FK2 FOREIGN KEY (POC_ID) REFERENCES POC(POC_ID)
);
```

Member Organization Association Log table:

```
CREATE TABLE Member_Organization_Association_Log (
    Log_ID INT PRIMARY KEY,
    Member_ID INT,
    Organization_ID INT,
    CONSTRAINT Member_Organization_Association_FK1 FOREIGN KEY (Member_ID) REFERENCES
    Member(Member_ID),
    CONSTRAINT Member_Organization_Association_FK2 FOREIGN KEY (Organization_ID) REFERENCES
    Organization(Organization_ID)
);
```

Activity Member Combination Log table:

```
CREATE TABLE Activity_Member_Combination_Log (
    Log_ID INT PRIMARY KEY,
    Member_ID INT,
    Activity_ID INT,
    CONSTRAINT Activity_Member_Combination_FK1 FOREIGN KEY (Member_ID) REFERENCES
    Member(Member_ID),
    CONSTRAINT Activity_Member_Combination_FK2 FOREIGN KEY (Activity_ID) REFERENCES
    Activity(Activity_ID)
);
```

Activity Organization Combination Log table:

```
CREATE TABLE Activity_Organization_Combination_Log (
    Log_ID INT PRIMARY KEY,
    Activity_ID INT,
    Organization_ID INT,
    Activity_Cost DECIMAL(10,3),
    CONSTRAINT Activity_Organization_Combination_FK1 FOREIGN KEY (Activity_ID) REFERENCES
    Activity(Activity_ID),
    CONSTRAINT Activity_Organization_Combination_FK2 FOREIGN KEY (Organization_ID) REFERENCES
    Organization(Organization_ID)
);
```

Inserting Values:

```
INSERT INTO Activity VALUES (1, 'Indoor', 'Badminton'), (2, 'Outdoor', 'Cricket'),
(3, 'Indoor', 'Swimming'),
(4, 'Indoor', 'Table Tennis'), (5, 'Outdoor', 'Basketball'), (6, 'Outdoor', 'Football'),
(7, 'Outdoor', 'Tennis'),
(8, 'Indoor', 'Kick-Boxing'), (9, 'Indoor', 'Painting'), (10, 'Indoor', 'Squash');
```

SELECT * FROM Activity;

	Activity_ID	Activity_Type	Activity_Name
1	1	Indoor	Badminton
2	2	Outdoor	Cricket
3	3	Indoor	Swimming
4	4	Indoor	Table Tennis
5	5	Outdoor	Basketball
6	6	Outdoor	Football
7	7	Outdoor	Tennis
8	8	Indoor	Kick-Boxing
9	9	Indoor	Painting
10	10	Indoor	Squash

```
INSERT INTO Organization VALUES (1, 'Syracuse University', 'Flanagan
Gymnasium', 'Syracuse', 'NY', '13210', 'Free Student Access', '06:00', '22:00'),
(2, 'Thorden Park', 'Thorden Park Dr', 'Syracuse', 'NY', '13210', 'Free Public
Access', '00:00', '23:59'),
(3, 'Impact Martial Arts and Fitness - Team Dewitt', '3649 Erie Blvd E
#36', 'Syracuse', 'NY', '13214', 'Training Package', '09:00', '21:00'),
(4, 'Cyber Sports Center', 'Glenwood Avenue', 'Syracuse', 'NY', '13207', 'Membership/Monthly
charges', '10:00', '21:00'),
(5, 'Cuse Complex', '1301 East colvin Street, Manley Field
House', 'Syracuse', 'NY', '13244', 'Membership/Monthly charges', '09:00', '20:00'),
(6, 'Melo', 'Carmelo K. Anthony Center', 'Syracuse', 'NY', '13244', 'Hourly
Rent', '10:00', '21:00'),
(7, 'TJK Training Center', 'Fayetteville', 'Syracuse', 'NY', '13066', 'Training
Package', '07:00', '19:00');
```

SELECT * FROM Organization;

	Organization_ID	Organization_Name	Street_Address	City	State	ZIPCODE	Facility_Type	Opening_Time	Closing_Time
1	1	Syracuse University	Flanagan Gymnasium	Syracuse	NY	13210	Free Student Access	06:00:00.00...	22:00:00.00...
2	2	Thorden Park	Thorden Park Dr	Syracuse	NY	13210	Free Public Access	00:00:00.00...	23:59:00.00...
3	3	Impact Martial Arts and Fitness - Team D...	3649 Erie Blvd E #36	Syracuse	NY	13214	Training Package	09:00:00.00...	21:00:00.00...
4	4	Cyber Sports Center	Glenwood Avenue	Syracuse	NY	13207	Membership/Monthly charges	10:00:00.00...	21:00:00.00...
5	5	Cuse Complex	1301 East colvin Street, Manley Field House	Syracuse	NY	13244	Membership/Monthly charges	09:00:00.00...	20:00:00.00...
6	6	Melo	Carmelo K. Anthony Center	Syracuse	NY	13244	Hourly Rent	10:00:00.00...	21:00:00.00...
7	7	TJK Training Center	Fayetteville	Syracuse	NY	13066	Training Package	07:00:00.00...	19:00:00.00...

```
INSERT INTO Admin VALUES
(1, 'Ananya', 'Bhupathipalli', 'abhupath@syr.edu', '3152785345', 'abhupath', 'Syracuse@123');
```

SELECT * FROM Admin;

Results							
	Admin_ID	First_Name	Last_Name	Email_ID	Phone_Number	Login_Username	Login_Password
1	1	Ananya	Bhupathipalli	abhupath@syr.edu	3152785345	abhupath	Syracuse@123

The password field is masked in the Access as below:

Admin_ID	First_Name	Last_Name	Email_ID	Phone_Number	Login_Username	Login_Password
1	Ananya	Bhupathipalli	abhupath@syr.edu	3152785345	abhupath	*****
*						

```
INSERT INTO POC VALUES (1,'Benjamin','Spark','bs@gmail.com','','3,1','bespark','Temp1'),
(2,'Ronit','Roy','rr@syr.edu','','1,1','rr','Temp2'),
(3,'Lara','John','lj@gmail.com','','4,1','lj','Temp3'),
(4,'Caroline','Rose','crose@gmail.com','','5,1','crose','Temp4'),
(5,'James','Miller','jam@gamil.com','','6,1','jam','Temp5'),
(6,'Sam','Taylor','staylor@gmail.com','','7,1','staylor','Temp6');
```

SELECT * FROM POC;

Results							
	POC_ID	First_Name	Last_Name	Email_ID	Phone_Number	Organization_ID	Admin_ID
1	1	Benjamin	Spark	bs@gmail.com		3	1
2	2	Ronit	Roy	rr@syr.edu		1	1
3	3	Lara	John	lj@gmail.com		4	1
4	4	Caroline	Rose	crose@gmail.com		5	1
5	5	James	Miller	jam@gamil.com		6	1
6	6	Sam	Taylor	staylor@gmail.com		7	1

The password field is masked in the Access as below:

	POC_ID	First_Name	Last_Name	Email_ID	Phone_Number	Organization	Admin_ID	Login_Username	Login_Password
1	1	Benjamin	Spark	bs@gmail.com		3	1	bespark	*****
2	2	Ronit	Roy	rr@syr.edu		1	1	rr	*****
3	3	Lara	John	lj@gmail.com		4	1	lj	*****
4	4	Caroline	Rose	crose@gmail.com		5	1	crose	*****
5	5	James	Miller	jam@gamil.com		6	1	jam	*****
6	6	Sam	Taylor	staylor@gmail.com		7	1	staylor	*****

```
INSERT INTO Member VALUES
(1,'Maria','Frank','mafrank@gmail.com','3152757869','F',1,'Student','mafrank','Password1',''),
(2,'Min ho','Lee','ml@gmail.com','3158135432','M',1,'Student','mlee','Password2',''),
(3,'Pranitha','Sabarwal','psa@gmail.com','','F',1,'Student','psa','Password3',''),
(4,'John','Carter','jcar@gmail.com','','M',1,'Tourist','jcar','Password4',''),
(5,'Susan','Garner','sgar@yahoo.com','','F',1,'Student','sgar','Password5',''),
(6,'Ronald','Jones','nj@yahoo.com','3152750869','M',1,'Citizen/PR','rj','Password6',''),
(7,'Nisha','Kapoor','nk_93@yahoo.com','3158012432','F',1,'Student','nk1','Password7',''),
(8,'Rachael','Ray','rray@gmail.com','','F',1,'Others','rray','Password8',''),
(9,'Steve','Harvey','sharv@gmail.com','','M',1,'Tourist','sharv','Password9',''),
(10,'Sandra','Smith','ss90@gmail.com','','F',1,'Others','ss','Password10',''),
```

```
(11, 'Krishna', 'Joshi', 'kcj@gmail.com', '3158907869', 'M', 1, 'Citizen/PR', 'kcj', 'Password11', ''),
(12, 'Shagun', 'Hegde', 'sh@gmail.com', '3158112342', 'F', 1, 'Student', 'sh', 'Password12', ''),
(13, 'Neha', 'Singu', 'nehas@yahoo.com', '', 'F', 1, 'Student', 'nehas', 'Password13', ''),
(14, 'Amulya', 'Keeli', 'ak@gmail.com', '', 'F', 1, 'Tourist', 'ak', 'Password14', ''),
(15, 'Akash', 'Rao', 'arao@yahoo.com', '', 'M', 1, 'Others', 'arao', 'Password15', ''),
(16, 'Harry', 'Wright', 'hwr@gmail.com', '3152759969', 'M', 1, 'Others', 'hwr', 'Password16', ''),
(17, 'Katy', 'Green', 'kgreen@gmail.com', '3151234432', 'F', 1, 'Student', 'kgreen', 'Password17', ''),
(18, 'James', 'Clarke', 'jcl@yahoo.com', '', 'M', 1, 'Others', 'jcl', 'Password18', ''),
(19, 'George', 'Wood', 'gwood@gmail.com', '', 'M', 1, 'Tourist', 'gwood', 'Password19', ''),
(20, 'Clara', 'Robinson', 'clro@yahoo.com', '', 'F', 1, 'Others', 'clrob', 'Password20', );
```

SELECT * FROM Member;

	Member_ID	First_Name	Last_Name	Email_ID	Phone_Number	Gender	Admin_ID	Member_Category	Login_Username	Login_Password	numOfActivities
1	1	Maria	Frank	mafrank@gmail.com	3152757869	F	1	Student	mafrank	Password1	0
2	2	Min ho	Lee	ml@gmail.com	3158135432	M	1	Student	mlee	Password2	0
3	3	Pranitha	Sabarwal	psa@gmail.com		F	1	Student	psa	Password3	0
4	4	John	Carter	jcar@gmail.com		M	1	Tourist	jcar	Password4	0
5	5	Susan	Garner	sgar@yahoo.com		F	1	Student	sgar	Password5	0
6	6	Ronald	Jones	rj@yahoo.com	3152750869	M	1	Citizen/PR	rj	Password6	0
7	7	Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	1	Student	nk1	Password7	0
8	8	Rachael	Ray	rray@gmail.com		F	1	Others	rray	Password8	0
9	9	Steve	Harvey	sharv@gmail.com		M	1	Tourist	sharv	Password9	0
10	10	Sandra	Smith	ss90@gmail.com		F	1	Others	ss	Password10	0
11	11	Krishna	Joshi	kcj@gmail.com	3158907869	M	1	Citizen/PR	kcj	Password11	0
12	12	Shagun	Hegde	sh@gmail.com	3158112342	F	1	Student	sh	Password12	0
13	13	Neha	Singu	nehas@yahoo.com		F	1	Student	nehas	Password13	0
14	14	Amulya	Keeli	ak@gmail.com		F	1	Tourist	ak	Password14	0
15	15	Akash	Rao	arao@yahoo.com		M	1	Others	arao	Password15	0
16	16	Harry	Wright	hwr@gmail.com	3152759969	M	1	Others	hwr	Password16	0
17	17	Katy	Green	kgreen@gmail.com	3151234432	F	1	Student	kgreen	Password17	0
18	18	James	Clarke	jcl@yahoo.com		M	1	Others	jcl	Password18	0
19	19	George	Wood	gwood@gmail.com		M	1	Tourist	gwood	Password19	0
20	20	Clara	Robinson	clro@yahoo.com		F	1	Others	clrob	Password20	0

The password field is masked in the Access as below:

Member_ID	First_Name	Last_Name	Email_ID	Phone_Num	Gender	Admin_ID	Member_Ca	Login_Userrn	Login_Passwor	numOfActiviti
1 Maria	Frank	mafrank@gmail.com	3152757869	F		1	Student	mafrank	*****	0
2 Min ho	Lee	ml@gmail.com	3158135432	M		1	Student	mlee	*****	0
3 Pranitha	Sabarwal	psa@gmail.com		F		1	Student	psa	*****	0
4 John	Carter	jcar@gmail.com		M		1	Tourist	jcar	*****	0
5 Susan	Garner	sgar@yahoo.co		F		1	Student	sgar	*****	0
6 Ronald	Jones	rj@yahoo.com	3152750869	M		1	Citizen/PR	rj	*****	0
7 Nisha	Kapoor	nk_93@yahoo.com	3158012432	F		1	Student	nk1	*****	0
8 Rachael	Ray	rray@gmail.co		F		1	Others	rray	*****	0
9 Steve	Harvey	sharv@gmail.co		M		1	Tourist	sharv	*****	0
10 Sandra	Smith	ss90@gmail.co		F		1	Others	ss	*****	0
11 Krishna	Joshi	kcj@gmail.com	3158907869	M		1	Citizen/PR	kcj	*****	0
12 Shagun	Hegde	sh@gmail.com	3158112342	F		1	Student	sh	*****	0
13 Neha	Singu	nehas@yahoo.		F		1	Student	nehas	*****	0
14 Amulya	Keeli	ak@gmail.com		F		1	Tourist	ak	*****	0
15 Akash	Rao	arao@yahoo.co		M		1	Others	arao	*****	0
16 Harry	Wright	hwr@gmail.co	3152759969	M		1	Others	hwr	*****	0
17 Katy	Green	kgreen@gmail..	3151234432	F		1	Student	kgreen	*****	0
18 James	Clarke	jcl@yahoo.com		M		1	Others	jcl	*****	0
19 George	Wood	gwood@gmail..		M		1	Tourist	gwood	*****	0
20 Clara	Robinson	clro@yahoo.co		F		1	Others	clrob	*****	0

```
INSERT INTO Activity_Organization_Combination_Log VALUES
(1,1,1,NULL),(2,2,1,NULL),(3,3,1,NULL),(4,4,1,NULL),(5,5,1,NULL),
(6,6,1,NULL),(7,7,1,NULL),(8,5,2,NULL),(9,6,2,NULL),(10,8,3,200),
(11,1,4,25),(12,2,4,20),(13,3,4,30),(14,4,4,25),(15,5,4,25),
(16,7,4,25),(17,10,1,NULL),(18,3,5,20),(19,6,5,30),(20,5,5,30),
(21,1,6,5),(22,2,6,7),(23,7,6,5),(24,4,6,5),(25,5,6,5),
(26,6,6,10),(27,10,6,5),(28,3,7,100),(29,5,7,125),(30,7,7,100),
(31,8,7,170),(32,9,7,70);
```

```
SELECT * FROM Activity_Organization_Combination_Log;
```

	Log_ID	Activity_ID	Organization_ID	Activity_Cost
1	1	1	1	NULL
2	2	2	1	NULL
3	3	3	1	NULL
4	4	4	1	NULL
5	5	5	1	NULL
6	6	6	1	NULL
7	7	7	1	NULL
8	8	5	2	NULL
9	9	6	2	NULL
10	10	8	3	200.000
11	11	1	4	25.000
12	12	2	4	20.000
13	13	3	4	30.000
14	14	4	4	25.000
15	15	5	4	25.000
16	16	7	4	25.000
17	17	10	1	NULL
18	18	3	5	20.000
19	19	6	5	30.000
20	20	5	5	30.000
21	21	1	6	5.000
22	22	2	6	7.000
23	23	7	6	5.000
24	24	4	6	5.000
25	25	5	6	5.000
26	26	6	6	10.000
27	27	10	6	5.000
28	28	3	7	100.000
29	29	5	7	125.000
30	30	7	7	100.000
31	31	8	7	170.000
32	32	9	7	70.000

```
INSERT INTO Activity_Member_Combination_Log VALUES
(1,1,1),(2,2,5),(3,3,8),(4,4,6),(5,5,4),
(6,6,5),(7,7,6),(8,8,10),(9,9,2),(10,10,3),
(11,11,7),(12,12,9),(13,13,8),(14,14,5),(15,15,3),
(16,16,1),(17,17,5),(18,18,10),(19,19,6),(20,20,7);
```

```
SELECT * FROM Activity_Member_Combination_Log;
```

	Log_ID	Member_ID	Activity_ID
1	1	1	1
2	2	2	5
3	3	3	8
4	4	4	6
5	5	5	4
6	6	6	5
7	7	7	6
8	8	8	10
9	9	9	2
10	10	10	3
11	11	11	7
12	12	12	9
13	13	13	8
14	14	14	5
15	15	15	3
16	16	16	1
17	17	17	5
18	18	18	10
19	19	19	6
20	20	20	7

```
INSERT INTO Member_Organization_Association_Log VALUES
(1,1,1),(2,2,1),(3,3,3),(4,4,2),(5,5,1),
(6,6,4),(7,7,5),(8,8,6),(9,9,6),(10,10,5),
(11,11,7),(12,12,7),(13,13,7),(14,14,7),(15,15,4),
(16,16,6),(17,17,6),(18,18,6),(19,19,6),(20,20,4);
```

```
SELECT * FROM Member_Organization_Association_Log;
```

	Log_ID	Member_ID	Organization_ID
1	1	1	1
2	2	2	1
3	3	3	3
4	4	4	2
5	5	5	1
6	6	6	4
7	7	7	5
8	8	8	6
9	9	9	6
10	10	10	5
11	11	11	7
12	12	12	7
13	13	13	7
14	14	14	7
15	15	15	4
16	16	16	6
17	17	17	6
18	18	18	6
19	19	19	6
20	20	20	4

```
INSERT INTO Member_POC_Combination_Log VALUES (1,1,2),(2,2,2),(3,3,2),(4,5,2),
(5,6,3),(6,7,4),(7,8,5),(8,9,5),(9,10,4),
(10,11,6),(11,12,6),(12,13,6),(13,14,6),(14,15,3),
(15,16,5),(16,17,5),(17,18,5),(18,19,5),(19,20,3);
```

```
SELECT * FROM Member_POC_Combination_Log;
```

	Log_ID	Member_ID	POC_ID
1	1	1	2
2	2	2	2
3	3	3	2
4	4	5	2
5	5	6	3
6	6	7	4
7	7	8	5
8	8	9	5
9	9	10	4
10	10	11	6
11	11	12	6
12	12	13	6
13	13	14	6
14	14	15	3
15	15	16	5
16	16	17	5
17	17	18	5
18	18	19	5
19	19	20	3

Major Data Questions:

The users of this database system are:

Admin

Member

POC

Below are the major data questions that the users would like to answer/query using this database and how the design satisfies these queries:

Queries by the Member:

1. For an activity selected by a member, display the list of organizations offering this activity.

```

--- For a Member:
---Displaying all the activities with the list of organizations offering these activities:
CREATE FUNCTION org_list(@act VARCHAR(20))
RETURNS TABLE
AS
RETURN

(SELECT a.Activity_Name, o.Organization_Name, o.Facility_Type,
aoc.Activity_Cost, o.Opening_Time,
o.Closing_Time, o.Street_Address, o.City,
o.State, o.ZIPCODE,
p.First_Name AS POC_First_Name, p.Last_Name AS POC_Last_Name,
p.Email_ID AS POC_Email_ID
FROM (Organization o
INNER JOIN (Activity a
INNER JOIN Activity_Organization_Combination_Log aoc
ON a.Activity_ID = aoc.Activity_ID)
ON o.Organization_ID = aoc.Organization_ID)
INNER JOIN POC p
ON o.Organization_ID = p.Organization_ID
WHERE a.Activity Name = @act)

```

SELECT * FROM org_list('Swimming')

	Activity_Name	Organization_Name	Facility_Type	Activity_Cost	Opening_Time	Closing_Time	Street_Address	City	State	ZIPC...	POC_First...	POC_Last...	POC_Ema...
1	Swimming	Syracuse University	Free Student Access	NULL	06:00:00.00...	22:00:00.00...	Flanagan Gymn...	Syracu...	NY	13210	Ronit	Roy	rr@syr.edu
2	Swimming	Cyber Sports Center	Membership/Monthly c...	30.000	10:00:00.00...	21:00:00.00...	Glenwood Aven...	Syracu...	NY	13207	Lara	John	lj@gmail.c
3	Swimming	Cuse Complex	Membership/Monthly c...	20.000	09:00:00.00...	20:00:00.00...	1301 East colvin...	Syracu...	NY	13244	Caroline	Rose	crose@gr...
4	Swimming	TJK Training Center	Training Package	100.000	07:00:00.00...	19:00:00.00...	Fayetteville	Syracu...	NY	13066	Sam	Taylor	staylor@g...

2. Displaying all the activities with the list of organizations offering these activities.

The member will be able to view the activity fee for all the activities that he/she is pursuing at different organizations.

```
CREATE FUNCTION Member_pay (@muser VARCHAR(20))
RETURNS TABLE
AS
RETURN

(SELECT m.First_Name, m.Last_Name, m.Member_Category,
o.Organization_Name, o.Facility_Type,
a.Activity_Name, aoc.Activity_Cost, |
p.First_Name AS POC_First_Name, p.Last_Name AS POC_Last_Name, p.Email_ID AS POC_Email_ID
FROM (((Organization o
INNER JOIN (Member m
INNER JOIN Member_Organization_Association_Log moa
ON m.Member_ID = moa.Member_ID)
ON o.Organization_ID = moa.Organization_ID)
INNER JOIN (Activity a
INNER JOIN Activity_Member_Combination_Log amc
ON a.Activity_ID = amc.Activity_ID)
ON m.Member_ID = amc.Member_ID)
INNER JOIN Member_POC_Combination_Log mpc
ON m.Member_ID = mpc.Member_ID)
INNER JOIN POC p
ON (p.POC_ID = mpc.POC_ID)
AND (o.Organization_ID = p.Organization_ID)
INNER JOIN Activity_Organization_Combination_Log aoc
ON (o.Organization_ID = aoc.Organization_ID)
AND (a.Activity_ID = aoc.Activity_ID)
WHERE m.Login_Username = @muser)
```

The screenshot shows a SQL query being run in a database environment. The query is:

```
SELECT * FROM Member_pay('mafrank');
```

The results are displayed in a table:

	First_Name	Last_Name	Member_Category	Organization_Name	Facility_Type	Activity_Name	Activity_Cost	POC_First_Name	POC_Last_Name	POC_Email_ID
1	Maria	Frank	Student	Syracuse University	Free Student Access	Badminton	NULL	Ronit	Roy	rr@syr.edu
2	Maria	Frank	Student	Syracuse University	Free Student Access	Football	NULL	Ronit	Roy	rr@syr.edu
3	Maria	Frank	Student	Cyber Sports Center	Membership/Monthly charges	Badminton	25.000	Lara	John	lj@gmail.com

3. Displaying all the activities with the list of organizations offering these activities.

```

CREATE FUNCTION org_location_search (@loc VARCHAR(20))
RETURNS TABLE
AS
RETURN

(SELECT o.Organization_Name, o.Street_Address, o.Facility_Type,
o.Opening_Time, o.Closing_Time,
a.Activity_Name, aoc.Activity_Cost,
p.First_Name AS POC_First_Name, p.Last_Name AS POC_Last_Name, p.Email_ID AS POC_Email_ID
FROM (Organization o
INNER JOIN (Activity a
INNER JOIN Activity_Organization_Combination_Log aoc
ON a.Activity_ID = aoc.Activity_ID)
ON o.Organization_ID = aoc.Organization_ID)
INNER JOIN POC p
ON o.Organization_ID = p.Organization_ID
WHERE o.Organization_Name = @loc);

Select * from org_location_search('Syracuse University');

```

The screenshot shows a SQL query being run in a database environment. The query is:

```
select * from org_location_search('Syracuse University');
```

The results table has the following data:

	Organization_Name	Street_Address	Facility_Type	Opening_Time	Closing_Time	Activity_Name	Activity_Cost	POC_First_Name	POC_Last_Name	POC_Email_ID
1	Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00.0000000	22:00:00.0000000	Badminton	NULL	Ronit	Roy	rr@syr.edu
2	Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00.0000000	22:00:00.0000000	Cricket	NULL	Ronit	Roy	rr@syr.edu
3	Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00.0000000	22:00:00.0000000	Swimming	NULL	Ronit	Roy	rr@syr.edu
4	Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00.0000000	22:00:00.0000000	Table Tennis	NULL	Ronit	Roy	rr@syr.edu
5	Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00.0000000	22:00:00.0000000	Basketball	NULL	Ronit	Roy	rr@syr.edu
6	Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00.0000000	22:00:00.0000000	Football	NULL	Ronit	Roy	rr@syr.edu
7	Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00.0000000	22:00:00.0000000	Tennis	NULL	Ronit	Roy	rr@syr.edu
8	Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00.0000000	22:00:00.0000000	Squash	NULL	Ronit	Roy	rr@syr.edu

Queries by the POC:

- Displaying only the members taking up activities in organization which the POC represents.

```

CREATE FUNCTION poc_org (@orgID INT)
RETURNS TABLE
AS
RETURN

(SELECT m.First_Name, m.Last_Name, m.Email_ID,
m.Phone_Number, m.Gender, m.Member_Category,
m.Login_Username, m.Login_Password,
m.numOfActivities, a.Activity_Name
FROM Activity a
INNER JOIN ((Organization o
INNER JOIN (Member m
INNER JOIN Member_Organization_Association_Log moa
ON m.Member_ID = moa.Member_ID)
ON o.Organization_ID = moa.Organization_ID)
INNER JOIN Activity_Member_Combination_Log amc
ON m.Member_ID = amc.Member_ID)
ON a.Activity_ID = amc.Activity_ID
GROUP BY m.First_Name, m.Last_Name, m.Email_ID, m.Phone_Number,
m.Gender, m.Member_Category, m.Login_Username, m.Login_Password,
m.numOfActivities, a.Activity_Name, o.Organization_ID
HAVING o.Organization_ID = @orgID);

```

	First_Name	Last_Name	Email_ID	Phone_Number	Gender	Member_Category	Login_Username	Login_Password	numOfActivities	Activity_Name
1	Maria	Frank	mafrank@gmail.com	3152757869	F	Student	mafrank	Password1	1	Badminton
2	Maria	Frank	mafrank@gmail.com	3152757869	F	Student	mafrank	Password1	1	Football
3	Min ho	Lee	ml@gmail.com	3158135432	M	Student	mlee	Password2	1	Basketball
4	Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	Student	nk1	Password7	1	Badminton
5	Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	Student	nk1	Password7	1	Football
6	Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	Student	nk1	Password7	1	Tennis
7	Susan	Garner	sgar@yahoo.com		F	Student	sgar	Password5	1	Swimming
8	Susan	Garner	sgar@yahoo.com		F	Student	sgar	Password5	1	Table Tennis

- Revenue obtained by the organization due to the activities taken up the members of Ardor database.

----- Revenue obtained by the organization due to the members of Ardor database

```
CREATE FUNCTION poc_org_revenue (@orgID INT)
RETURNS TABLE
```

```
AS
```

```
RETURN
```

```
(SELECT o.Organization_Name,
Sum(aoc.Activity_Cost) AS Revenue_Generated
FROM (Organization o
INNER JOIN (((Admin ad
INNER JOIN Member m
ON ad.Admin_ID = m.Admin_ID)
INNER JOIN ((Activity a
INNER JOIN Activity_Member_Combination_Log amc
ON a.Activity_ID = amc.Activity_ID)
INNER JOIN Activity_Organization_Combination_Log aoc
ON a.Activity_ID = aoc.Activity_ID)
ON m.Member_ID = amc.Member_ID)
INNER JOIN Member_Organization_Association_Log moa
ON m.Member_ID = moa.Member_ID)
INNER JOIN Member_POC_Combination_Log mpc
ON m.Member_ID = mpc.Member_ID)
ON (o.Organization_ID = aoc.Organization_ID)
AND (o.Organization_ID = moa.Organization_ID))
INNER JOIN POC p
ON (ad.Admin_ID = p.Admin_ID)
AND (o.Organization_ID = p.Organization_ID)
AND (mpc.POC_ID = p.POC_ID)
GROUP BY o.Organization_Name, o.Organization_ID
HAVING o.Organization_ID=@orgID)
```

The screenshot shows a SQL query execution interface. The query is:

```
SELECT * FROM poc_org_revenue(5);
```

The results pane shows one row:

	Organization_Name	Revenue_Generated
1	Cuse Complex	70.000

The progress bar indicates the query is at 91% completion.

Queries by the Admin:

- Revenue obtained by each of the organizations due to the activities taken up by the members in that organization.**

```
--Queries by Admin
--- Revenue obtained by each of the organizations due to the activities taken up by the members in the Ardor database system.

SELECT o.Organization_Name,
       Sum(aoc.Activity_Cost) AS Revenue_Generated
  FROM (Organization o
INNER JOIN (((Admin ad
INNER JOIN Member m
      ON ad.Admin_ID = m.Admin_ID)
INNER JOIN ((Activity a
INNER JOIN Activity_Member_Combination_Log amc
      ON a.Activity_ID = amc.Activity_ID)
INNER JOIN Activity_Organization_Combination_Log aoc
      ON a.Activity_ID = aoc.Activity_ID)
      ON m.Member_ID = amc.Member_ID)
INNER JOIN Member_Organization_Association_Log moa
      ON m.Member_ID = moa.Member_ID)
INNER JOIN Member_POC_Combination_Log mpc
      ON m.Member_ID = mpc.Member_ID)
      ON (o.Organization_ID = aoc.Organization_ID)
      AND (o.Organization_ID = moa.Organization_ID))
INNER JOIN POC p
      ON (ad.Admin_ID = p.Admin_ID)
      AND (o.Organization_ID = p.Organization_ID)
      AND (mpc.POC_ID = p.POC_ID)
 GROUP BY o.Organization_Name, o.Organization_ID
```

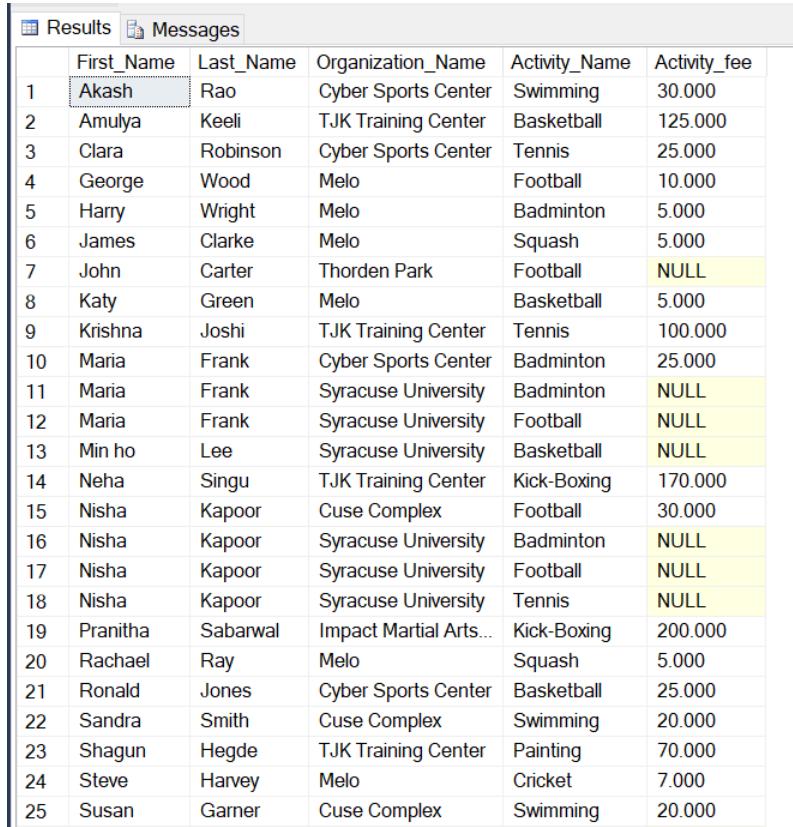
The screenshot shows a Microsoft SQL Server Management Studio (SSMS) interface. The 'Results' tab is selected, displaying a table with two columns: 'Organization_Name' and 'Revenue_Generated'. The data is as follows:

	Organization_Name	Revenue_Generated
1	Syracuse University	NULL
2	Cyber Sports Center	105.000
3	Cuse Complex	70.000
4	Melo	37.000
5	TJK Training Center	465.000

2. How many activities is each of the member interested in. What are the organizations from which the member would like to pursue these activities and what is the total cost the member is incurring for pursuing these activities?

```
/*How many activities is each of the member interested in. What are the organizations from which the member would like to pursue these activities and what is the total cost the member is incurring for pursuing these activities? */
```

```
SELECT m.First_Name, m.Last_Name, o.Organization_Name,
a.Activity_Name, Sum(aoc.Activity_Cost) AS Activity_fee
FROM ((Organization o
INNER JOIN (Activity a
INNER JOIN Activity_Organization_Combination_Log aoc
ON a.Activity_ID = aoc.Activity_ID)
ON o.Organization_ID = aoc.Organization_ID)
INNER JOIN (Member m
INNER JOIN Member_Organization_Association_Log moa
ON m.Member_ID = moa.Member_ID)
ON o.Organization_ID = moa.Organization_ID)
INNER JOIN Activity_Member_Combination_Log amc
ON (m.Member_ID = amc.Member_ID)
AND (a.Activity_ID = amc.Activity_ID)
GROUP BY m.First_Name, m.Last_Name, o.Organization_Name, a.Activity_Name
ORDER BY m.First_Name;
```



The screenshot shows a Microsoft SQL Server Management Studio (SSMS) results grid. The title bar says 'Results' and 'Messages'. The grid has columns: First_Name, Last_Name, Organization_Name, Activity_Name, and Activity_fee. The data consists of 25 rows, each representing a member's interest in a specific activity at a specific organization, along with their total activity fee.

	First_Name	Last_Name	Organization_Name	Activity_Name	Activity_fee
1	Akash	Rao	Cyber Sports Center	Swimming	30.000
2	Amulya	Keeli	TJK Training Center	Basketball	125.000
3	Clara	Robinson	Cyber Sports Center	Tennis	25.000
4	George	Wood	Melo	Football	10.000
5	Harry	Wright	Melo	Badminton	5.000
6	James	Clarke	Melo	Squash	5.000
7	John	Carter	Thorden Park	Football	NULL
8	Katy	Green	Melo	Basketball	5.000
9	Krishna	Joshi	TJK Training Center	Tennis	100.000
10	Maria	Frank	Cyber Sports Center	Badminton	25.000
11	Maria	Frank	Syracuse University	Badminton	NULL
12	Maria	Frank	Syracuse University	Football	NULL
13	Min ho	Lee	Syracuse University	Basketball	NULL
14	Neha	Singu	TJK Training Center	Kick-Boxing	170.000
15	Nisha	Kapoor	Cuse Complex	Football	30.000
16	Nisha	Kapoor	Syracuse University	Badminton	NULL
17	Nisha	Kapoor	Syracuse University	Football	NULL
18	Nisha	Kapoor	Syracuse University	Tennis	NULL
19	Pranitha	Sabanwal	Impact Martial Arts...	Kick-Boxing	200.000
20	Rachael	Ray	Melo	Squash	5.000
21	Ronald	Jones	Cyber Sports Center	Basketball	25.000
22	Sandra	Smith	Cuse Complex	Swimming	20.000
23	Shagun	Hegde	TJK Training Center	Painting	70.000
24	Steve	Harvey	Melo	Cricket	7.000
25	Susan	Garner	Cuse Complex	Swimming	20.000

26	Susan	Garner	Syracuse University	Swimming	NULL
27	Susan	Garner	Syracuse University	Table Tennis	NULL

3. Percentage of users in each of the member category(Student, Tourist, Citizen/PR, Others)

```

/* Percentage of users in each of the member category(Student, Tourist, Citizen/PR, Others) */
SELECT m.Member_Category, 100*Count(m.Member_Category)/total AS Percentage
FROM Member m,
(SELECT COUNT(m.Member_Category) AS Total
FROM Member m) AS x
GROUP BY m.Member_Category, x.Total
ORDER BY 100*Count(m.Member_Category)/total DESC;

```

91 % <

	Member_Category	Percentage
1	Student	40
2	Others	30
3	Tourist	20
4	Citizen/PR	10

4. Percentage of indoor and outdoor activities at each of the organizations

--- Percentage comparison of indoor and outdoor activities at each of the organization.

```

Select o.Organization_Name,a.Activity_Type, (COUNT(aoc.Activity_ID)*100)/SUM(aoc.Activity_ID) AS Percentage
FROM Organization o
INNER JOIN (Activity a
INNER JOIN Activity_Organization_Combination_Log aoc
ON a.Activity_ID = aoc.Activity_ID)
ON o.Organization_ID = aoc.Organization_ID
GROUP BY Organization_Name,Activity_Type

```

	Organization_Name	Activity_Type	Percentage
1	Cuse Complex	Indoor	33
2	Cyber Sports Center	Indoor	37
3	Impact Martial Arts and Fitness - Team Dewitt	Indoor	12
4	Melo	Indoor	20
5	Syracuse University	Indoor	22
6	TJK Training Center	Indoor	15
7	Cuse Complex	Outdoor	18
8	Cyber Sports Center	Outdoor	21
9	Melo	Outdoor	20
10	Syracuse University	Outdoor	20
11	Thorden Park	Outdoor	18
12	TJK Training Center	Outdoor	16

5. Percentage of Male and Female members using the Ardor database system

The screenshot shows a SQL query being run in a database environment. The query is:

```
--Percentage of male and female members?  
SELECT Gender, (Count(Gender)* 100 / (SELECT Count(*) FROM Member)) as Percentage  
FROM Member  
GROUP BY Gender;
```

The results table shows the following data:

	Gender	Percentage
1	F	55
2	M	45

INTERFACES:

First Page of Ardor database system:

This is the page any user using the Ardor database will first view. The page has 4 options:

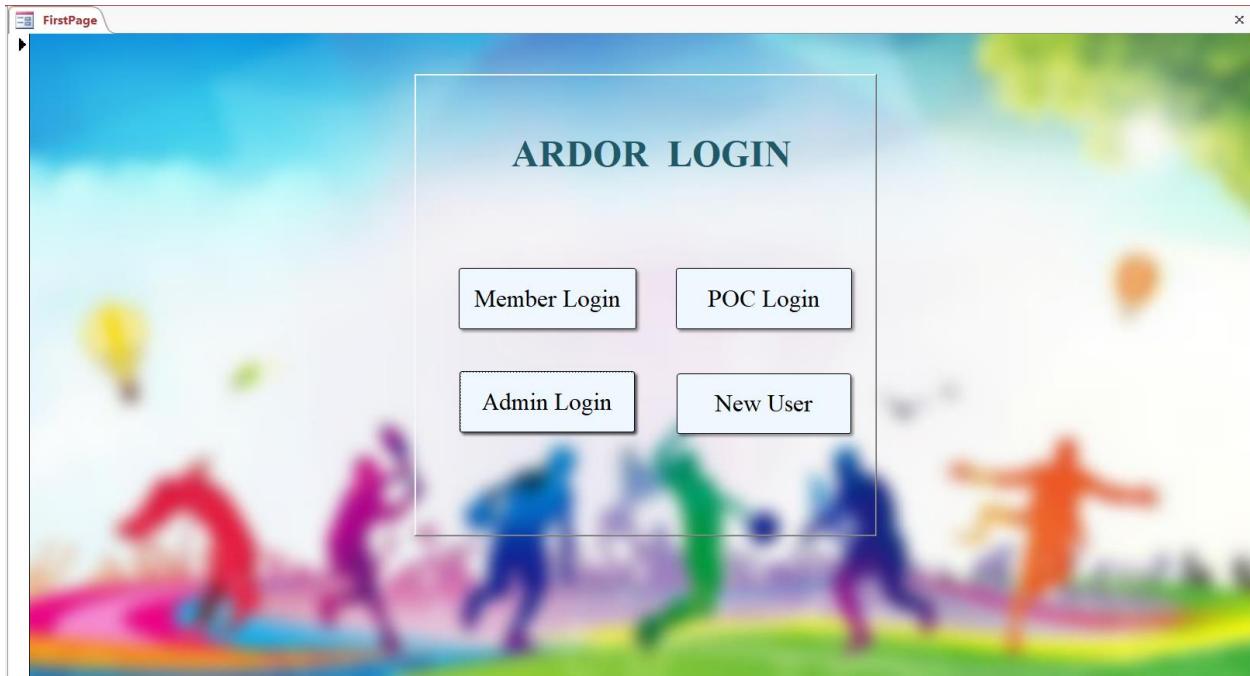
Member login: For all the members to login

POC Login: For all the POCs of different organizations to login

Admin Login: For the admin to login

New User: For any person who is a new user, can create their account here – POC account or

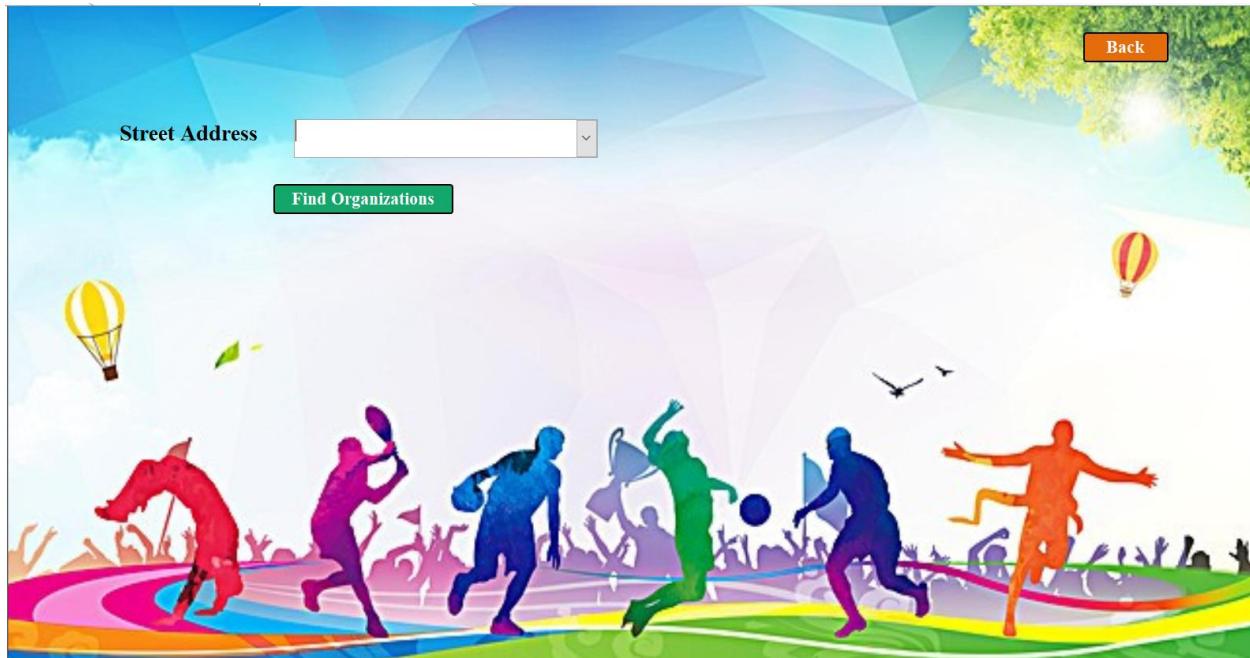
Member account



Organization Selection Page – Location wise:

A member can choose a location on this page and click on the ‘Find Organizations’ button to display all the organizations at this location and all the activities it offers as a facility.

The ‘Back’ button can be used go back to the ‘Member Display Page’.



The screenshot shows a web application interface. At the top, there are three tabs: 'FirstPage', 'Member_DisplayPage', and 'LocationWiseOrganizations'. The 'LocationWiseOrganizations' tab is active, indicated by a red border. Below the tabs, there is a search bar labeled 'Street Address' with a dropdown arrow. A dropdown menu is open, listing the following address:

Flanagan Gymnasium
Thorden Park Dr
3649 Erie Blvd E #36
Glenwood Avenue
1301 East colvin Street, Manley Field Hous
Carmelo K. Anthony Center
Fayetteville

On the right side of the screen, there is a 'Back' button. The background features a colorful illustration of people in various sports activities like running, jumping, and playing soccer, set against a backdrop of hot air balloons and a green landscape.

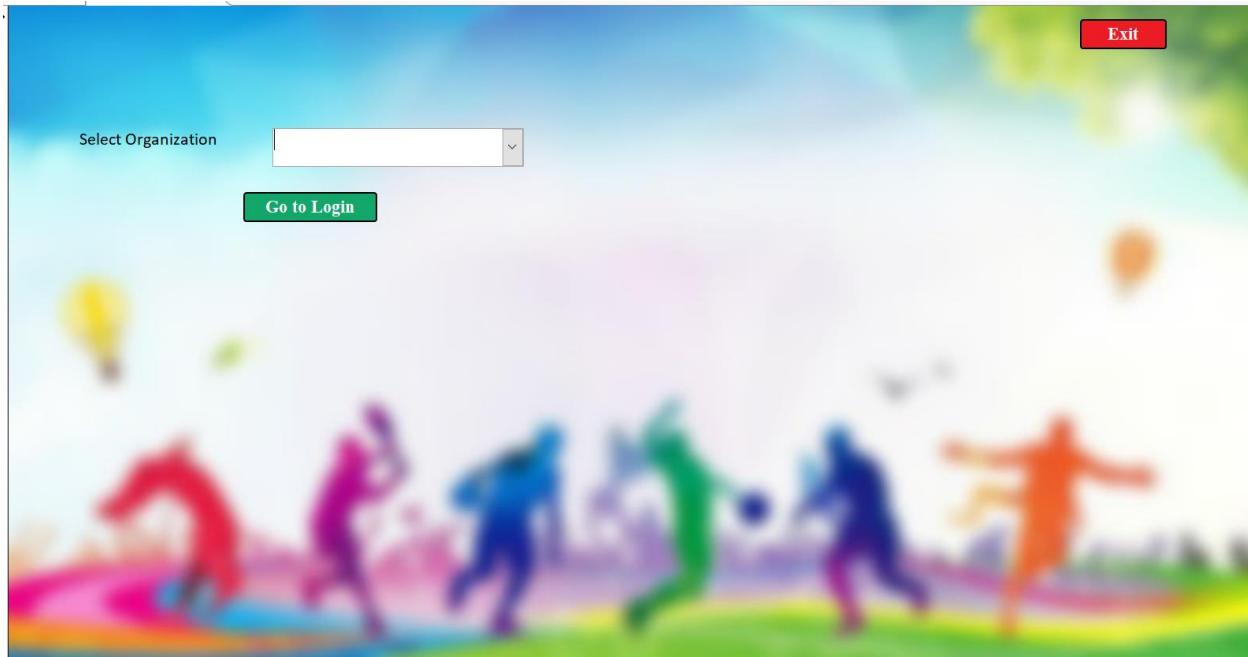
The screenshot shows the same web application interface after a selection has been made. The 'Street Address' field now contains the text 'Flanagan Gymnasium'. Below the address field is a green button labeled 'Find Organizations'. The rest of the interface and background remain the same as the first screenshot.

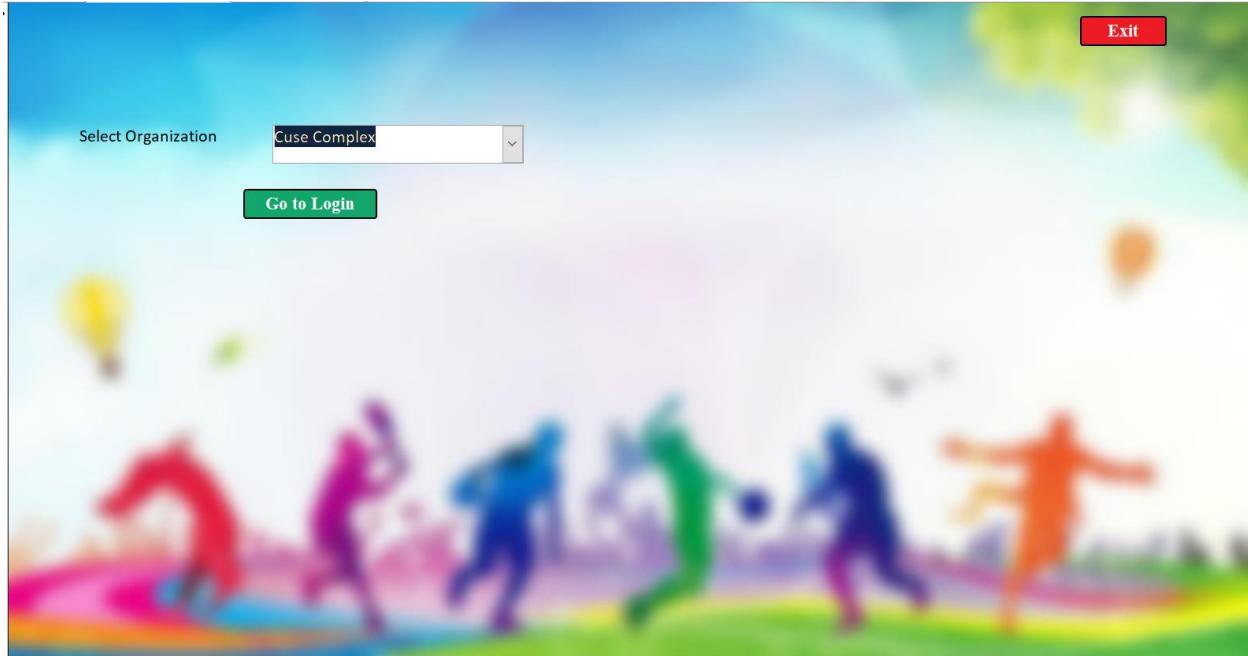
This is the page the member will view after selecting the location as 'Flanagan Gymnasium'. Query report showing organizations at this location and the activities it offers:

Organization_Name	Street_Address	Facility_Type	Openi	Closin	Activity_Nam	Activity_Cost	POC_First_N	POC_Last_N	POC_Email_I
Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00	22:00:00	Badminton		Ronit	Roy	rr@syr.edu
Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00	22:00:00	Cricket		Ronit	Roy	rr@syr.edu
Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00	22:00:00	Swimming		Ronit	Roy	rr@syr.edu
Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00	22:00:00	Table Tennis		Ronit	Roy	rr@syr.edu
Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00	22:00:00	Basketball		Ronit	Roy	rr@syr.edu
Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00	22:00:00	Football		Ronit	Roy	rr@syr.edu
Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00	22:00:00	Tennis		Ronit	Roy	rr@syr.edu
Syracuse University	Flanagan Gymnasium	Free Student Access	06:00:00	22:00:00	Squash		Ronit	Roy	rr@syr.edu

POC Organization Selection Page:

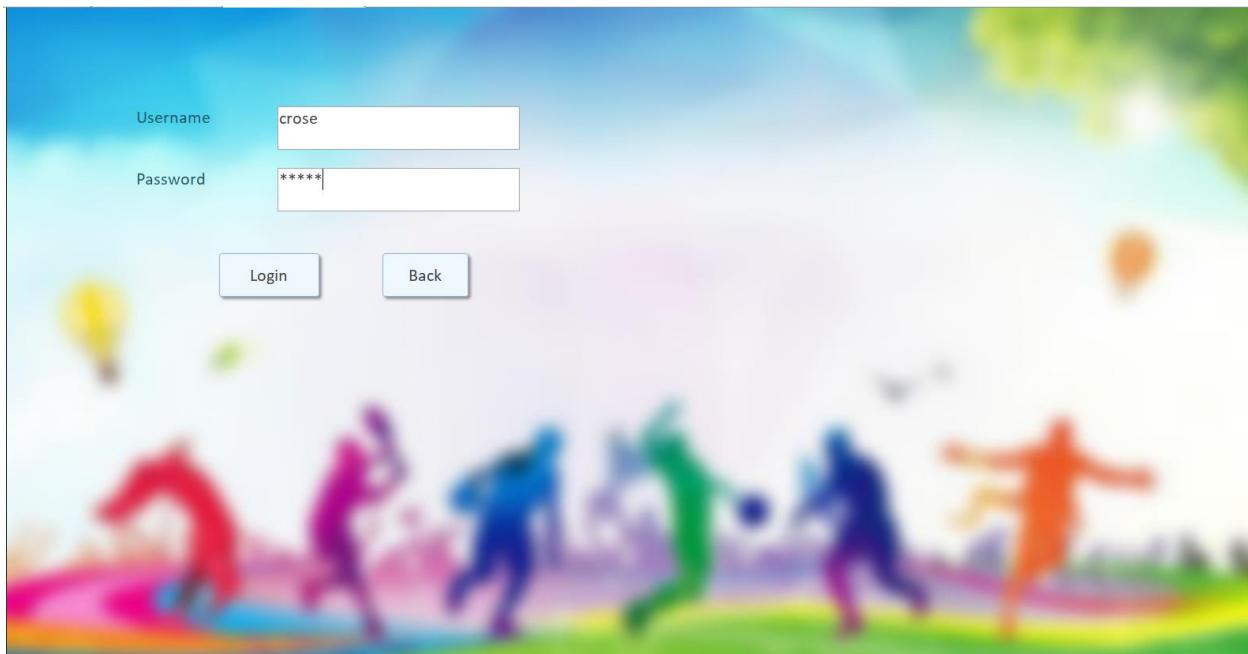
This is the page any POC will get after clicking on the POC login button in the first page. POC needs to select the organization they are working for. They can use the ‘Exit’ button to get back to the first page.

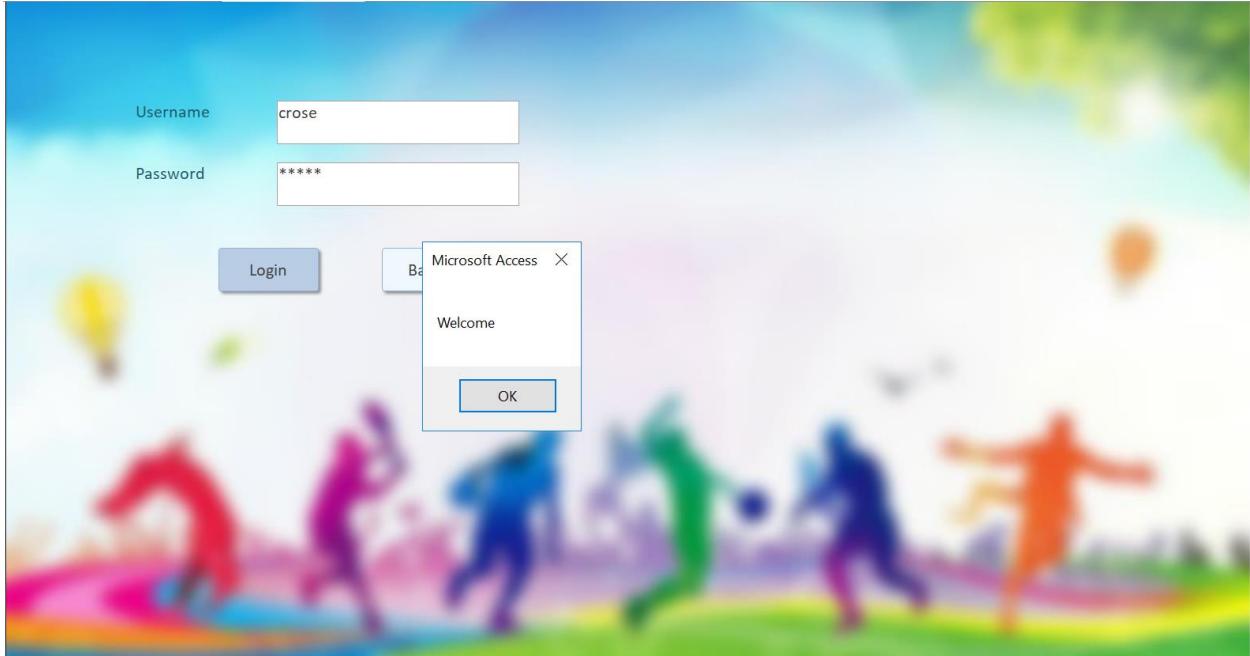




POC Login Page:

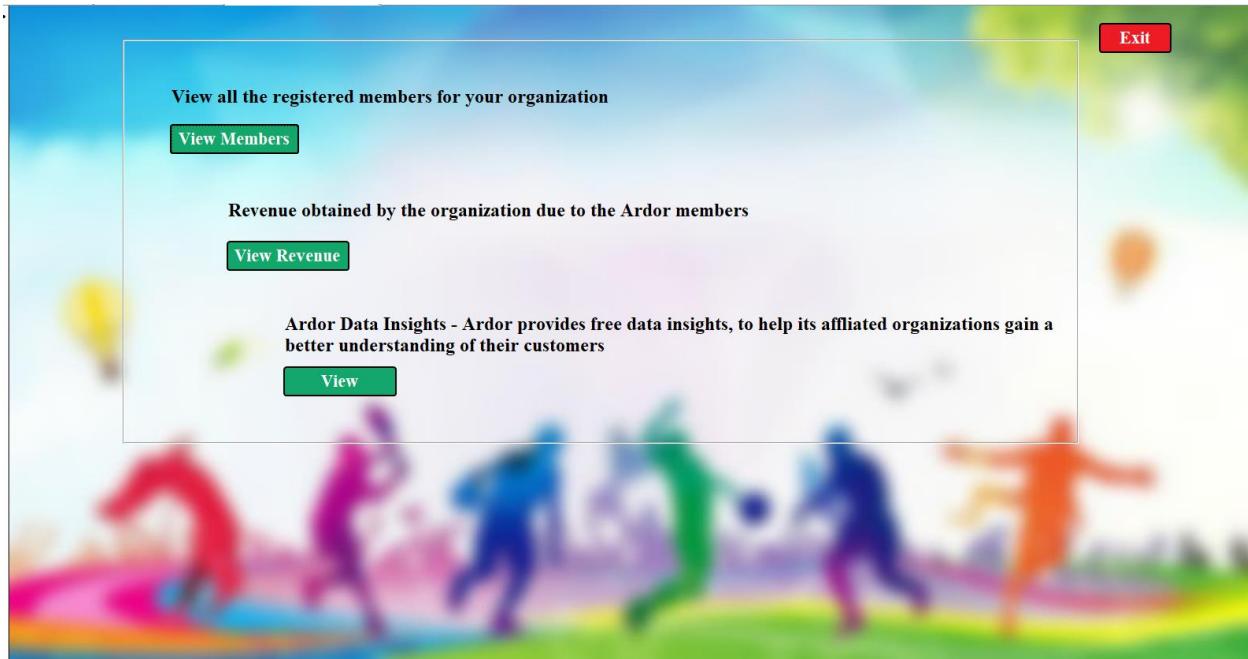
POC can enter their username and password to login into the database. Else they can use the 'back' button to get back to the first page.





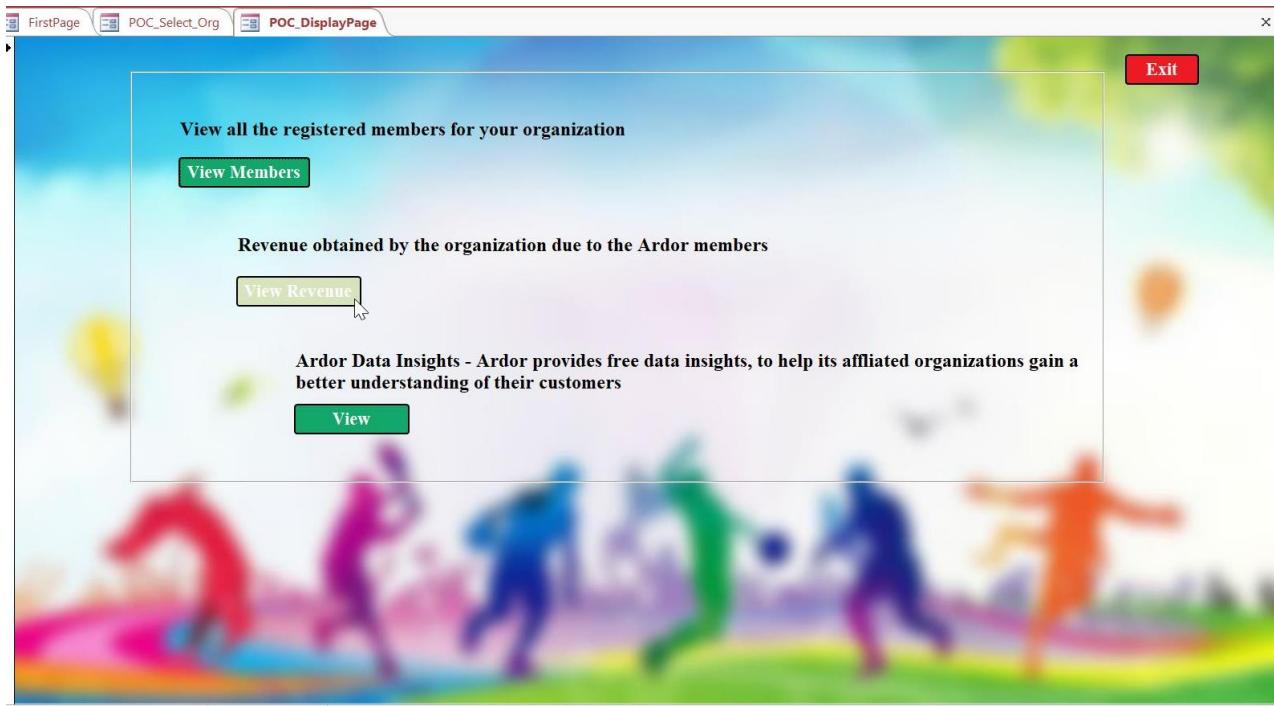
POC Display Page:

This is the page a POC will get after logging on to the system.



Query report showing all the registered members at the organization the POC is working for and the activities they are pursuing at the POC's organization:

First_Name	Last_Name	Email_ID	Phone_Num	Gender	Member_Cat	Login_Username	Login_Password	numOfActivi	Activity_Nam
Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	Student	nk1	*****	3	Badminton
Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	Student	nk1	*****	3	Football
Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	Student	nk1	*****	3	Tennis
Sandra	Smith	ss90@gmail.com		F	Others	ss	*****	1	Swimming
Susan	Garner	sgar@yahoo.com		F	Student	sgar	*****	2	Swimming
Susan	Garner	sgar@yahoo.com		F	Student	sgar	*****	2	Table Tennis



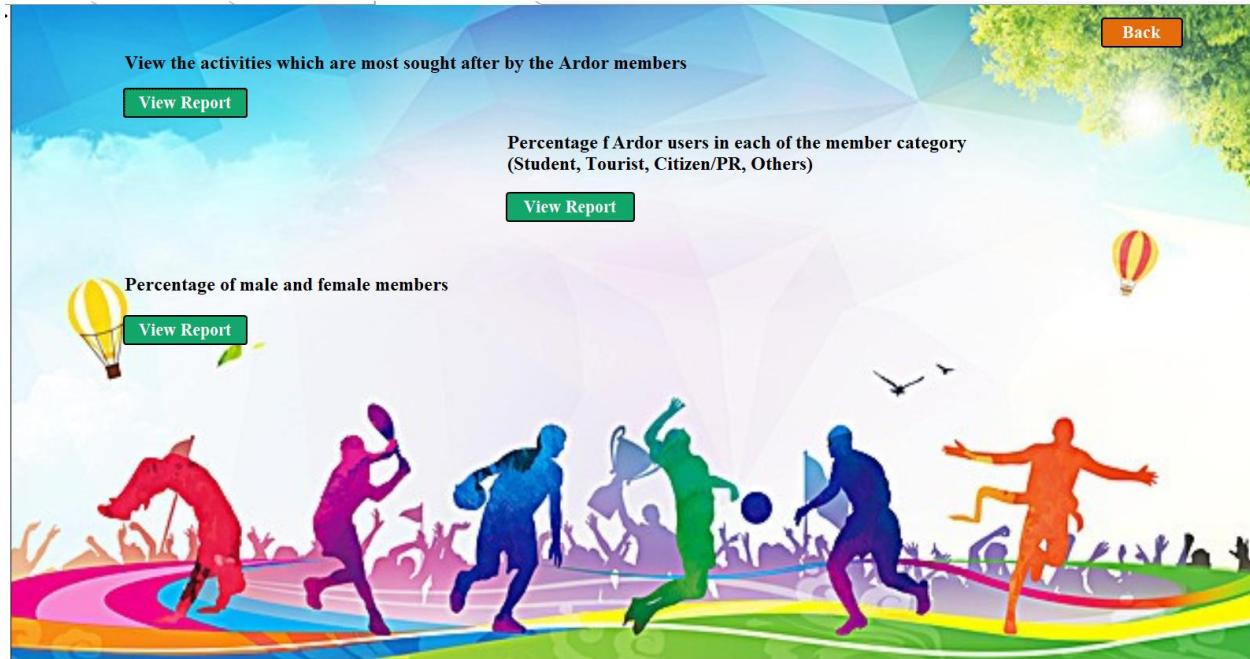
This page shows the revenue obtained by the organization due to the activities taken up the members of Ardor database.

Organization_Name		Revenue_Generated
Cuse Complex		70

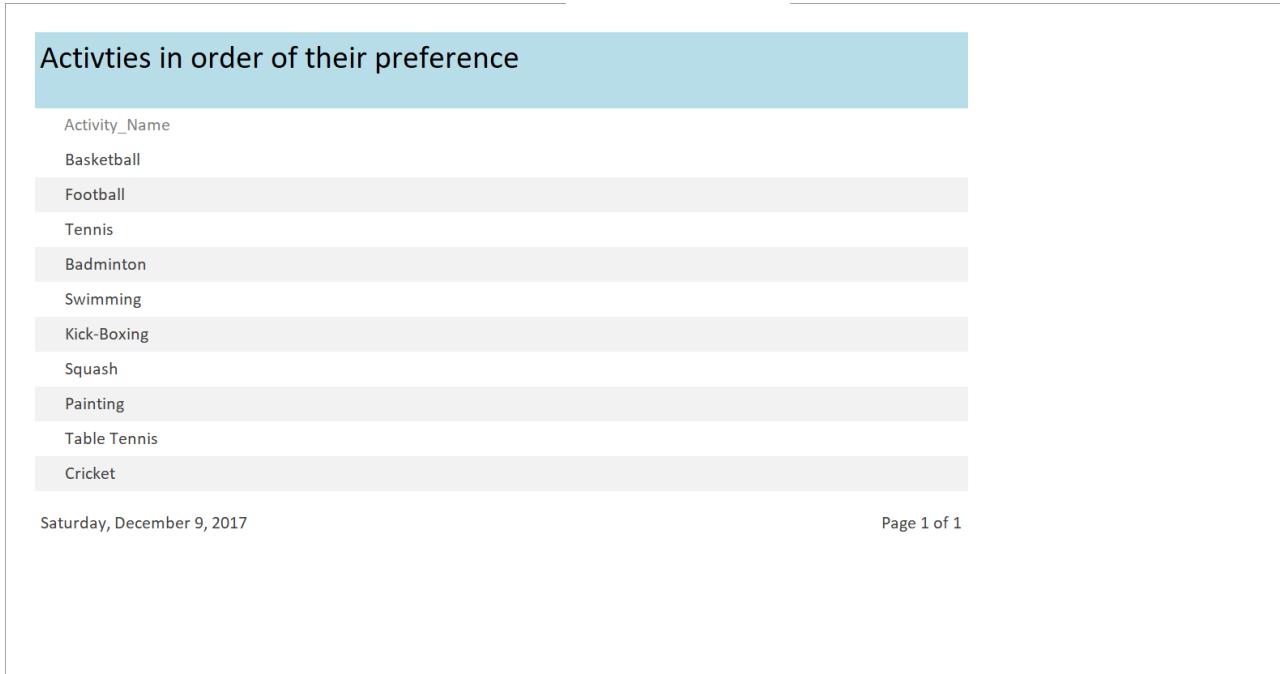
Ardor Data Insights for the POC:

The POC can view a few Ardor data insights on this page. This can be used by the POC to get insights which they can further utilize to improve the business prospects at their organization.

This page shows only selective details of the data analysis, to ensure that the privacy of the members and other organizations are maintained.



The below report shows the activities which are most sought after by the Ardor members:



The below report shows the percentages of member in each of the member category:

Member-Category Percentage	
Member_Category	Percentage
Citizen/PR	10
Others	30
Student	40
Tourist	20

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The below report shows the percentages of male and female members in the Ardor database:

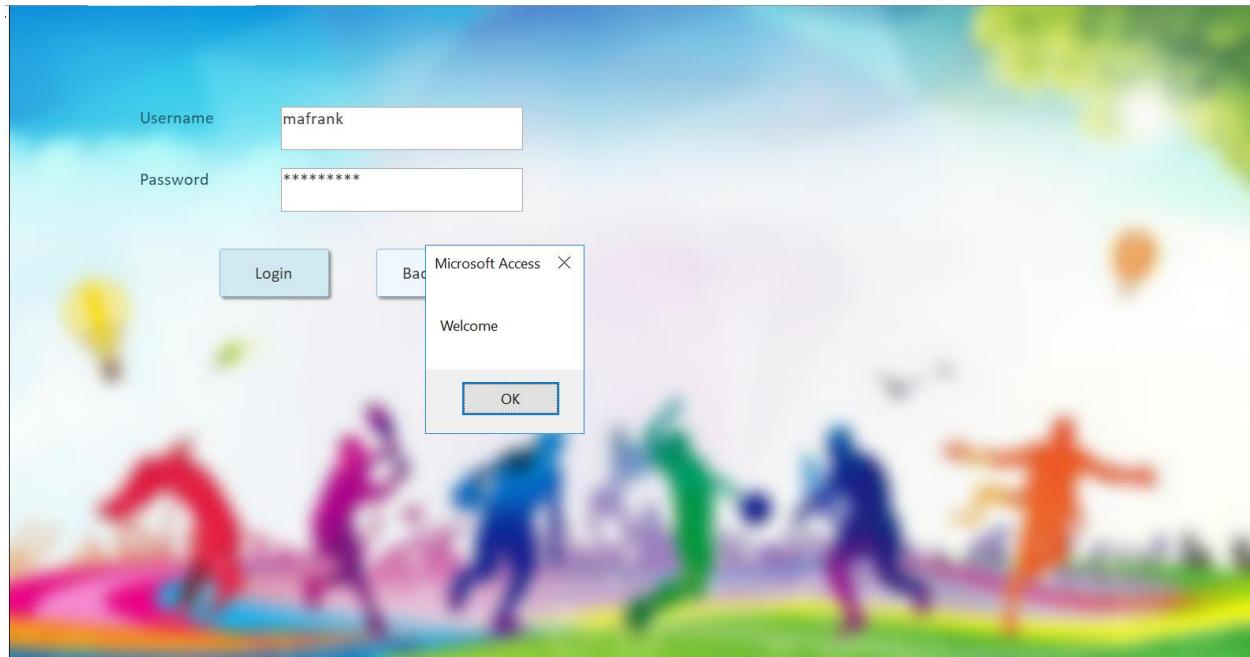
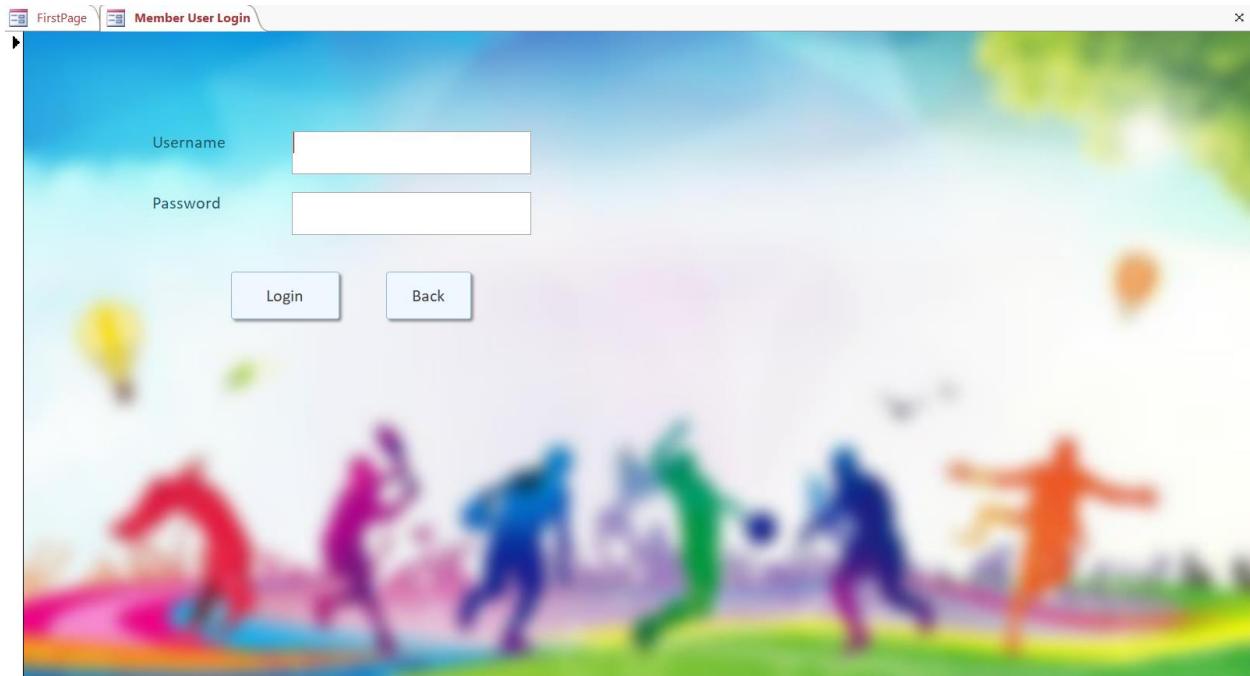
Percentage of male and female members in Ardor system	
Gender	Percentage
F	55
M	45

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Member Login Page:

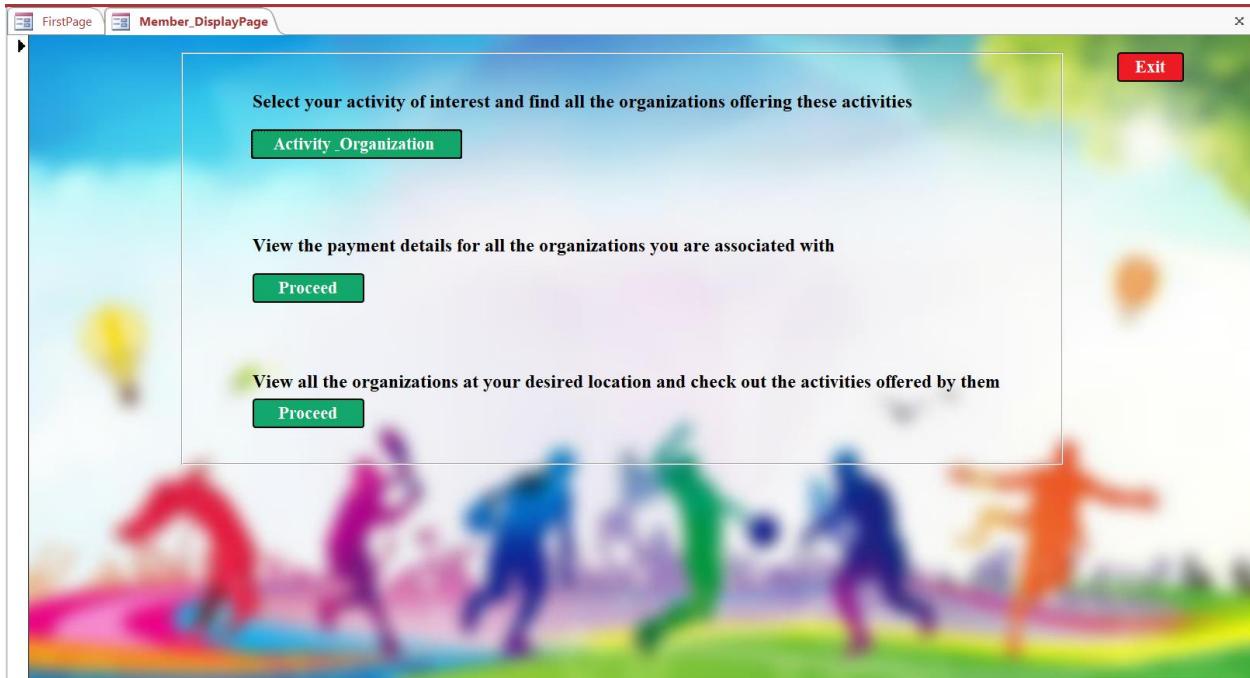
This is the page any member will get after clicking on the member login button in the first page.

Member can enter their username and password to login into the database. Else they can use the ‘back’ button to get back to the first page.



Member Display Page:

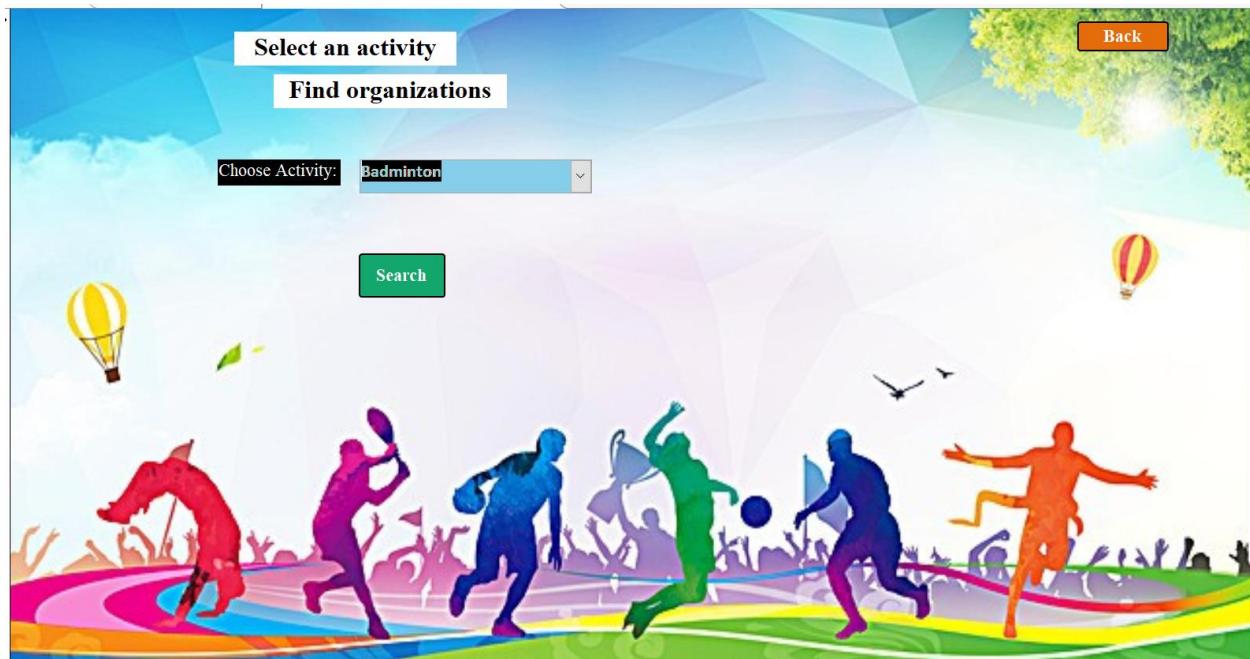
This is the page a member will get after logging on to the system.



Activity Selection Page:

A member can choose an activity on this page and click on the ‘search’ button to display all the organizations offering this activity as a facility.

The ‘Back’ button can be used go back to the ‘Member Display Page’.

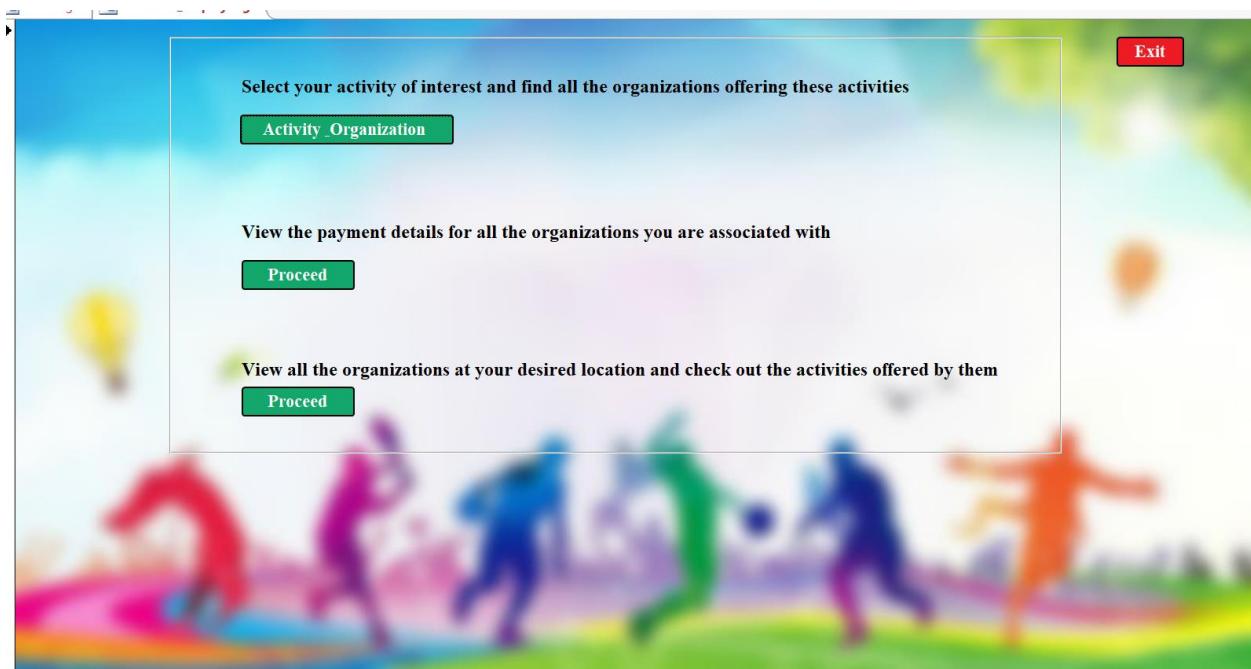


This is the page the member will view after selecting the activity as 'Badminton'. Query report showing organizations having Badminton as a sport facility:

Activity_Nam	Organization_Nam	Facility_Type	Activity_Cost	Opening_	Closing_1	Street_Address	City	State	ZIPCC	POC_Fi	POC_I	POC_Email_I	
Badminton	Syracuse University	Free Student Access		06:00:00.00	22:00:00.00	Flanagan Gym	Syracuse	NY	13210	Ronit	Roy	rr@syr.edu	
Badminton	Cyber Sports Center	Membership/Month		25	10:00:00.00	21:00:00.00	Glenwood Aver	Syracuse	NY	13207	Lara	John	lj@gmail.com
Badminton	Melo	Hourly Rent		5	10:00:00.00	21:00:00.00	Carmelo K. Antl	Syracuse	NY	13244	James	Miller	jam@gamil.cc

Member Payment Page:

After selecting the second option on the member display page, a member will view the below report, which lists the payment details the member owes to each of the organizations he/she is taking up an activity at.

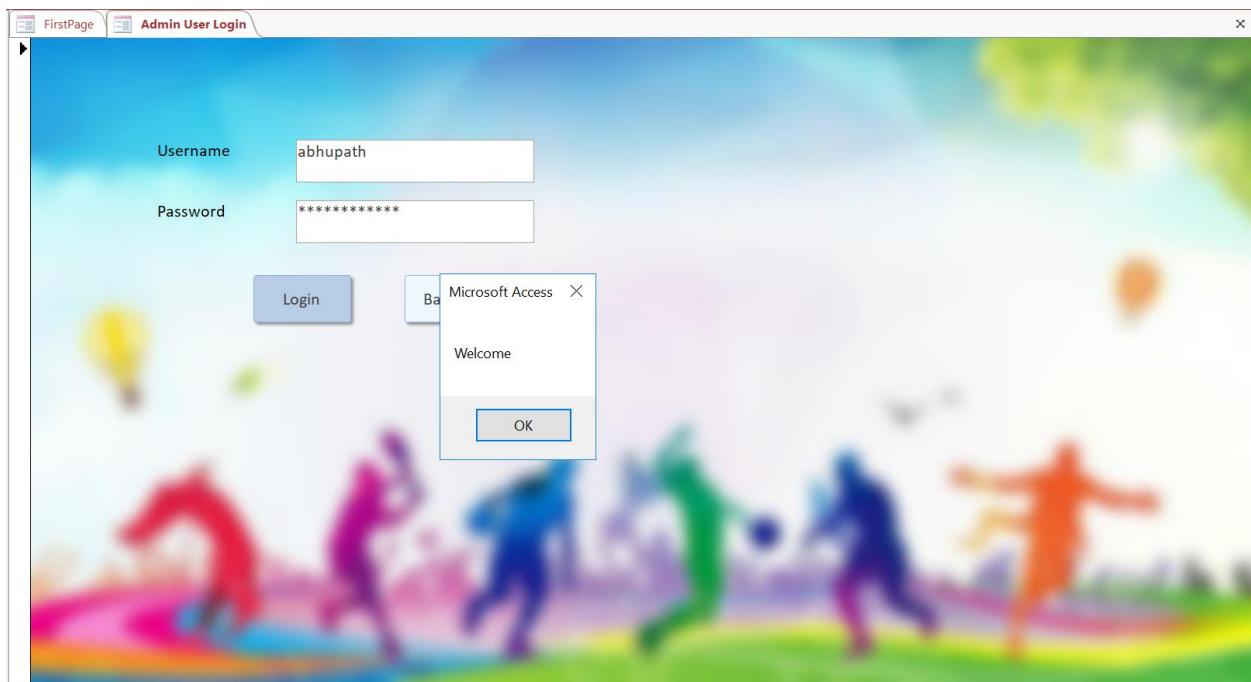
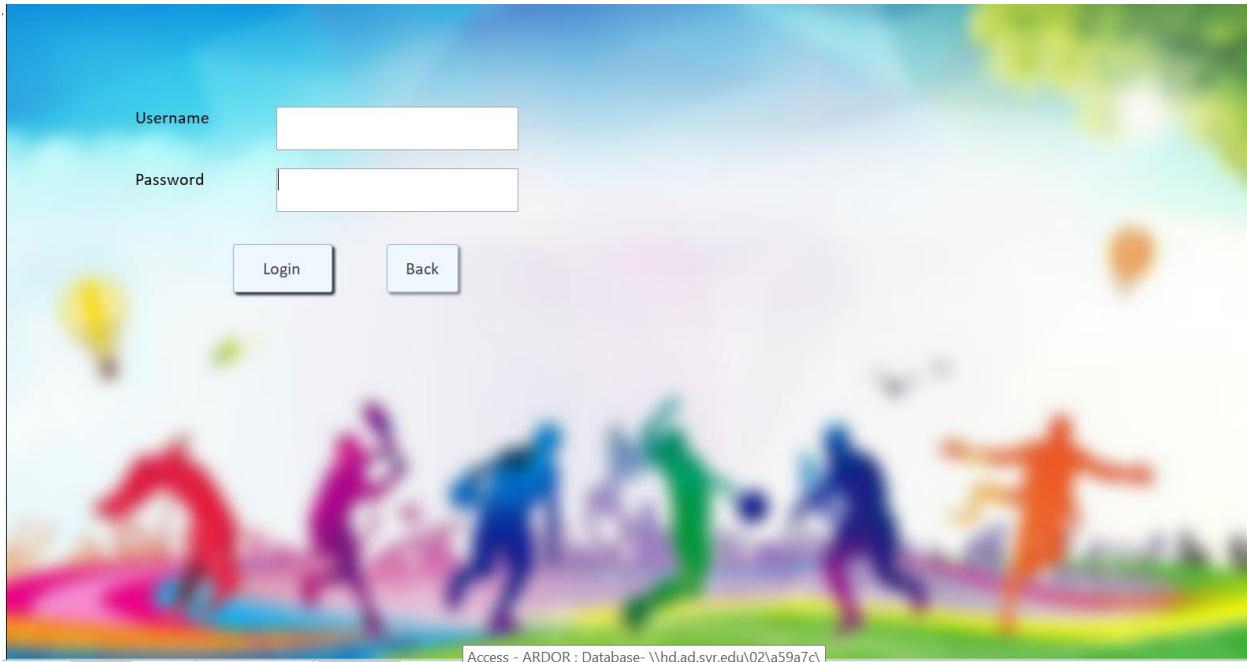


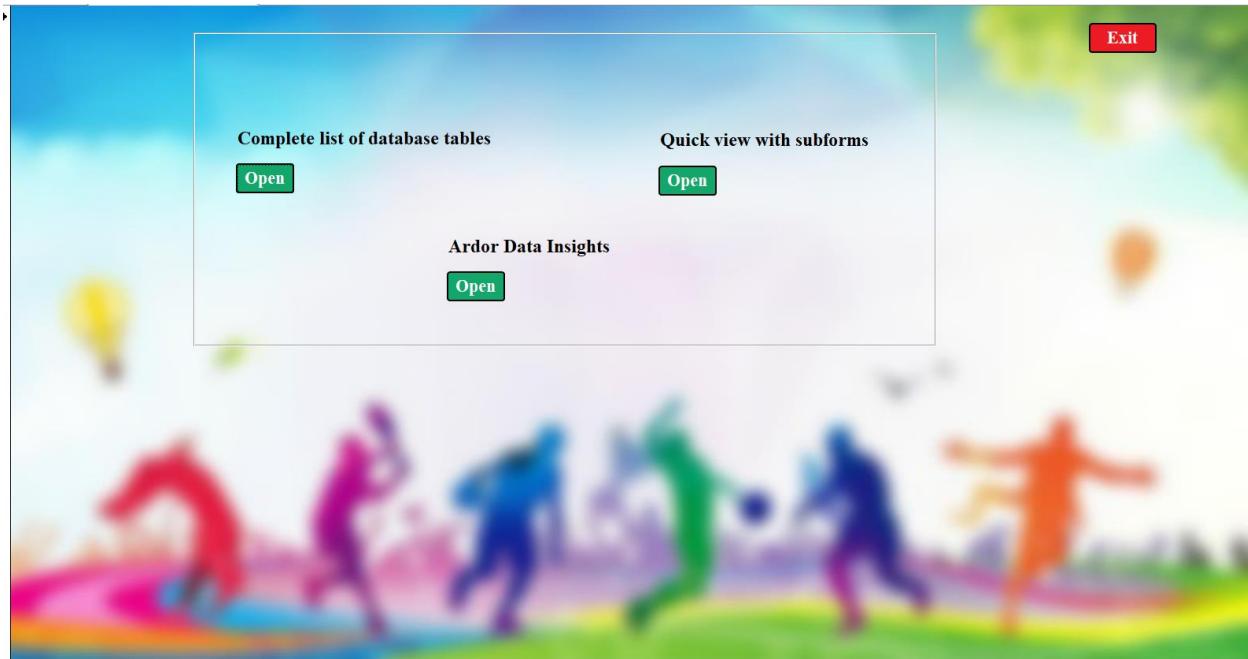
dbo_M	dbo_Me	Member	Organization_Name	Facility_Type	Activity_Nam	Activity_	dbo_POC.First	dbo_POC.Last_Name	Email_ID
Maria	Frank	Student	Syracuse University	Free Student Access	Badminton		Ronit	Roy	rr@syr.edu
Maria	Frank	Student	Syracuse University	Free Student Access	Football		Ronit	Roy	rr@syr.edu
Maria	Frank	Student	Cyber Sports Center	Membership/Monthly char	Badminton	25	Lara	John	lj@gmail.com

Admin Login Page:

This is the page the Admin will get after clicking on the member login button in the first page.

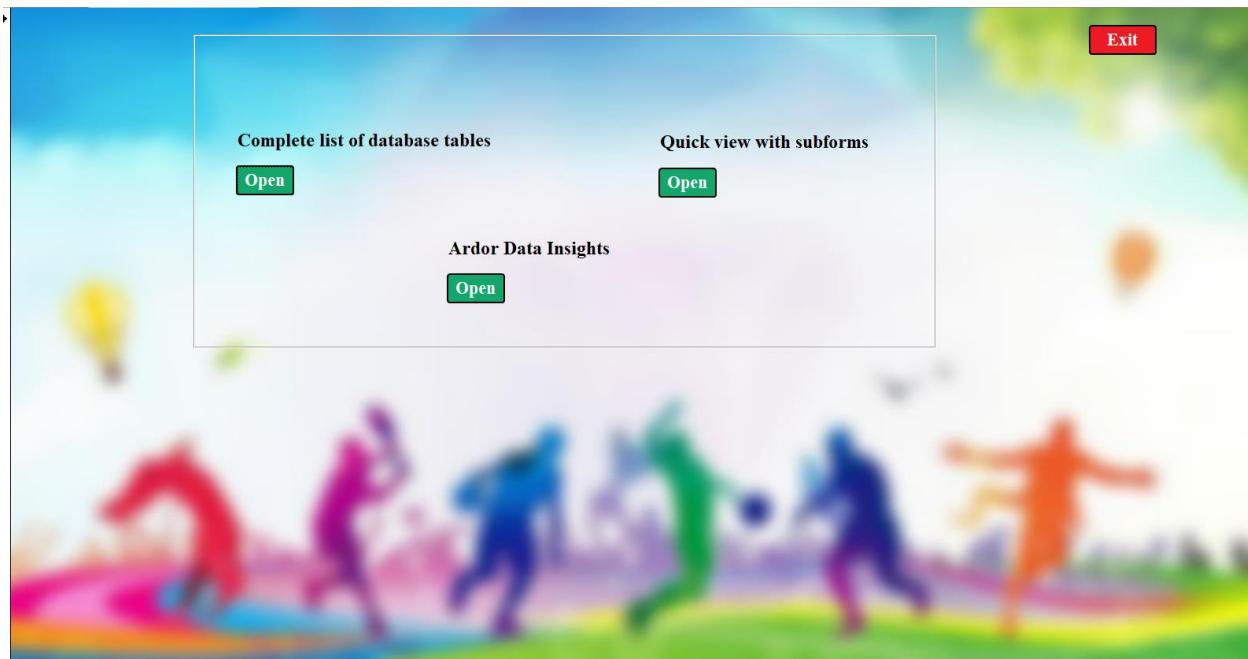
Admin can then enter their username and password to login into the database. Else they can use the 'back' button to get back to the first page.





Admin Display Page:

This is the page a Admin will get after logging on to the system.



This is the page the Admin will get after clicking on the ‘Complete list of database tables’.

Here the Admin can view all the tables of the database system:



For example: Clicking on the organization table will take the admin to the organization records:

The screenshot shows a database record view for the 'dbo_Organization' table. The title bar says 'dbo_Organization'. The record details are as follows:

Organization_ID	1
Organization_Name	Syracuse University
Street_Address	Flanagan Gymnasium
City	Syracuse
State	NY
ZIPCODE	13210
Facility_Type	Free Student Access
Opening_Time	06:00:00.0000000
Closing_Time	22:00:00.0000000

At the bottom, there is a navigation bar with buttons for Record, Search, and a status message 'No Filter'.

Admin Sub-forms Page:

Here the Admin can view all the sub-form tables in the database system:



For example: Clicking on the Activity_Org_subform button will take the admin to the below page with all records of activities and the corresponding organizations hosting these activities:

Activities						
Activity_ID	<input type="text" value="1"/>	Activity_Type	<input type="text" value="Indoor"/>	Activity_Name	<input type="text" value="Badminton"/>	
Organizations:						
	Organization_Name	Street_Address	City	State	ZIPCODE	Facility_Type
▶	Syracuse University	Flanagan Gymnasium	Syracuse	NY	13210	Free Student Acc
◀	Cyber Sports Center	Glenwood Avenue	Syracuse	NY	13207	Membership/M
◀	Melo	Carmelo K. Anthony Center	Syracuse	NY	13244	Hourly Rent
Record: 1 of 3 Back Next No Filter Search Access - ARDOR : Database- \\hd.ad.syr.edu\02\aa59a7c\Documents\Desktop\659\Demo\ARDOR.accdb (Access)						

Ardor Data Insights for the Admin:

The Admin can view different types of Ardor data insights on this page. This can be utilized to improve the business prospects of the Ardor and understand the users better.

How many activities are each of the members interested in. What are the organizations from which the member would like to pursue these activities and what is the total cost the member is incurring for pursuing these activities?

Generate Report

How many activities are offered by each of the organizations and which organization offers the most number of activities

Generate Report

Revenue obtained by each of the organizations due to the activities taken up by the members in that organization.

Generate Report

Which activity is most sought after by the members?

Generate Report

Percentage of users in each of the member category(Student, Tourist, Citizen/PR, Others)

FirstPage Admin_DisplayPage Data_Insights

Which activity is most sought after by the members?

Generate Report

Percentage of users in each of the member category(Student, Tourist, Citizen/PR, Others)

Generate Report

Percentage comparison of indoor and outdoor activities at each of the organization.

Generate Report

Percentage of male and female members

Generate Report

The below report shows all the members in Ardor database and the activities they are pursuing and organizations at which they are pursuing:

Member_activity				
First_Name	Last_Name	Activity_Name	Organization_Name	Activity_fee
Akash	Rao	Swimming	Cyber Sports Center	30
Amulya	Keeli	Basketball	TJK Training Center	125
Clara	Robinson	Tennis	Cyber Sports Center	25
George	Wood	Football	Melo	10
Harry	Wright	Badminton	Melo	5
James	Clarke	Squash	Melo	5
John	Carter	Football	Thorden Park	
Katy	Green	Basketball	Melo	5
Krishna	Joshi	Tennis	TJK Training Center	100
Maria	Frank	Badminton	Cyber Sports Center	25
Maria	Frank	Badminton	Syracuse University	
Maria	Frank	Football	Syracuse University	
Min ho	Lee	Basketball	Syracuse University	
Neha	Singu	Kick-Boxing	TJK Training Center	170
Nisha	Kapoor	Badminton	Syracuse University	
...	...	Football	Cyber Sports Center	20

The below report shows the number of activities offered by each of the organization:

Number of activities offered by each Organization	
Organization_Name	CountOfActivity_ID
Cuse Complex	3
Cyber Sports Center	6
Impact Martial Arts and Fitness - Tea	1
Melo	7
Syracuse University	8
Thorden Park	2
TJK Training Center	5

The below report shows the revenue obtained by each of the organizations due to the Ardor members:

Organization_Name	Revenue_Generated
TJK Training Center	465
Cyber Sports Center	105
Cuse Complex	70
Melo	37
Syracuse University	

The below query report shows the activities which are most sought after by the Ardor members:

Activity_Name	NumOfMembers
Basketball	4
Football	4
Tennis	3
Badminton	3
Swimming	3
Kick-Boxing	2
Squash	2
Painting	1
Table Tennis	1
Cricket	1

The below report shows the percentages of member in each of the member category:

Member-Category Percentage

Member_Category	Percentage
Citizen/PR	10
Others	30
Student	40
Tourist	20

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The below report shows the percentages of male and female members in the Ardor database:

Percentage of male and female members in Ardor system

Gender	Percentage
F	55
M	45

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Procedure:

Created a procedure to count the number of activities taken by each of the members and update this count in the Member table, in the ‘numOfActivities’ column.

```
CREATE PROCEDURE Activities_Selected
AS
BEGIN
    UPDATE Member
    SET numOfActivities = nActivities.NumOfActivities
    FROM
        (SELECT m.Member_ID, COUNT(aml.Activity_ID) AS 'NumOfActivities'
        FROM Member m
        INNER JOIN Activity_Member_Combination_Log aml
        ON m.Member_ID = aml.Member_ID
        GROUP BY m.Member_ID ) AS nActivities
        WHERE Member.Member_ID = nActivities.Member_ID
END;
.

EXEC Activities_Selected;
```

Member table before executing the procedure:

	Member_ID	First_Name	Last_Name	Email_ID	Phone_Number	Gender	Admin_ID	Member_Category	Login_Username	Login_Password	numOfActivities
1	1	Maria	Frank	mafrank@gmail.com	3152757869	F	1	Student	mafrank	Password1	0
2	2	Min ho	Lee	ml@gmail.com	3158135432	M	1	Student	mlee	Password2	0
3	3	Pranitha	Sabarwal	psa@gmail.com		F	1	Student	psa	Password3	0
4	4	John	Carter	jcar@gmail.com		M	1	Tourist	jcar	Password4	0
5	5	Susan	Garner	sgar@yahoo.com		F	1	Student	sgar	Password5	0
6	6	Ronald	Jones	rj@yahoo.com	3152750869	M	1	Citizen/PR	rj	Password6	0
7	7	Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	1	Student	nk1	Password7	0
8	8	Rachael	Ray	rray@gmail.com		F	1	Others	rray	Password8	0
9	9	Steve	Harvey	sharv@gmail.com		M	1	Tourist	sharv	Password9	0
10	10	Sandra	Smith	ss90@gmail.com		F	1	Others	ss	Password10	0
11	11	Krishna	Joshi	kcj@gmail.com	3158907869	M	1	Citizen/PR	kcj	Password11	0
12	12	Shagun	Hegde	sh@gmail.com	3158112342	F	1	Student	sh	Password12	0
13	13	Neha	Singu	nehas@yahoo.com		F	1	Student	nehas	Password13	0
14	14	Amulya	Keeli	ak@gmail.com		F	1	Tourist	ak	Password14	0
15	15	Akash	Rao	arao@yahoo.com		M	1	Others	arao	Password15	0
16	16	Harry	Wright	hwr@gmail.com	3152759969	M	1	Others	hwr	Password16	0
17	17	Katy	Green	kgreen@gmail.com	3151234432	F	1	Student	kgreen	Password17	0
18	18	James	Clarke	jcl@yahoo.com		M	1	Others	jcl	Password18	0
19	19	George	Wood	gwood@gmail.com		M	1	Tourist	gwood	Password19	0
20	20	Clara	Robinson	clob@yahoo.com		F	1	Others	clob	Password20	0

Member table after executing the procedure:

	Member_ID	First_Name	Last_Name	Email_ID	Phone_Number	Gender	Admin_ID	Member_Category	Login_Username	Login_Password	numOfActivities
1	1	Maria	Frank	mafrank@gmail.com	3152757869	F	1	Student	mafrank	Password1	1
2	2	Min ho	Lee	ml@gmail.com	3158135432	M	1	Student	mlee	Password2	1
3	3	Pranitha	Sabarwal	psa@gmail.com		F	1	Student	psa	Password3	1
4	4	John	Carter	jcar@gmail.com		M	1	Tourist	jcar	Password4	1
5	5	Susan	Garner	sgar@yahoo.com		F	1	Student	sgar	Password5	1
6	6	Ronald	Jones	rj@yahoo.com	3152750869	M	1	Citizen/PR	rj	Password6	1
7	7	Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	1	Student	nk1	Password7	1
8	8	Rachael	Ray	rray@gmail.com		F	1	Others	rray	Password8	1
9	9	Steve	Harvey	sharv@gmail.com		M	1	Tourist	sharv	Password9	1
10	10	Sandra	Smith	ss90@gmail.com		F	1	Others	ss	Password10	1
11	11	Krishna	Joshi	kcj@gmail.com	3158907869	M	1	Citizen/PR	kcj	Password11	1
12	12	Shagun	Hegde	sh@gmail.com	3158112342	F	1	Student	sh	Password12	1
13	13	Neha	Singu	nehas@yahoo.com		F	1	Student	nehas	Password13	1
14	14	Amulya	Keeli	ak@gmail.com		F	1	Tourist	ak	Password14	1
15	15	Akash	Rao	arao@yahoo.com		M	1	Others	arao	Password15	1
16	16	Harry	Wright	hwr@gmail.com	3152759969	M	1	Others	hwr	Password16	1
17	17	Katy	Green	kgreen@gmail.com	3151234432	F	1	Student	kgreen	Password17	1
18	18	James	Clarke	jcl@yahoo.com		M	1	Others	jcl	Password18	1
19	19	George	Wood	gwood@gmail.com		M	1	Tourist	gwood	Password19	1
20	20	Clara	Robinson	clob@yahoo.com		F	1	Others	clob	Password20	1

Trigger:

Created a trigger to update the Member table with the ‘NumOfActivities’ column after new data was added to the ‘Activity_Member_Combination_Log’ table.

Member table before adding values to the ‘Activity_Member_Combination_Log’ table:

	Member_ID	First_Name	Last_Name	Email_ID	Phone_Number	Gender	Admin_ID	Member_Category	Login_Username	Login_Password	numOfActivities
1	1	Maria	Frank	mafrank@gmail.com	3152757869	F	1	Student	mafrank	Password1	1
2	2	Min ho	Lee	ml@gmail.com	3158135432	M	1	Student	mlee	Password2	1
3	3	Pranitha	Sabarwal	psa@gmail.com		F	1	Student	psa	Password3	1
4	4	John	Carter	jcar@gmail.com		M	1	Tourist	jcar	Password4	1
5	5	Susan	Garner	sgar@yahoo.com		F	1	Student	sgar	Password5	1
6	6	Ronald	Jones	rj@yahoo.com	3152750869	M	1	Citizen/PR	rj	Password6	1
7	7	Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	1	Student	nk1	Password7	1
8	8	Rachael	Ray	rray@gmail.com		F	1	Others	rray	Password8	1
9	9	Steve	Harvey	sharv@gmail.com		M	1	Tourist	sharv	Password9	1
10	10	Sandra	Smith	ss90@gmail.com		F	1	Others	ss	Password10	1
11	11	Krishna	Joshi	kcj@gmail.com	3158907869	M	1	Citizen/PR	kcj	Password11	1
12	12	Shagun	Hegde	sh@gmail.com	3158112342	F	1	Student	sh	Password12	1
13	13	Neha	Singu	nehas@yahoo.com		F	1	Student	nehas	Password13	1
14	14	Amulya	Keeli	ak@gmail.com		F	1	Tourist	ak	Password14	1
15	15	Akash	Rao	arao@yahoo.com		M	1	Others	arao	Password15	1
16	16	Harry	Wright	hwr@gmail.com	3152759969	M	1	Others	hwr	Password16	1
17	17	Katy	Green	kgreen@gmail.com	3151234432	F	1	Student	kgreen	Password17	1
18	18	James	Clarke	jcl@yahoo.com		M	1	Others	jcl	Password18	1
19	19	George	Wood	gwood@gmail.com		M	1	Tourist	gwood	Password19	1
20	20	Clara	Robinson	ciro@yahoo.com		F	1	Others	crob	Password20	1

Adding values to the ‘Activity_Member_Combination_Log’ table:

```

INSERT INTO Activity_Member_Combination_Log VALUES (21,1,6),(22,5,3),(23,7,7),(24,7,1);
INSERT INTO Member_Organization_Association_Log VALUES (21,1,4),(22,5,5),(23,7,1),(24,7,1);
INSERT INTO Member_POC_Combination_Log VALUES (21,1,3),(22,5,4),(23,7,2),(24,7,2);

```

Although the trigger works for update only on ‘Activity_Member_Combination_Log’ table, however to maintain proper record feed in all tables, I have updated the other related tables like ‘Member_Organization_Association_Log’ and ‘Member_POC_Combination_Log’ as well.

Member table after adding values to the 'Activity_Member_Combination_Log' table:

Highlighted are the updated values.

	Member_ID	First_Name	Last_Name	Email_ID	Phone_Number	Gender	Admin_ID	Member_Category	Login_Username	Login_Password	numOfActivities
1	1	Maria	Frank	mafrank@gmail.com	3152757869	F	1	Student	mafrank	Password1	2
2	2	Min ho	Lee	ml@gmail.com	3158135432	M	1	Student	mlee	Password2	1
3	3	Pranitha	Sabarwal	psa@gmail.com		F	1	Student	psa	Password3	1
4	4	John	Carter	jcar@gmail.com		M	1	Tourist	jcar	Password4	1
5	5	Susan	Garnet	sgar@yahoo.com		F	1	Student	sgar	Password5	2
6	6	Ronald	Jones	rj@yahoo.com	3152750869	M	1	Citizen/PR	rj	Password6	1
7	7	Nisha	Kapoor	nk_93@yahoo.com	3158012432	F	1	Student	nk1	Password7	3
8	8	Rachael	Ray	rray@gmail.com		F	1	Others	rray	Password8	1
9	9	Steve	Harvey	sharv@gmail.com		M	1	Tourist	sharv	Password9	1
10	10	Sandra	Smith	ss90@gmail.com		F	1	Others	ss	Password10	1
11	11	Krishna	Joshi	kcj@gmail.com	3158907869	M	1	Citizen/PR	kcj	Password11	1
12	12	Shagun	Hegde	sh@gmail.com	3158112342	F	1	Student	sh	Password12	1
13	13	Neha	Singh	nehas@yahoo.com		F	1	Student	nehas	Password13	1
14	14	Amulya	Keeli	ak@gmail.com		F	1	Tourist	ak	Password14	1
15	15	Akash	Rao	arao@yahoo.com		M	1	Others	arao	Password15	1
16	16	Harry	Wright	hwr@gmail.com	3152759969	M	1	Others	hwr	Password16	1
17	17	Katy	Green	kgreen@gmail.com	3151234432	F	1	Student	kgreen	Password17	1
18	18	James	Clarke	jcl@yahoo.com		M	1	Others	jcl	Password18	1
19	19	George	Wood	gwood@gmail.com		M	1	Tourist	gwood	Password19	1
20	20	Clara	Robinson	clro@yahoo.com		F	1	Others	clrob	Password20	1