RECRUITMENT MANAGEMENT SYSTEM

T-WORK JOB COMPANY RECRUITMENT

A System Proposal presented to the

Faculty of the College of Computer and Information Sciences,

Polytechnic University of the Philippines

In partial fulfillment for the course

COMP 20093 – Information Management

Haber, Jhon Mark B.

Reyes, Jewel Anne A.

Soriao, Kyra Jean T.

I. Background / Overview of the Project

The recruitment process is managed by our Recruitment Management System (RMS), which includes a collection of tools specifically built for that purpose. T-Work Job Recruitment Company provides assistance to candidates and allows them to arrange the recruitment needs that they desire. This assistance ranges from handling the job application to maintaining applicants' connections and engagement throughout the process. Because of the intense competition in recruitment, particularly for applicants with highly marketable technological talents, there has been a growing interest in more advanced recruiting methods. Both job searchers and recruiters stand to benefit from the increased productivity afforded by these newly developed technologies.

Its primary aim is to provide companies, organizations, and businesses with an organized recruitment management system that they can use to develop the most qualified, and competent job applicants who are also enthusiastic about their profession and ready to start working. The importance of the Recruitment Management System is to provide an efficient and convenient way to store valuable data information about the applicants. Because of this, businesses are able to conduct the recruiting process more effectively and save a significant amount of time.

Business Rules:

1. The company requires applicants to have at least one (1) work experience.
2. An applicant should have exactly one (1) active phone number, one (1) active work email address and one (1) current living address.
3. An applicant should attain at least one (1) degree as their highest level of educational attainment.

Manual Form

Figure 1, Image of the manual application form used for the project

APPLICATION FORM

T-WORK JOB COMPANY RECRUITMENT

ApplicationNo: _____

PERSONAL INFORMATION

Last Name: _____ First Name: _____ MI: ____

Email Address: _____ Phone Number: _____ Birthday: _____ Age: ____ Sex: ____

Home Address

Street/House No./Building No./ Village/ Subd.: _____

Barangay: _____ City: _____ Province: _____ Zip Code: _____

Highest Education Attainment

Educ ID	School	School Address	Degree/s	Year Graduated

Work Experience

Work ID	Company	Position	Date Started	Date Ended	Length of Service

II. Normalization

Legends:
Primary Key
Partial Functional Dependency
Full Dependency
Foreign Key

- ***Unormalized Form***

  App Table (ApplicationNo, FirstName, LastName, MI, Email, PhoneNum, Birthdate, Age, Sex, Adrs, Barangay, City, Province, ZipCode, {EducID, School, School_Add, Degree, Year_Grad, WorkID, Company, Position, DateStarted, DateEnded, LengthService})

App Table

ApplicationNo	FirstName	LastName	MI	Email	PhoneNum
1	Mary Jane	Lastimosa	Y	lastimosa.mjane@yahoo.com	(+63)9064557612
2	Jack Mario	Morer	W	marioworkingmorer@gmail.com	(+63)9201167298

Birthdate	Age	Sex	Adrs	Barangay	City
1995-01-01	27	F	Blk 4 Lot 15 Ph 5 Sampaguita St. Sunshine Village	Brgy. San Roque Calumpang	Marikina
1993-05-28	28	M	Mapagmahal St. Cool Village	Brgy. Dimatibag	Santiago

Province	ZipCode	EducID	School	School_Add	Degree	Year_Grad
Metro Manila	1801	1	Ateneo de Manila	Katipunan Ave., Quezon City	BSCS	2015
Isabela	3311	2 3	Cagayan Valley Computer Information Technology College University of the Philippines	Santiago, Isabela Diliman, Quezon	BSIT BSCE	2012 2016

WorkID	Company	Position	DateStarted	DateEnded	LengthService
1 2	Banana Tech Inc. Concentrix Corporation	Programmer Analyst Customer Service Representative	2015-07-13 2020-11-22	2020-07-13 2021-11-22	5.00 1.00
3 4	Techner Juicy Corp. Techtilaok Inc.	Systems Analyst Senior Programmer	2016-04-08 2018-12-12	2018-11-08 2022-05-01	2.58 3.50

- ***1NF (1st Normalization Form)***

  App Table (ApplicationNo, FirstName, LastName, MI, Email, PhoneNum, Birthdate, Age, Sex, Adrs, Barangay, City, Province, ZipCode, EducID, School, School_Add, Degree, Year_Grad, WorkID, Company, Position, DateStarted, DateEnded, LengthService)

App Table

ApplicationNo	FirstName	LastName	MI	Email	PhoneNum
1	Mary Jane	Lastimosa	Y	lastimosa.mjane@yahoo.com	(+63)9064557612
1	Mary Jane	Lastimosa	Y	lastimosa.mjane@yahoo.com	(+63)9064557612
2	Jack Mario	Morer	W	marioworkingmorer@gmail.com	(+63)9201167298
2	Jack Mario	Morer	W	marioworkingmorer@gmail.com	(+63)9201167298

Birthdate	Age	Sex	Adrs	Barangay	City
1995-01-01	27	F	Blk 4 Lot 15 Ph 5 Sampaguita St. Sunshine Village	Brgy. San Roque Calumpang	Marikina
1995-01-01	27	F	Blk 4 Lot 15 Ph 5 Sampaguita St. Sunshine Village	Brgy. San Roque Calumpang	Marikina
1993-05-28	28	M	Mapagmahal St. Cool Village	Brgy. Dimatibag	Santiago
1993-05-28	28	M	Mapagmahal St. Cool Village	Brgy. Dimatibag	Santiago

Province	ZipCode	EducID	School	School_Add	Degree	Year_Grad
Metro Manila	1801	1	Ateneo de Manila	Katipunan Ave., Quezon City	BSCS	2015
Metro Manila	1801	2	Ateneo de Manila	Katipunan Ave., Quezon City	BSCS	2015
Isabela	3311	3	Cagayan Valley Computer Information Technology College	Santiago, Isabela	BSIT	2012
Isabela	3311	4	University of the Philippines	Diliman, Quezon	BSCE	2016

WorkID	Company	Position	DateStarted	DateEnded	LengthService
1	Banana Tech Inc.	Programmer Analyst	2015-07-13	2020-07-13	5.00
2	Concentrix Corporation	Customer Service Representative	2020-11-22	2021-11-22	1.00
3	Techner Juicy Corp.	Systems Analyst	2016-04-08	2018-11-08	2.58
4	Techtilaok Inc.	Senior Programmer	2018-12-12	2022-05-01	3.50

- ***2NF (2nd Normalization Form)***

  App Table (ApplicationNo, FirstName, LastName, MI, Email, PhoneNum, Birthdate, Age, Sex, Adrs, Barangay, City, Province, ZipCode)

  Educ_attained Table (ApplicationNo, EducID, School, School_Add, Year_Grad, Degree)

  WorkExp Table (ApplicationNo, WorkID, Company, Position, DateStarted, DateEnded, LengthService)

App Table

ApplicationNo	FirstName	LastName	MI	Email
1	Mary Jane	Lastimosa	Y	lastimosa.mjane@yahoo.com
2	Jack Mario	Morer	W	marioworkingmorer@gmail.com

PhoneNum	Birthdate	Age	Sex	Adrs
(+63)9064557612	1995-01-01	27	F	Blk 4 Lot 15 Ph 5 Sampaguita St. Sunshine Village
(+63)9201167298	1993-05-28	28	M	Mapagmahal St. Cool Village

Barangay	City	Province	ZipCode
Brgy. San Roque Calumpang	Marikina	Metro Manila	1801
Brgy. Dimatibag	Santiago	Isabela	3311

Educ_attained Table

EducID	ApplicationNo	School
1	1	Ateneo de Manila
3	2	Cagayan Valley Computer Information Technology College
4	2	University of the Philippines

School_Add	Year_Grad	Degree
Katipunan Ave., Quezon City	2015	BSCS
Santiago, Isabela	2012	BSIT
Diliman, Quezon	2016	BSCE

WorkExp Table

ApplicationNo	WorkID	Company	Position
1	1	Banana Tech Inc.	Programmer Analyst
1	2	Concentrix Corporation	Customer Service Representative
2	3	Techner Juicy Corp.	Systems Analyst
2	4	Techtilaok Inc.	Senior Programmer

DateStarted	DateEnded	LengthService
2015-07-13	2020-07-13	5.00
2020-11-22	2021-11-22	1.00
2016-04-08	2018-11-08	2.58
2018-12-12	2022-05-01	3.50

- ***3NF (3rd Normalization Form)***

App Table (ApplicationNo, FirstName, LastName, MI, Email, PhoneNum, Birthdate, Age, Sex, Adrs, Barangay, City, Province, ZipCode)

Educ_attained Table (ApplicationNo, EducID, School, School_Add, Year_Grad, Degree)

WorkExp Table (ApplicationNo, WorkID, Company, Position, DateStarted, DateEnded, LengthService)

App Table

ApplicationNo	FirstName	LastName	MI	Email
1	Mary Jane	Lastimosa	Y	lastimosa.mjane@yahoo.com
2	Jack Mario	Morer	W	marioworkingmorer@gmail.com

PhoneNum	Birthdate	Age	Sex	Adrs
(+63)9064557612	1995-01-01	27	F	Blk 4 Lot 15 Ph 5 Sampaguita St. Sunshine Village
(+63)9201167298	1993-05-28	28	M	Mapagmahal St. Cool Village

Barangay	City	Province	ZipCode
Brgy. San Roque Calumpang	Marikina	Metro Manila	1801
Brgy. Dimatibag	Santiago	Isabela	3311

Educ_attained Table

EducID	ApplicationNo	School
1	1	Ateneo de Manila
2	2	Cagayan Valley Computer Information Technology College
3	2	University of the Philippines

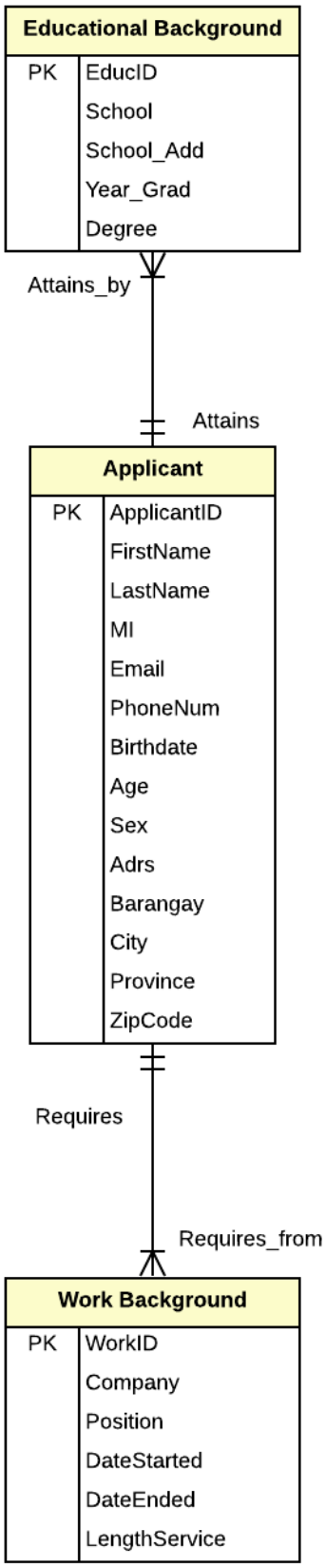
School_Add	Year_Grad	Degree
Katipunan Ave., Quezon City	2015	BSCS
Santiago, Isabela	2012	BSIT
Diliman, Quezon	2016	BSCE

WorkExp Table

ApplicationNo	WorkID	Company	Position
1	1	Banana Tech Inc.	Programmer Analyst
1	2	Concentrix Corporation	Customer Service Representative
2	3	Techner Juicy Corp.	Systems Analyst
2	4	Techtilaok Inc.	Senior Programmer

DateStarted	DateEnded	LengthService
2015-07-13	2020-07-13	5.00
2020-11-22	2021-11-22	1.00
2016-04-08	2018-11-08	2.58
2018-12-12	2022-05-01	3.50

III. Entity Relationship Diagram



IV. Data Dictionary

App Table

	Attribute Name	Data Type	Size	Allowable Values	Other Constraints
PK	ApplicationNo	Int	6		
	FirstName	Varchar	50		required
	LastName	Varchar	50		required
	MI	Varchar	4		required
	Email	Varchar	50		required
	PhoneNumber	Varchar	15		required
	Birthdate	Date			required
	Age	Integer	3		required
	Sex	Varchar	1	F, M	required
	Adrs	Varchar	100		required
	Barangay	Varchar	20		required
	City	Varchar	20		required
	Province	Varchar	20		required
	ZipCode	Integer	5		required

Educ_attained Table

	Attribute Name	Data Type	Size	Allowable Values	Other Constraints
PK	ApplicationNo	Int	11		
PK	EducID	Int	11		
	School	Varchar	100		required
	School_Add	Varchar	100		required
	Year_Grad	Int	4		required
	Degree	Varchar	100		required

WorkExp Table

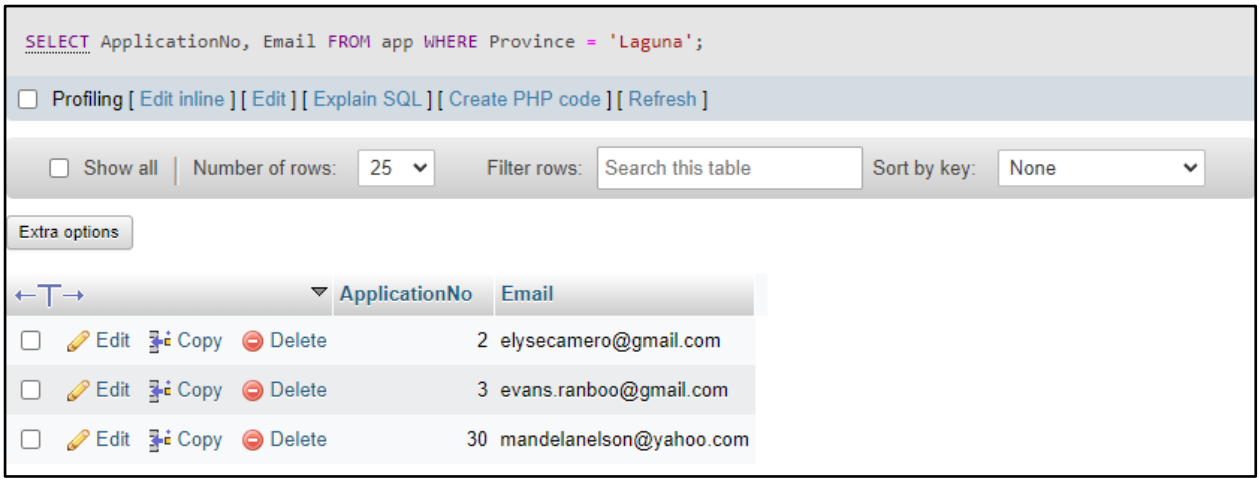
	Attribute Name	Data Type	Size	Allowable Values	Other Constraints
PK	ApplicationNo	Int	11		
PK	WorkID	Int	11		
	Company	Varchar	50		required
	Position	Varchar	50		required
	DateStarted	Date			required
	DateEnded	Date			required
	LengthService	Double			required

VI. SQL Statements

EASY

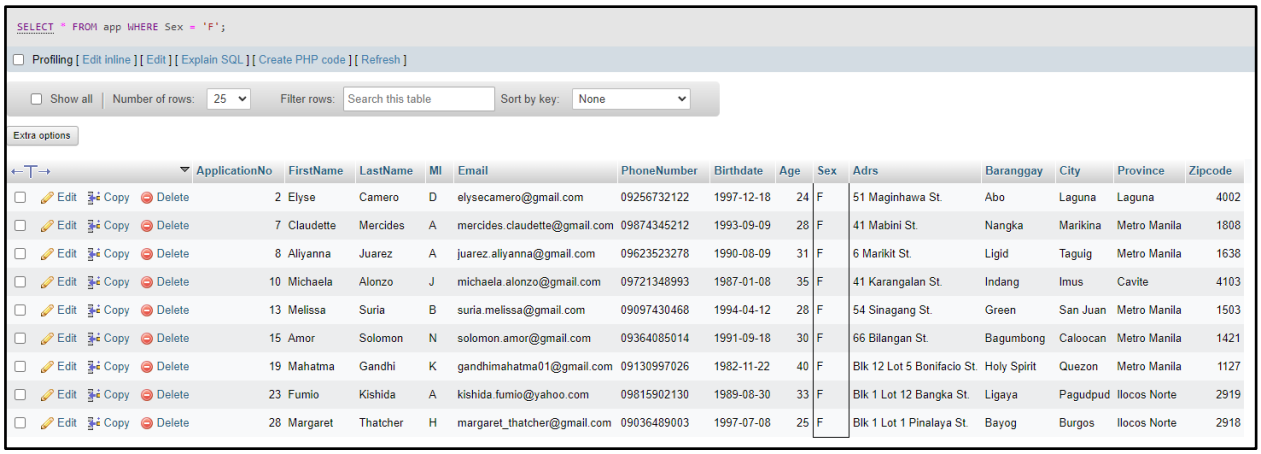
1. **A hiring company is looking for the email address of those who applied at the first date of application. Display the Applicant ID and Email Address of those who lived in Laguna.**

```
SELECT ApplicationNo, Email
FROM app
WHERE Province = 'METRO MANILA';
```



2. **A hiring employer requires applicants who are female. Display all of the Applicant information of those applicants whose sex are Females.**

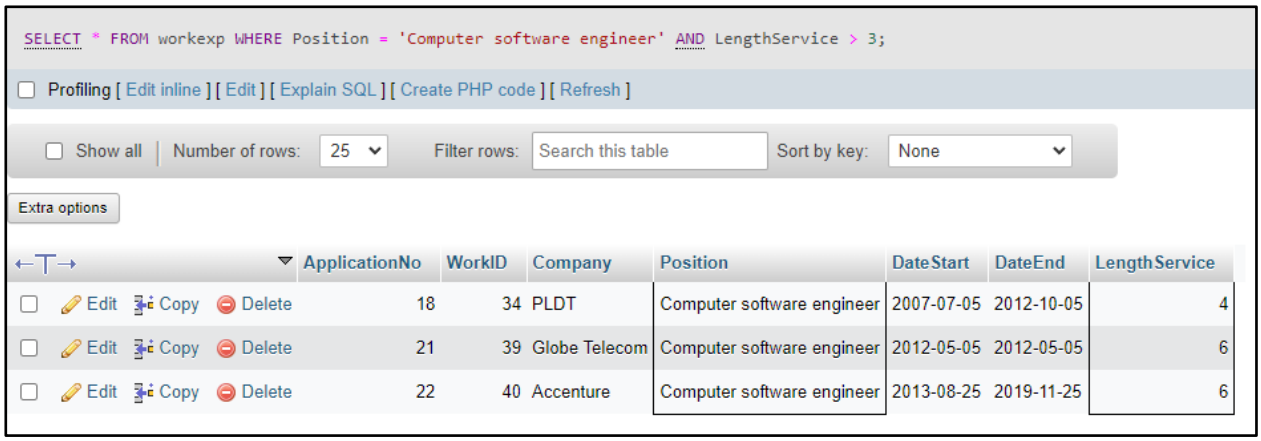
```
SELECT *
FROM app
WHERE Sex = 'F';
```



AVERAGE

1. **A big company is hiring for a position of Computer Software Engineer, they are currently looking for applicants with the most length of experience as being a computer programmer. Display all of the work service information of those applicants who had worked as a position of Computer Software Engineer and length of service greater than 3 years.**

```
SELECT *
FROM workexp
WHERE Position = 'Computer software engineer' AND LengthService > 3;
```



	ApplicationNo	WorkID	Company	Position	DateStart	DateEnd	LengthService
Edit Copy Delete	18	34	PLDT	Computer software engineer	2007-07-05	2012-10-05	4
Edit Copy Delete	21	39	Globe Telecom	Computer software engineer	2012-05-05	2012-05-05	6
Edit Copy Delete	22	40	Accenture	Computer software engineer	2013-08-25	2019-11-25	6

2. **An employer wants to hire applicants who are at the age greater than 25 and near Marikina. Display ApplicationNo, including their Adrs, Barangay, City, Province and Zipcode as concatenated Complete Address of those applicants who are living in the city of Pasig and age is greater than 25.**

```
SELECT ApplicantionNo, Age, CONCAT(Adrs, ' ', Baranggay, ' ', City, ' ', Province, ' ', Zipcode) AS CompleteAddress
FROM app
WHERE City = 'Marikina' AND Age > 25;
```

```
SELECT ApplicationNo, Age, CONCAT(Adrs, ' ', baranggay, ' ', City, ' ', Province, ' ', Zipcode) AS CompleteAddress FROM app WHERE City = 'Marikina' AND Age > 25;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

	ApplicationNo	Age	CompleteAddress
Edit Copy Delete	7	28	41 Mabini St. Nangka Marikina Metro Manila 1808
Edit Copy Delete	12	29	35 Mabilis St. Barangka Marikina Metro Manila 1803
Edit Copy Delete	26	31	Blk 9 Lot 6 Banal St. Barangka Marikina Metro Mani...

3. **The Length of Experience must be greater than 5 years for all applicants. Display the Applicantion Number, their last name, and their past work position with the length of service. Sort it by the position and length of service.**

```
SELECT A.ApplicationNo, LastName, Position, LengthService
FROM app A, workexp W
WHERE A.ApplicationNo = W.ApplicationNo
HAVING LengthService > 5
ORDER BY 3, 4;
```

```
SELECT A.ApplicationNo, LastName, Position, LengthService FROM app A , workexp W WHERE A.ApplicationNo = W.ApplicationNo HAVING LengthService > 5 ORDER BY 3, 4;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table

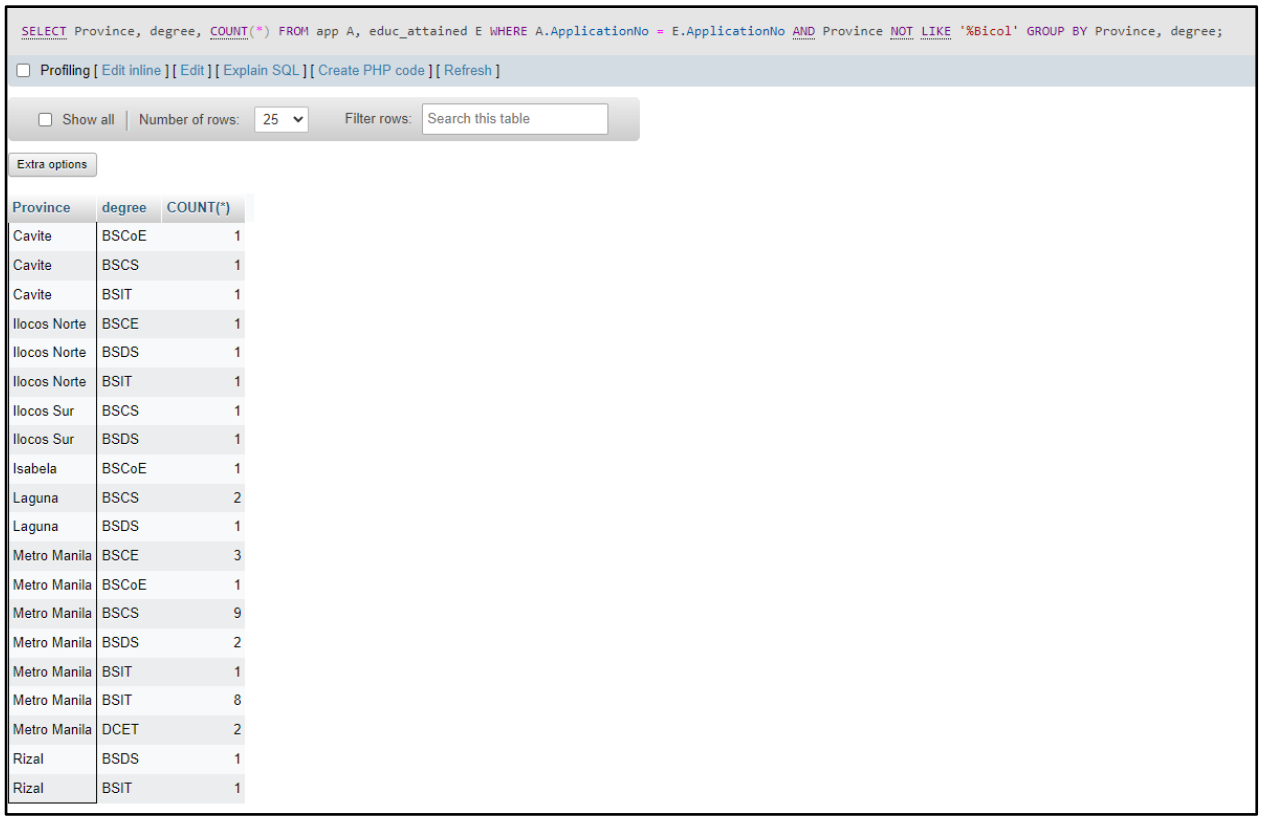
Extra options

ApplicationNo	LastName	Position	LengthService
21	Trudeau	Computer software engineer	6
22	Lincoln	Computer software engineer	6
20	Morrison	Computer Technician	7
3	Evans	Senior Programmer	7

DIFFICULT

1. **Count how many applicants there are in each Province per Degree. Display Province and the degree. Include only those applicants whose province is not from Bicol.**

```
SELECT Province, degree, COUNT(*)
FROM app A, educ_attained E
WHERE A.ApplicationNo = E.ApplicationNo AND Province NOT LIKE '%Bicol'
GROUP BY Province, degree;
```



```
SELECT Province, degree, COUNT(*) FROM app A, educ_attained E WHERE A.ApplicationNo = E.ApplicationNo AND Province NOT LIKE '%Bicol' GROUP BY Province, degree;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

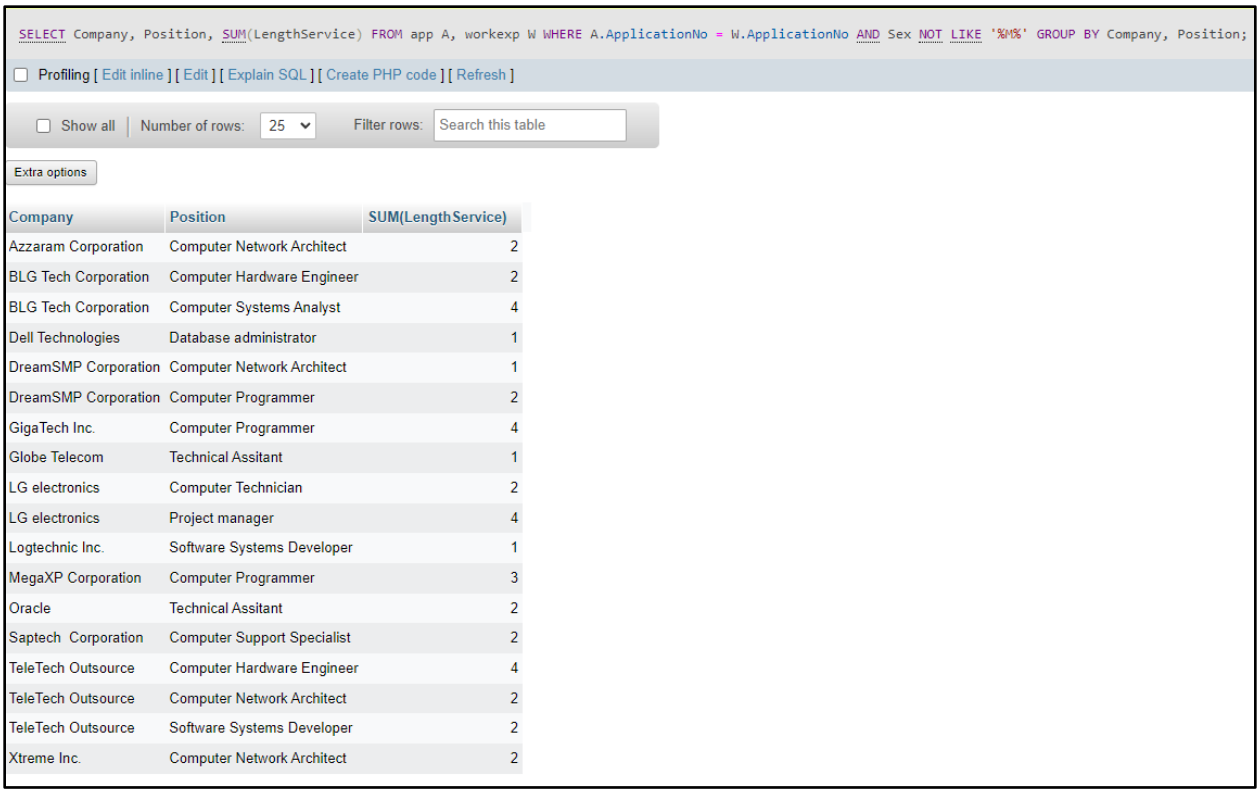
Show all | Number of rows: 25 Filter rows: Search this table

Extra options

Province	degree	COUNT(*)
Cavite	BSCoE	1
Cavite	BSCS	1
Cavite	BSIT	1
Ilocos Norte	BSCE	1
Ilocos Norte	BSDS	1
Ilocos Norte	BSIT	1
Ilocos Sur	BSCS	1
Ilocos Sur	BSDS	1
Isabela	BSCoE	1
Laguna	BSCS	2
Laguna	BSDS	1
Metro Manila	BSCE	3
Metro Manila	BSCoE	1
Metro Manila	BSCS	9
Metro Manila	BSDS	2
Metro Manila	BSIT	1
Metro Manila	BSIT	8
Metro Manila	DCET	2
Rizal	BSDS	1
Rizal	BSIT	1

2. **Sum up the Length of Service per company in each position. Do not include those who are males.**

```
SELECT  Company, Position, SUM(LengthService)
FROM app A, workexp W
WHERE A.ApplicationNo = W.ApplicationNo AND Sex NOT LIKE '%M%'
GROUP BY Company, Position;
```



```
SELECT Company, Position, SUM(LengthService) FROM app A, workexp W WHERE A.ApplicationNo = W.ApplicationNo AND Sex NOT LIKE '%M%' GROUP BY Company, Position;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

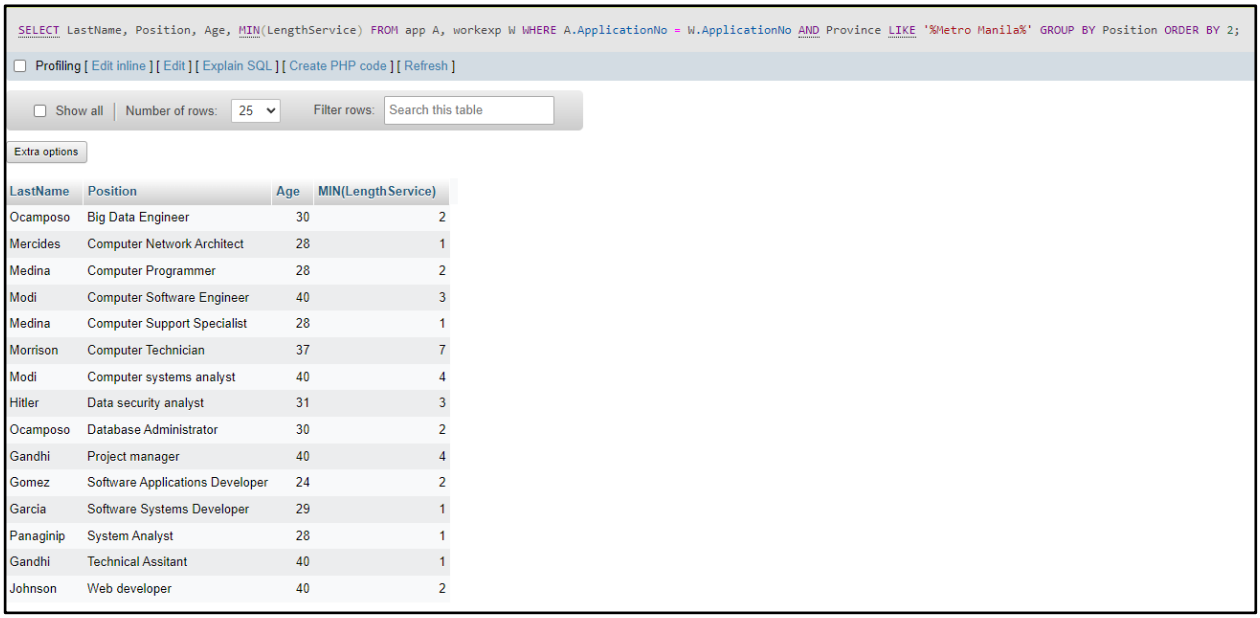
Show all | Number of rows: 25 Filter rows: Search this table

Extra options

Company	Position	SUM(LengthService)
Azzaram Corporation	Computer Network Architect	2
BLG Tech Corporation	Computer Hardware Engineer	2
BLG Tech Corporation	Computer Systems Analyst	4
Dell Technologies	Database administrator	1
DreamSMP Corporation	Computer Network Architect	1
DreamSMP Corporation	Computer Programmer	2
GigaTech Inc.	Computer Programmer	4
Globe Telecom	Technical Assitant	1
LG electronics	Computer Technician	2
LG electronics	Project manager	4
Logtechnic Inc.	Software Systems Developer	1
MegaXP Corporation	Computer Programmer	3
Oracle	Technical Assitant	2
Saptech Corporation	Computer Support Specialist	2
TeleTech Outsource	Computer Hardware Engineer	4
TeleTech Outsource	Computer Network Architect	2
TeleTech Outsource	Software Systems Developer	2
Xtreme Inc.	Computer Network Architect	2

3. **A hiring company is looking for aspiring applicants with a little work experience. Find out what is the minimum length of service of those applicants in each position. Display their last name and age, sort the length of service from lowest to highest. Included only are those who are living in the province of Metro Manila.**

```
SELECT  LastName, Position, Age, MIN(LengthService)
FROM app A, workexp W
WHERE A.ApplicationNo = W.ApplicationNo  AND Province LIKE '%Metro Manila%'
GROUP BY Position
ORDER BY 2;
```



```
SELECT LastName, Position, Age, MIN(LengthService) FROM app A, workexp W WHERE A.ApplicationNo = W.ApplicationNo AND Province LIKE '%Metro Manila%' GROUP BY Position ORDER BY 2;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

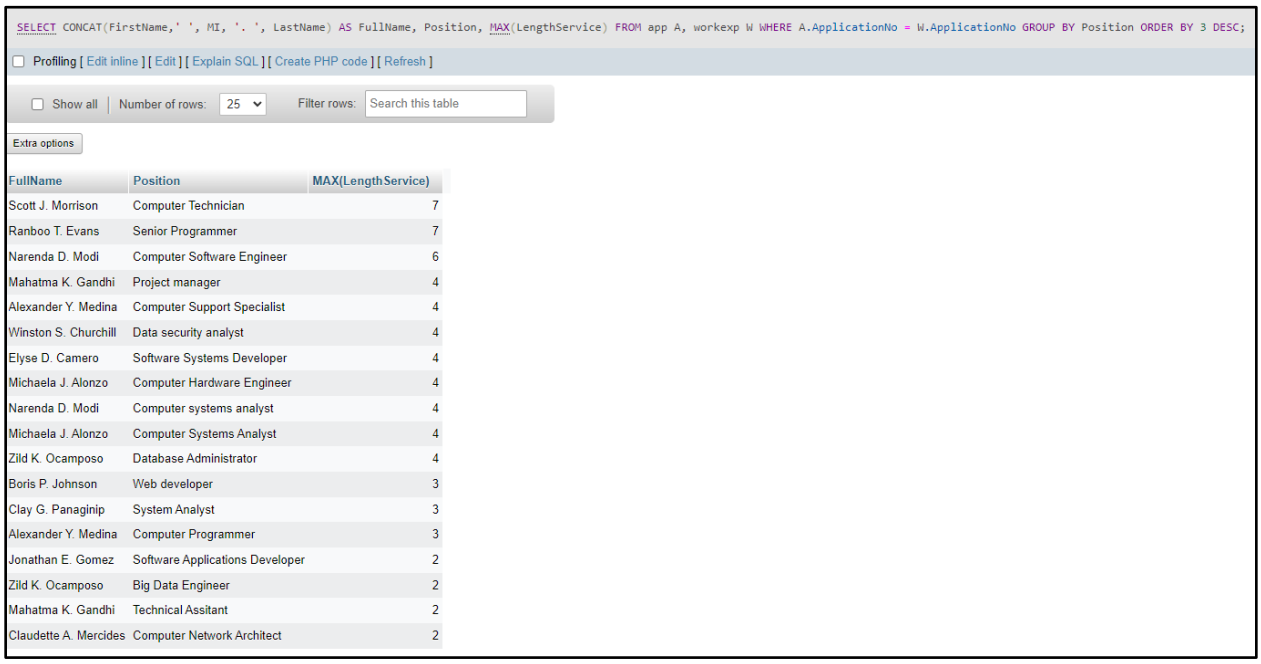
Show all | Number of rows: 25 Filter rows: Search this table

Extra options

LastName	Position	Age	MIN(LengthService)
Ocamposo	Big Data Engineer	30	2
Mercides	Computer Network Architect	28	1
Medina	Computer Programmer	28	2
Modi	Computer Software Engineer	40	3
Medina	Computer Support Specialist	28	1
Morrison	Computer Technician	37	7
Modi	Computer systems analyst	40	4
Hitler	Data security analyst	31	3
Ocamposo	Database Administrator	30	2
Gandhi	Project manager	40	4
Gomez	Software Applications Developer	24	2
Garcia	Software Systems Developer	29	1
Panaginip	System Analyst	28	1
Gandhi	Technical Assitant	40	1
Johnson	Web developer	40	2

4. **A business organization is looking for applicants with the highest length of work experience in each position. The Length of service should be displayed in a descending order. Also included in the display are their first name, middle inital, and last name, it should be concatenated as their Fullname.**

```
SELECT CONCAT(FirstName,' ', MI, '. ', LastName) AS FullName, Position, MAX(LengthService)
FROM app A, workexp W
WHERE A.ApplicationNo = W.ApplicationNo
GROUP BY Position
ORDER BY 3 DESC;
```



```
SELECT CONCAT(FirstName,' ', MI, '. ', LastName) AS FullName, Position, MAX(LengthService) FROM app A, workexp W WHERE A.ApplicationNo = W.ApplicationNo GROUP BY Position ORDER BY 3 DESC;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

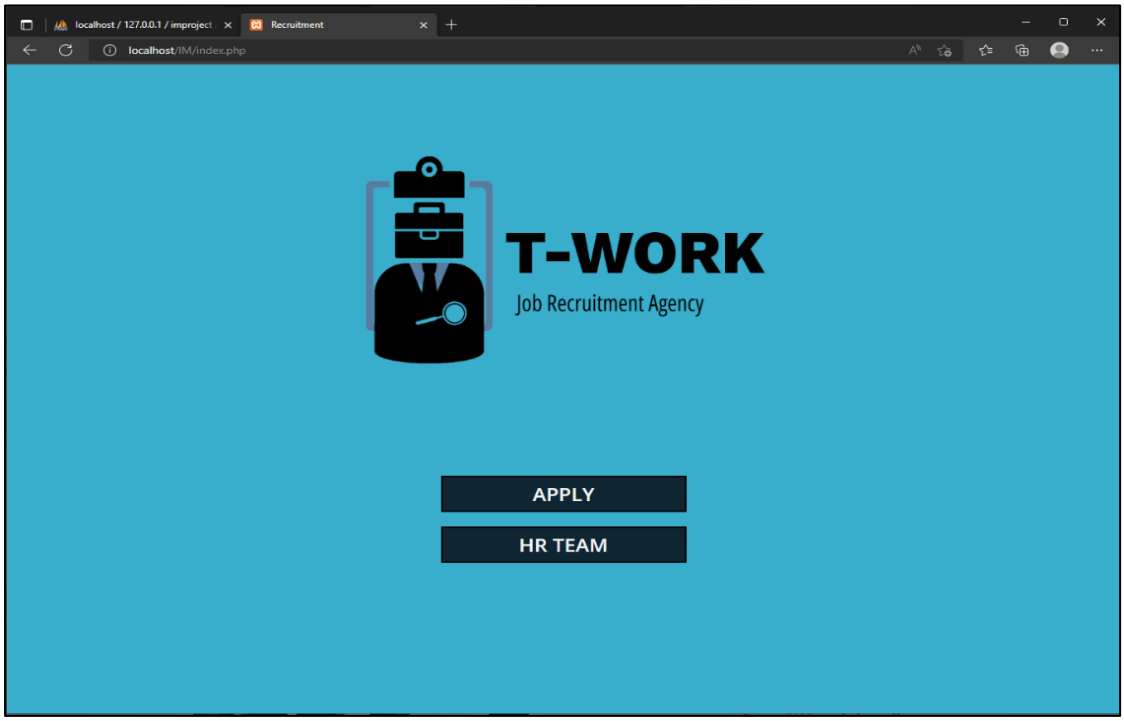
Show all | Number of rows: 25 Filter rows: Search this table

Extra options

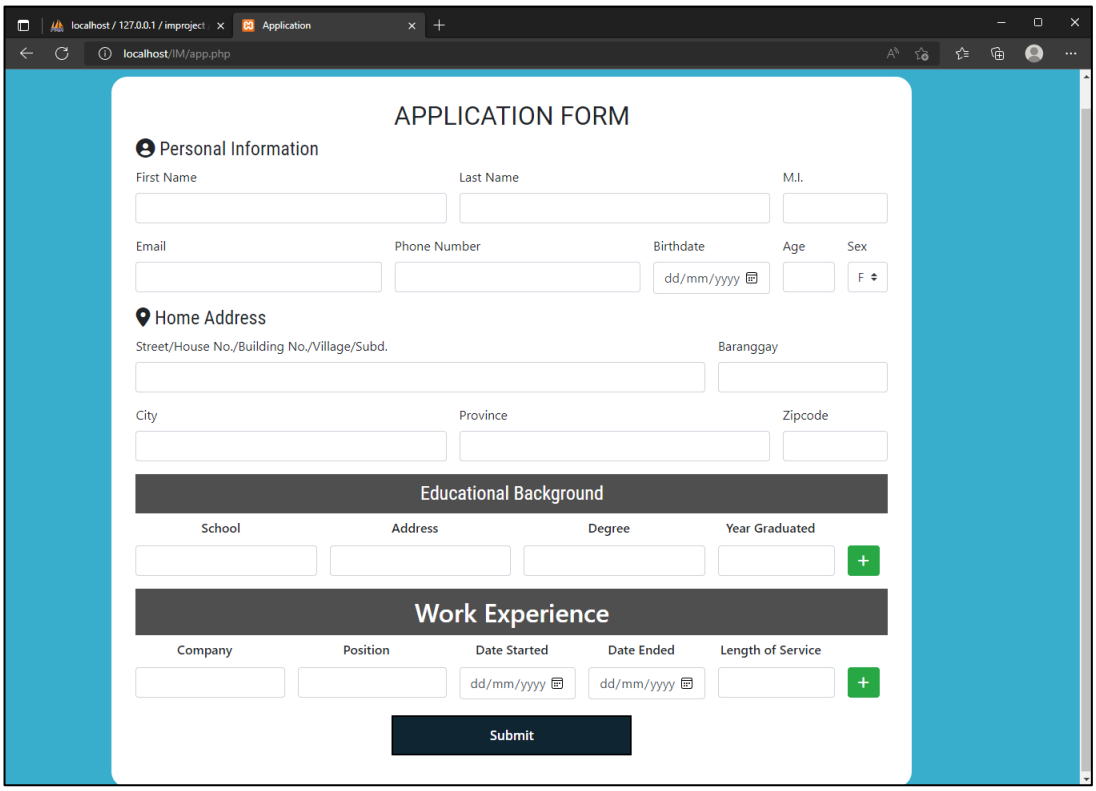
FullName	Position	MAX(LengthService)
Scott J. Morrison	Computer Technician	7
Ranboo T. Evans	Senior Programmer	7
Narenda D. Modi	Computer Software Engineer	6
Mahatma K. Gandhi	Project manager	4
Alexander Y. Medina	Computer Support Specialist	4
Winston S. Churchill	Data security analyst	4
Elyse D. Camero	Software Systems Developer	4
Michaela J. Alonzo	Computer Hardware Engineer	4
Narenda D. Modi	Computer systems analyst	4
Michaela J. Alonzo	Computer Systems Analyst	4
Zild K. Ocamposo	Database Administrator	4
Boris P. Johnson	Web developer	3
Clay G. Panaginip	System Analyst	3
Alexander Y. Medina	Computer Programmer	3
Jonathan E. Gomez	Software Applications Developer	2
Zild K. Ocamposo	Big Data Engineer	2
Mahatma K. Gandhi	Technical Assitant	2
Claudette A. Mercides	Computer Network Architect	2

VII. User Interfaces

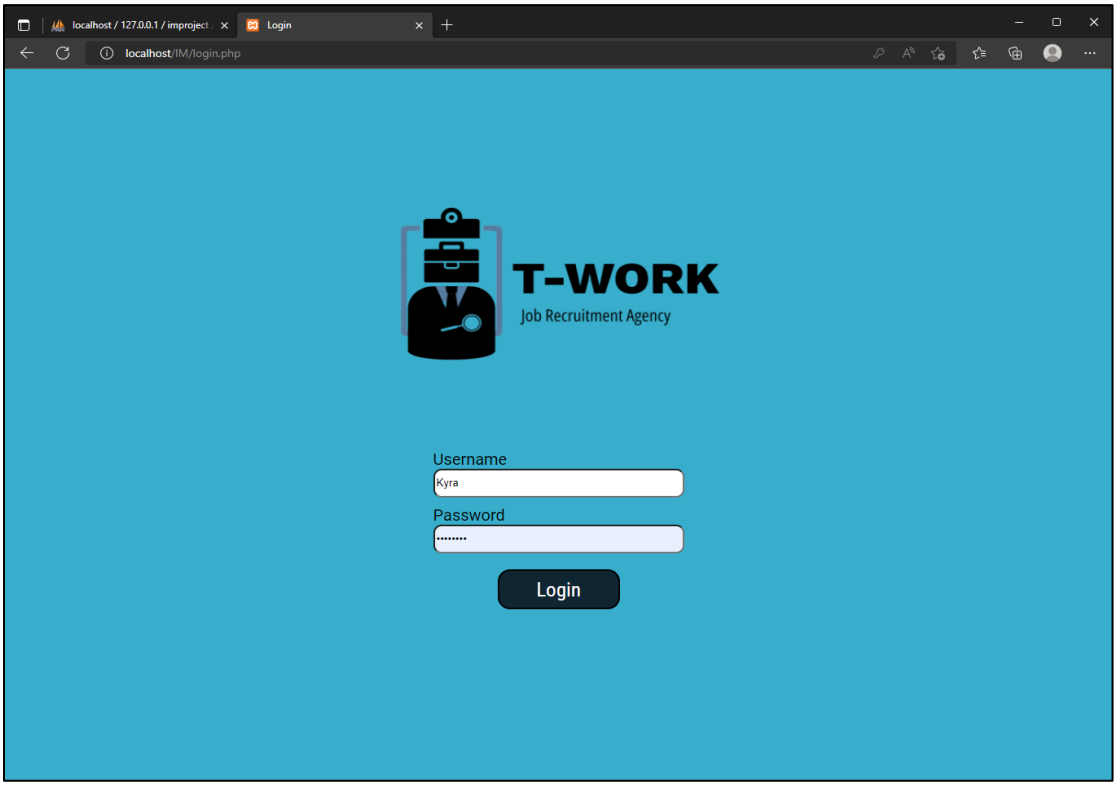
Home Page



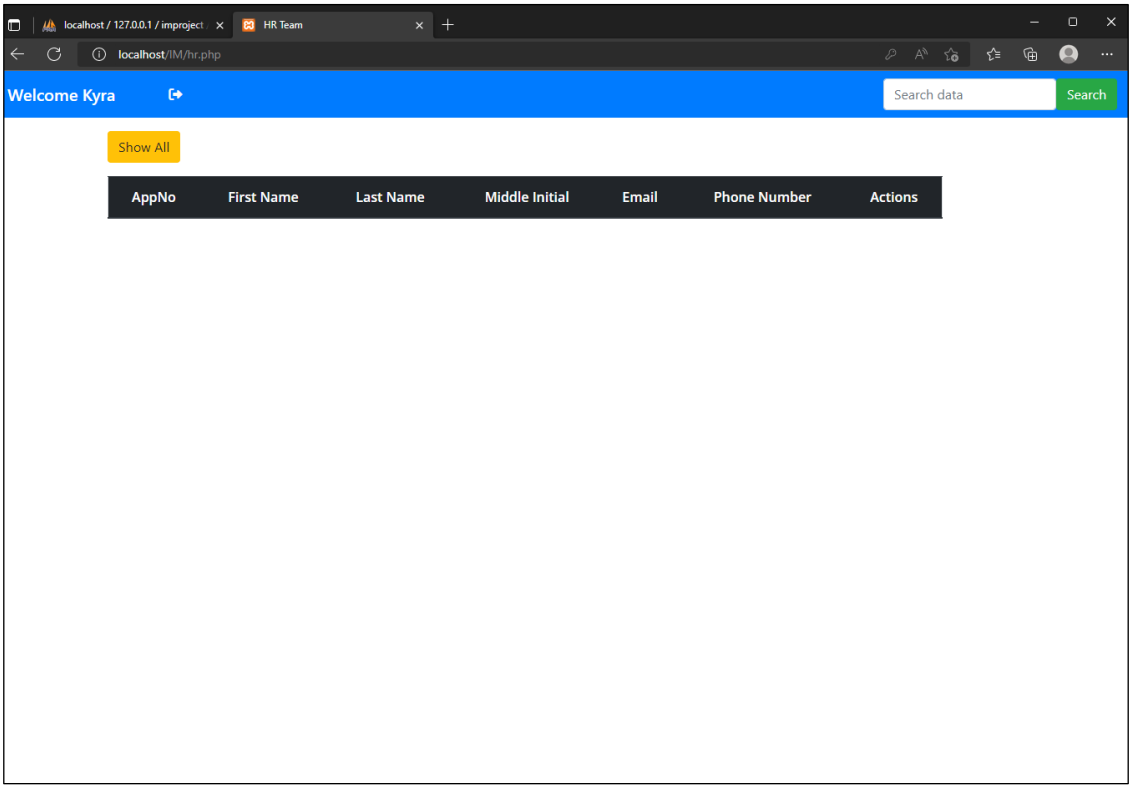
Apply Page

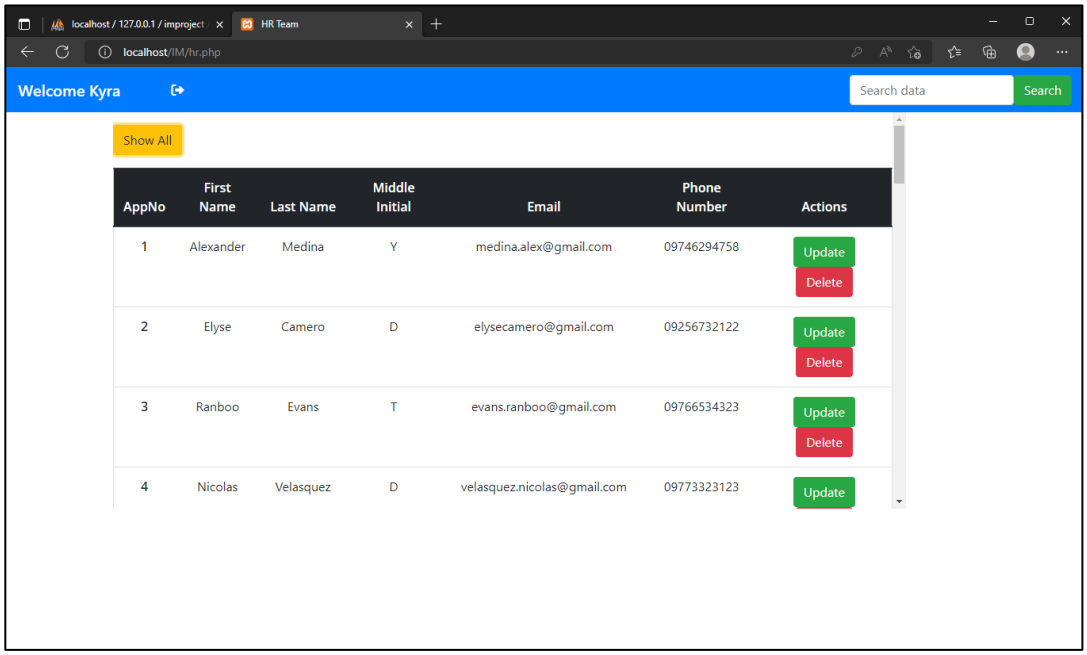


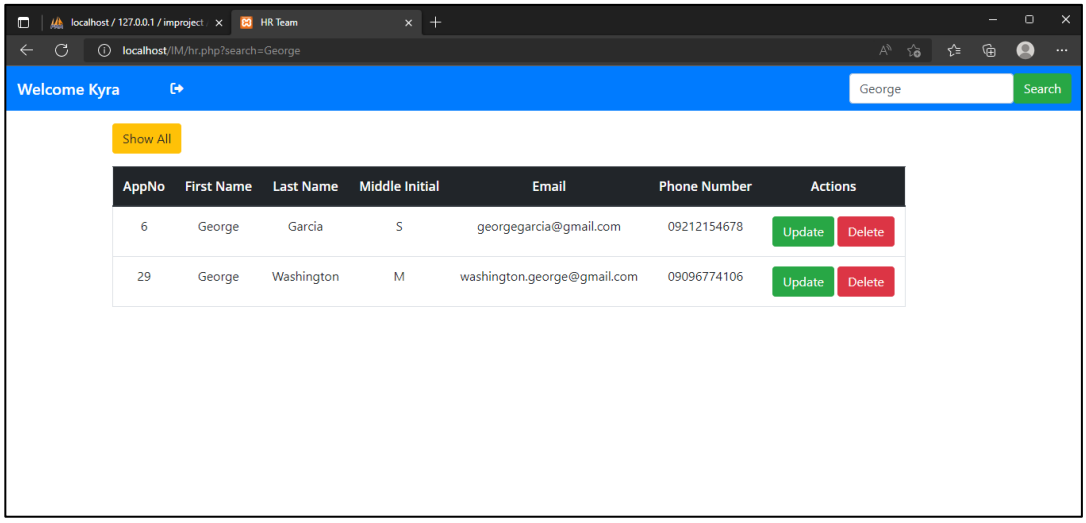
HRTeam Login Page

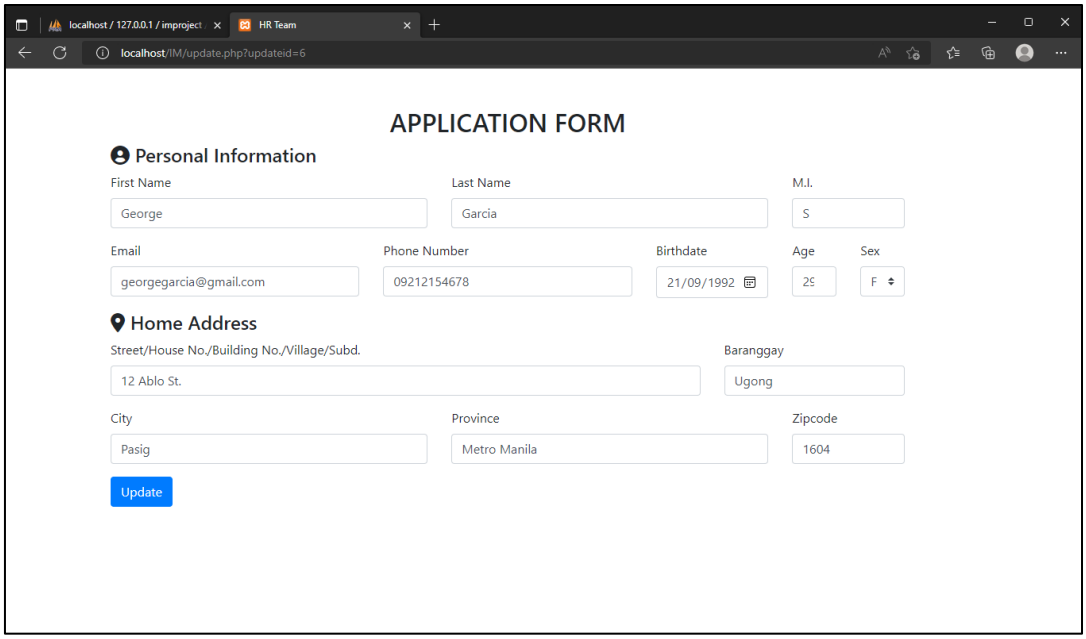


HR Page




localhost / 127.0.0.1 / improject
HR Team
localhost/IM/hr.php
Welcome Kyra
Search data
Search
Show All
AppNo
First Name
Last Name
Middle Initial
Email
Phone Number
Actions
1 Alexander Medina Y medina.alex@gmail.com 09746294758 Update Delete
2 Elyse Camero D elysecamero@gmail.com 09256732122 Update Delete
3 Ranboo Evans T evans.ranboo@gmail.com 09766534323 Update Delete
4 Nicolas Velasquez D velasquez.nicolas@gmail.com 09773323123 Update


localhost / 127.0.0.1 / improject
HR Team
localhost/IM/hr.php?search=George
Welcome Kyra
George
Search
Show All
AppNo
First Name
Last Name
Middle Initial
Email
Phone Number
Actions
6 George Garcia S georgegarcia@gmail.com 09212154678 Update Delete
29 George Washington M washington.george@gmail.com 09096774106 Update Delete


localhost / 127.0.0.1 / improject
HR Team
localhost/IM/update.php?updateid=6
APPLICATION FORM
Personal Information
First Name
George
Last Name
Garcia
M.I.
S
Email
georgegarcia@gmail.com
Phone Number
09212154678
Birthdate
21/09/1992
Age
Sex
F
Home Address
Street/House No./Building No./Village/Subd.
12 Ablo St.
Baranggay
Ugong
City
Pasig
Province
Metro Manila
Zipcode
1604
Update

VIII. Sample Data for All Tables

Table Name: APP

ApplicationNo	FirstName	LastName	MI	Email	PhoneNumber		
INT(6)	VARCHAR(50)	VARCHAR(50)	VARCHAR(4)	VARCHAR(50)	VARCHAR(15)		
Birthdate	**Age**	**Sex**	**Adrs**	**Barangay**	**City**	**Province**	**Zipcode**
DATE	INT(3)	VARCHAR(1)	VARCHAR(100)	VARCHAR(20)	VARCHAR(20)	VARCHAR(20)	INT(5)

Valid values for Sex are F and M.

Table Name: EDUC_ATTAINED

ApplicationNo	EducID	School	School_Add	Year_Grad	DEGREE
INT(11)	INT(11)	VARCHAR(100)	VARCHAR(100)	INT(4)	VARCHAR(100)

Table Name: WORKEXP

ApplicationNo	WorkID	Company	Position	DateStarted	DateEnded	LengthService
INT(11)	INT(11)	VARCHAR(50)	VARCHAR(50)	DATE	DATE	DOUBLE