



SL1 Mini Project Report Of
**U.S. EMBASSY DATABASE
MANAGEMENT SYSTEM**

A.Y. 2020-2021

Submitted by

33155 Shreyas Agrawal

33158 Priyadarshan Todmal

33161 Abhishek Velankar

33164 Chandrakantesh More

Under the guidance of

Prof. J. K. Kamble

Department of Information Technology,
Pune Institute of Computer Technology

Abstract

The current system is manual, this system is slow, time consuming and it is very difficult for each person to make an application. Users inquire about the process through phones and it is very difficult for the user to remember all the details. It is very difficult to calculate how many people are registered. This requires quite a lot of time and wastage of money as it requires quite lot of manpower to do. So, our main objective was to automate the process of grating of visa, provide services to U.S> nationals, hence minimize errors resulting from manual system operations. The Embassy Management System designed is developed using HTML, CSS, JS for front send, JSP and JDBC for backend connectivity and MySQL as the Database Management system, with all the code written in Java programming language. By virtue of this project, we were able to implement Relational database management concepts, functionalities and applications, as we learn it in the current semester. Also, we got to enrich our knowledge about Java Programming as we design the User Interface of this project. Lastly, we also got to explore about current database management system and study the pro's and con's of it in the embassy system.

Acknowledgement

We are overwhelmed in all humbleness and gratefulness to acknowledge our sincere gratitude to all those who have helped us put our ideas to perfection and have assigned tasks well above the level of simplicity and into something concrete and unique. We wholeheartedly thank **Prof. J.K. Kamble** for having faith in us, and for continuously motivating us to do better.

We thank **Dr. A. M. Bagade** for providing us with the opportunity to work on this project, and for his valuable suggestions. With the help of his brilliant guidance and encouragement, we were able to complete our tasks correctly and were up to the mark in all the assigned tasks. We are also grateful to our parents and friends for their continuous love, support and care for us. During the process, we got a chance to see the stronger side of our technical and non-technical aspects and strengthen our concepts of Database Management System & explore Java Programming.

Contents

1 Introduction

1.1 Purpose.....	5
1.2 Scope	5
1.3 Developers' Responsibilities: An Overview.....	6

2 System Design

2.1 ER Model	7
2.2 Schema Description	8
2.3 Table Description	9

3 System Implementation

3.1 Hardware and Software Platform Description.....	10
3.2 Tools Used	10

4 Project Demonstration (Screen Shots)

5 Future Work / Extension.....	19
---------------------------------------	-----------

6 Conclusion.....	20
--------------------------	-----------

7 References	21
---------------------------	-----------

1.Introduction

1.1 Purpose

As the embassy plays a crucial role in the diplomatic relations as well as serving the base country's nationals we were motivated to create a database management system for the same.

Also in present times of pandemic when international relations have a high priority , many citizens wish to travel back home , foreign experts may want to travel to aid in health research and some to solve the rising tensions over international disputes an embassy has to store , process, update and provide essential data.

1.2 Scope

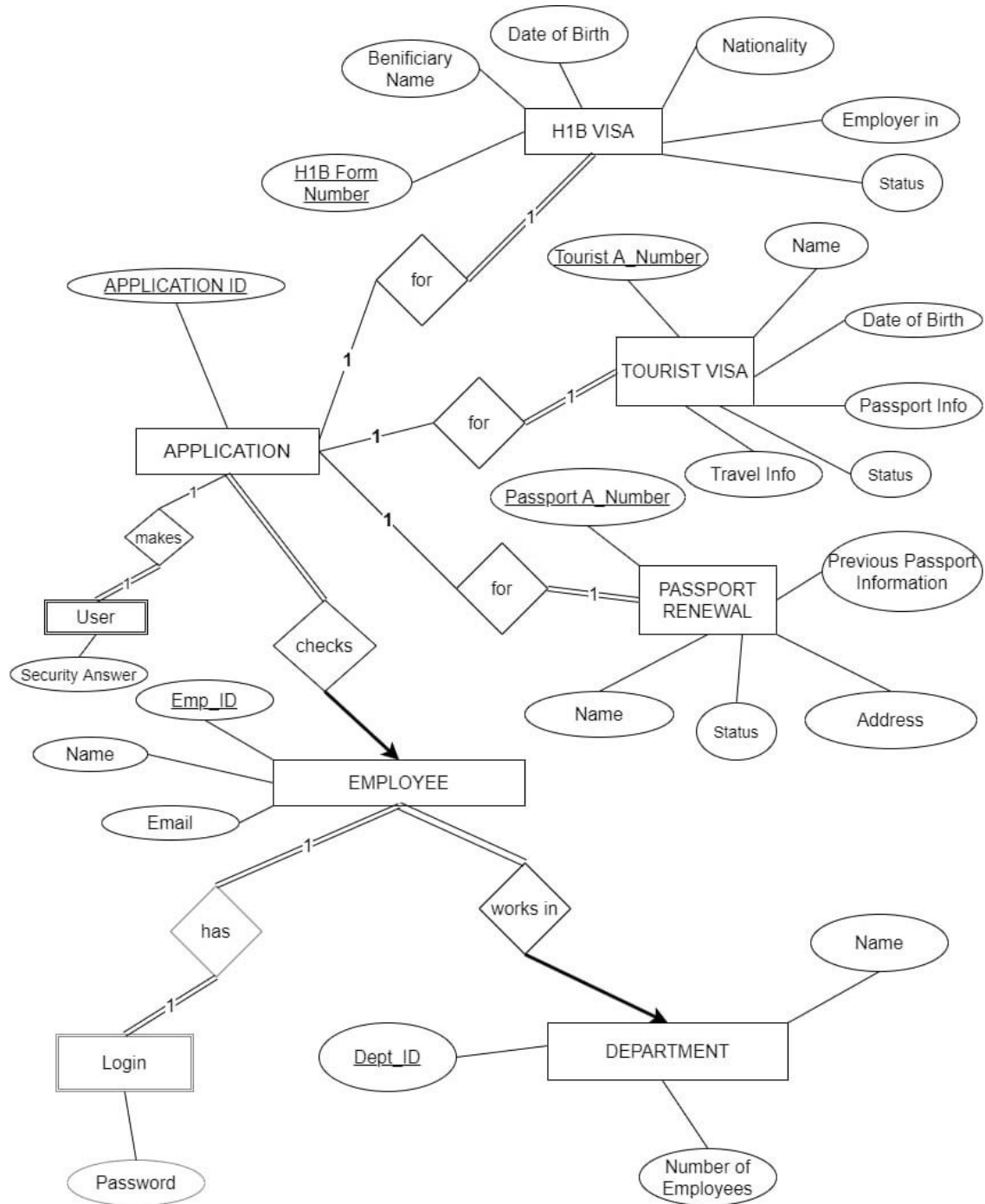
- US nationals:
 - Passport renewal
 - registration of births and deaths
- Foreign Nationals:
 - VISA application log
 - Granting permission
- Important Indian and Foreign National (people and private organizations such as agencies, companies and firms)

1.3 Developers' Responsibilities: An Overview

- Researching, designing, implementing and managing software programs.
- Testing and evaluating the program
- Identifying areas for modification in existing
- programs and subsequently developing these modifications.
- Writing and implementing efficient code.
- Determining operational practicality.
- Developing quality assurance procedures.
- Deploying software tools, processes, and metrics.
- Maintaining and upgrading existing systems.
- Training users.
- Working closely with other developers, UX designers, business, and systems analysts.

2. System Design

2.1 ER Diagram



2.2 Schema Description

applications (app_id, emp_id, H1B Form Number, Tourist A_number, Passport A_Number)

departments (dept_id, dept_name, no_of_emp)

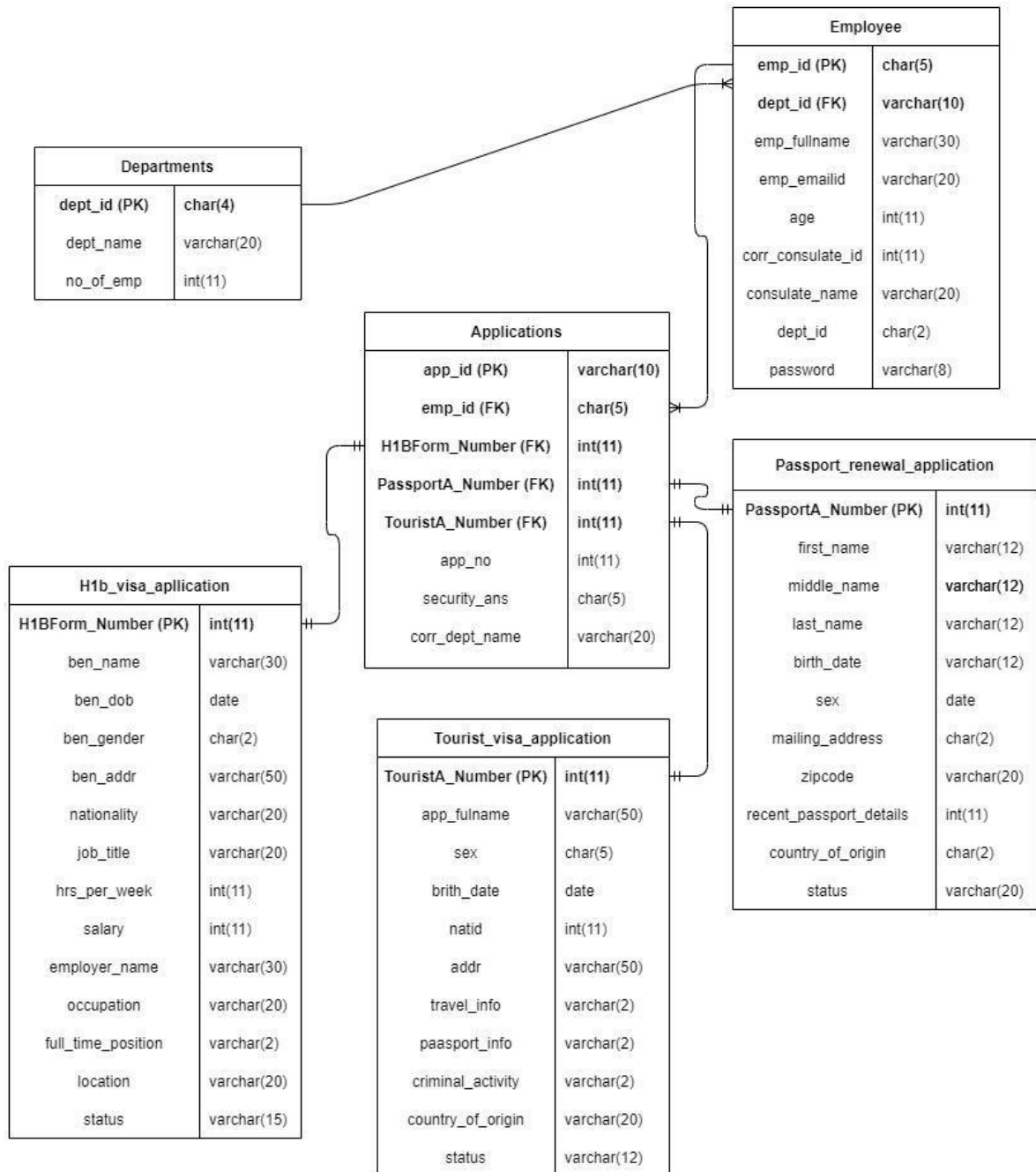
employee (emp_id, dept_id, emp_fullname, emp_emailid, age, corr_consulate_id, consulate_name, password)

h1b_visa_application (H1B Form Number, ben_name, ben_dob, ben_gender, ben_addr, nationality, job_title, hrs_per_week, salary, employer_name, occupation, full_time_position, location, status)

tourist_visa_application (Tourist A_number, appl_fullname, sex, birth_date, natid, addr, travel_info, passport_info, criminal_activity, country_of_origin, status)

passport_renewal_application (Passport A Number, first_name, middle_name, last_name, birth_date, sex, mailing_address, zipcode, recent_passport_details, occupation, status)

2.3 Table Description



3.System Implementation

2.1 Hardware and Software Platform Description

Hardware Platform Description:

- 2 vCPUs
- 1 GB RAM
- 3 GB HDD

Software Platform Description

- Hosted via Ubuntu 18.04 LTS
- Implemented on Eclipse Java IDE

2.2 Tools Used

Front End

- HTML, CSS, Js

Back End

- JSP + JDBC connectivity
- Java

Database


- MySQL

4.Project Demonstration (Screen Shots)

4.1)HOME PAGE


localhost:8080/Mysq... x +

localhost:8080/MysqTest/templates/home.html 130%

 U.S. Embassy & Consulates
India

Air Quality Data: U.S. Embassy and Consulates' air quality monitors measure PM 2.5 data.


Home Visas U.S. Citizen Services View Status **Our Relationship** Education & Culture Employee login


 Secretary of Defense Mark T. Esper meets with Minister Rajnath Singh

localhost:8080/MysqTest/templates/home.html#/heathcare.html


localhost:8080/Mysq... x +

localhost:8080/MysqTest/templates/home.html 130%


 Secretary of Defense Mark T. Esper meets with Minister Rajnath Singh



U.S. Mission India NowCast Air Quality Index The U.S. Embassy and Consulates' air quality monitors measure airborne fine particulate matter (commonly referred to as PM_{2.5}).

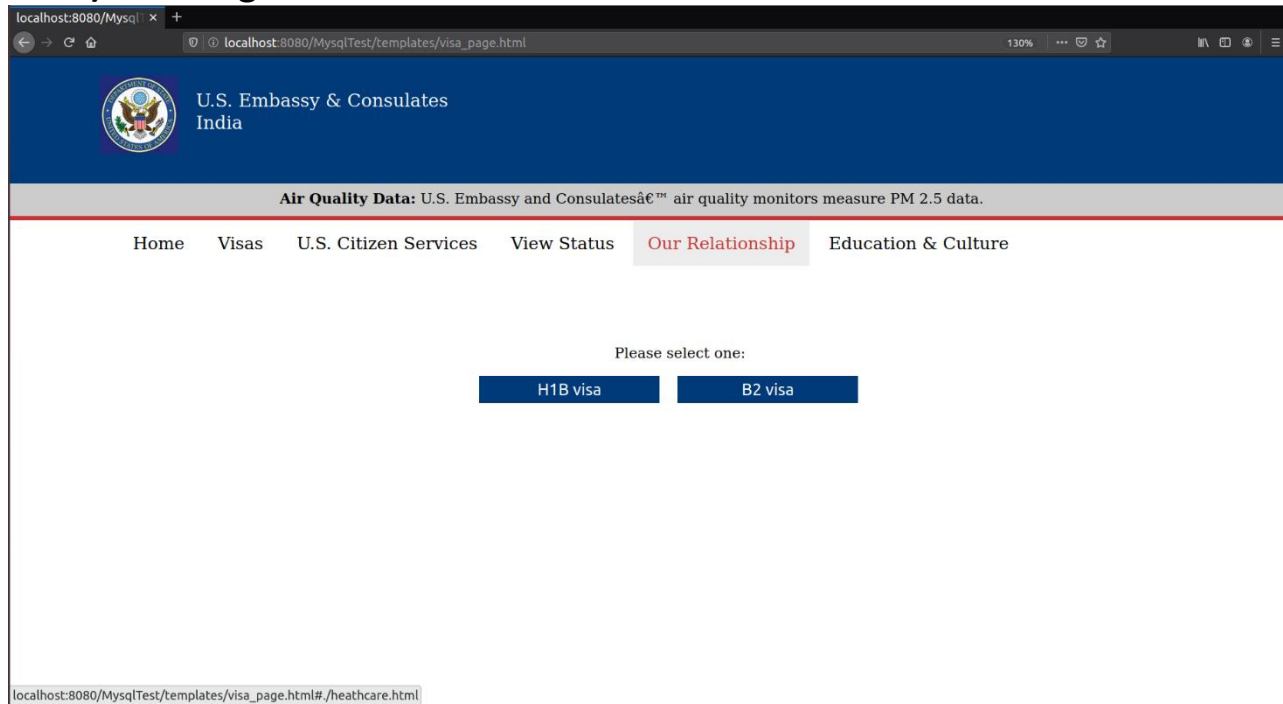


Weather Alert U.S. Consulate General Chennai Tropical Cyclone Development November 23, 2020 Location: Puducherry, Tamil Nadu Event: A tropical depression in the Bay of Bengal is expected to strengthen into a tropical cyclone.

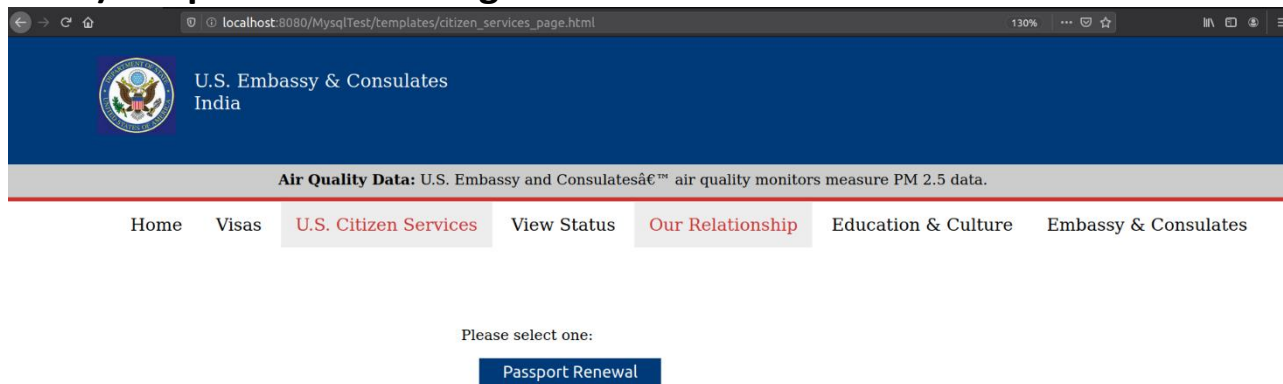


The U.S. Government, through the U.S. Agency for International Development (USAID), is donating 15 new, state-of-the-art ventilators to the Royal Government of Bhutan to assist.

4.2.1)Visas Page



4.2.2)Passport Renewal Page



4.3) Create Visa Application after selecting a visa type (Application ID displayed which is system generated)

localhost:8080/Mysq...
localhost:8080/MysqTest/templates/h1b_register.jsp

U.S. Embassy & Consulates
India

Air Quality Data: U.S. Embassy and Consulates' air quality monitors measure PM 2.5 data.

Home Visas U.S. Citizen Services View Status Our Relationship Education & Culture

Your registration ID is:
A2K2027

Please select a security question:
In which city did you have your first job?

Answer: Bangalore

Submit

4.4) Tourist Visa Form after submitting above page

INFORMATION

Enter the name as listed in your passport. If only one name is listed in your passport, enter that name.

Enter as per your birth certificate. If day or month is unknown, enter as shown in the passport. Format: ddmm/yyyy

Your National ID Number is a unique number that your government provides. The U.S. Government provides unique numbers to those who seek employment (Social Security Number) or pay taxes (Taxpayer ID).

Personal Information

First Name: Vinay Middle Name: Prabhakar Last Name: Pendharkar

Sex: Male ☒ Female ☐

Marital status: Married

Date of Birth: 16/10/2020

Place of Birth: Pune

Country/Region of Origin: India

National Identification Number: A8K98889310

Back Save Next

INFORMATION

Travel Information

Date of Arrival in U.S.
01 Jan 2020

Arrival City
New York

Date of Departure from U.S.
19 Jan 2020

Departure city
New York

Person/Entity Paying for Your Trip :
Self

Address Where You Will Stay in the U.S.

Street Address (line 1)
Street 2700

Street Address (line 2) optional
Farnum Road

City
New York

State
New York

Zip Code (if known)
10019

Back Save Next

INFORMATION

Address and Phone Information

Home Address

Street Address (line 1)
397 -A , Broad Society

Street Address (line 2) optional
Prabhakar Lane

City
Pune

State
Maharashtra

Country/Region of Origin:
India

You must provide a primary phone number. The primary phone number should be the phone number at which you are most likely to be reached, this could be a land line or a cellular/mobile number. If you have an additional land line or a cellular/mobile number please list that as your secondary phone number.

Primary Phone Number
8987898789

You must provide an email address. The email address you provide will be used for correspondence purposes. Provide an email address that is secure and to which you have reasonable access.

Email Address
srnu@gmail.com

Back Save Next

INFORMATION

Help: Passport/Travel Document Number Enter the information on the travel document you will be using when traveling to the U.S. Your travel document should be a valid, unexpired passport or other valid, unexpired documentation that is sufficient to establish your identity and nationality.

Help: Expiration Date In most cases your passport/Travel Document must have at least six months of validity beyond the date of your next appearance before your arrival in the United States.

Passport and Security Information

Passport/Travel Document Type

Passport/Travel Document Number

Where was the Passport/Travel Document issued?

City

State/Province

Country/Region

Issuance Date

Expiration Date

Security Information

Have you ever been arrested or convicted for any offense or crime, even though subject of a pardon, amnesty, or other similar action?

Yes ☐ No ☒

Have you ever recruited, or engaged in a conspiracy to recruit, any one resulting in criminal substance?

Yes ☐ No ☒

Form Submitted Successfully

localhost:8080/MySQLTest/templates/h1b_control.jsp 130%

Data is successfully inserted! [Go to Homepage](#)

4.5)Check form Status

localhost:8080/MysqlTest/templates/statuspage.html

U.S. Embassy & Consulates
India

Air Quality Data: U.S. Embassy and Consulates' air quality monitors measure PM 2.5 data.

Home Visas U.S. Citizen Services View Status **Our Relationship** Education & Culture

APPLICATION FORM STATUS

Enter Application ID :
A2K2027

Enter Answer to the security question you chose:
Banglore

Submit

localhost:8080/MysqlTest/templates/statuspage.html#heathcare.html

localhost:8080/MysqlTest/templates/display_status.jsp

U.S. Embassy & Consulates
India

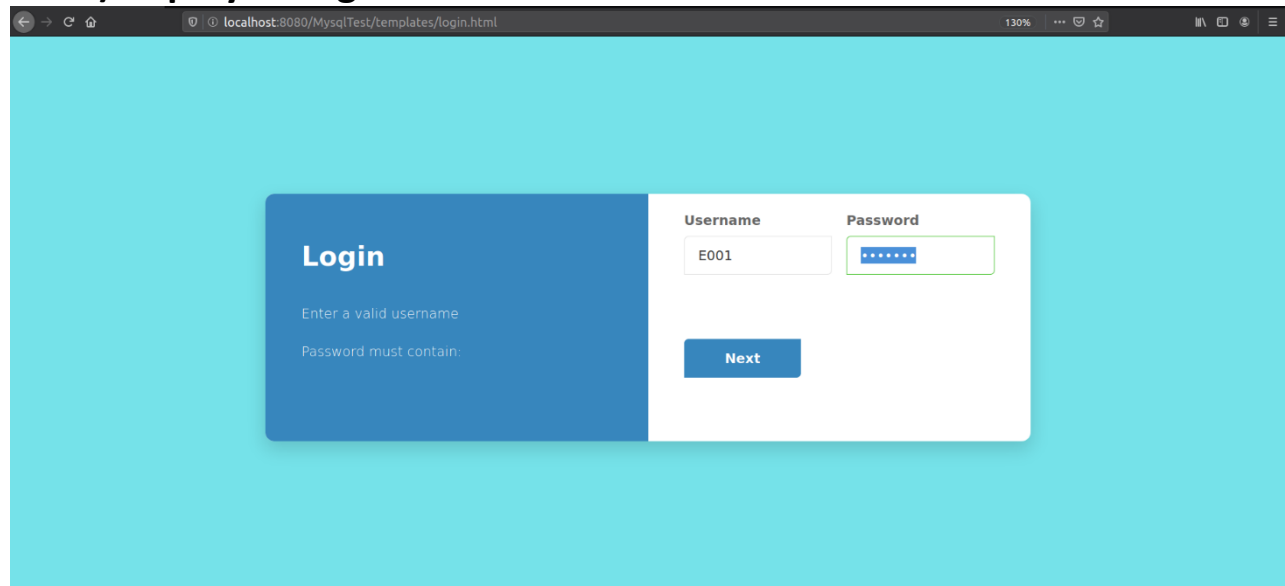
Air Quality Data: U.S. Embassy and Consulates' air quality monitors measure PM 2.5 data.

Home Visas U.S. Citizen Services View Status Our Relationship Education & Culture

APPLICATION FORM STATUS

Application id : A2K2021
Applicant name : Aditya Velankar
Status : in proccess

4.6.1)Employee Login



login.html

130%

Login

Enter a valid username

Password must contain:

Username: E001

Password: [masked]

Next

4.6.2) Employee can see applications assigned to him/her



emp_page.jsp

130%

U.S. Embassy & Consulates India

Air Quality Data: U.S. Embassy and Consulates' air quality monitors measure PM 2.5 data.

Our Relationship Education & Culture Embassy & Consulates Logout

H1B VISA



Applicant ID: A2K2001
Full name: Sandeep Singh
Nationality: Indian
Address: Mum, Mh
Age: 30
Sex: M


Is it a full and clear image? Yes ☐ No ☐

Does the name match as given in the papers? Yes ☐ No ☐

Is the national eligible for H1B visa? Yes ☐ No ☐
Does the address match as given in the papers? Yes ☐ No ☐

4.6.3) Employee can view the applicants details and Accept/Reject the application

localhost:8080/MysqlTest/templates/emp_page.jsp



Applicant ID: A2K2001
Full name: Sandeep Singh
Nationality: Indian
Address: Mum, Mh
Age: 30
Sex: M
Job Title: Soft Engg
Occupation: Sales
Location: Seattle, WA
Full Time position: YES

Is it a full and clear image? Yes ☐ No ☐

Does the name match as given in the papers? Yes ☐ No ☐

Is the national eligible for H1B visa? Yes ☐ No ☐

Does the address match as given in the papers? Yes ☐ No ☐

Rate the importance of the occupation High ☐ Medium ☐ Low ☐

Rate the importance of the location High ☐ Medium ☐ Low ☐

Rate the importance of position High ☐ Medium ☐ Low ☐

5.Future Scope

In the future, we decide to add a prediction system using sklearn trained on the collected H1B dataset. We decide to connect the python script to the forms using flask.

In the future we will also decide the status based on the current address due to the current covid-19 scenario.

The applicants can be notified using e-mail and phone about the visa decisions.

Finally, feedback from customers can be taken and stored in database, so that the management can monitor it precisely, and improve on shortcomings.

6.Conclusion

We have implemented an Embassy Management system. It mainly helps admins to keep record of all the applications. Using JSP and JDBC as Backend and MySQL as Database Storage we performed basic to advance database operations required. With some new concepts like procedured, triggers, views we successfully executed a java-based project. We are extremely grateful to Prof. J. K. Kamble , Dr. Emmanuel M., Dr. Anant Bagade and the Pune Institute of Computer Technology for this opportunity and would like to thank them wholeheartedly.

7.References

- <https://in.usembassy.gov/>
- <https://in.usembassy.gov/visas/>
- <https://in.usembassy.gov/u-s-citizen-services/>
- <http://cdn.ustraveldocs.com/in/in-loc-post.asp>
- <https://travel.state.gov/content/travel/en/us-visas/employment/temporary-worker-visas.html>
- <https://www.path2usa.com/h1b-visa-guide>