Report: Final Report
Group #7: Alicia Martinez, Maden Edaugal, Suamy Hernandez
Due Date: 12/4/23

Final Report Outline for Church Conference Website Database Project

Church Conference Website Report

1. Executive Summary

- **Objective**: Develop a web-based application to facilitate the registration and management of multiple church conferences. Online registration for attendees and admins must be available. Apps must also be able to support both Admin and Regular users.
- Key technologies used: MySQL, HTML, Apache, and PHP are the four technologies that we utilized for this project.

2. Introduction

- In this project, one will develop a web-based application to facilitate the registration and management of multiple church conferences. The final web application will feature online registration for attendees and administrative capabilities for managing multiple church conferences.

3. Project Specification

- *Description of the web application's features for both Admin and Regular users.*
    - Regular Users will be able to navigate the website Information and be able to Register for the Conference as an Attendee. Admin users will be able to access information regarding volunteers and Attendees as well as Congregations Attending.

4. Database Design

- **ER Diagram:**

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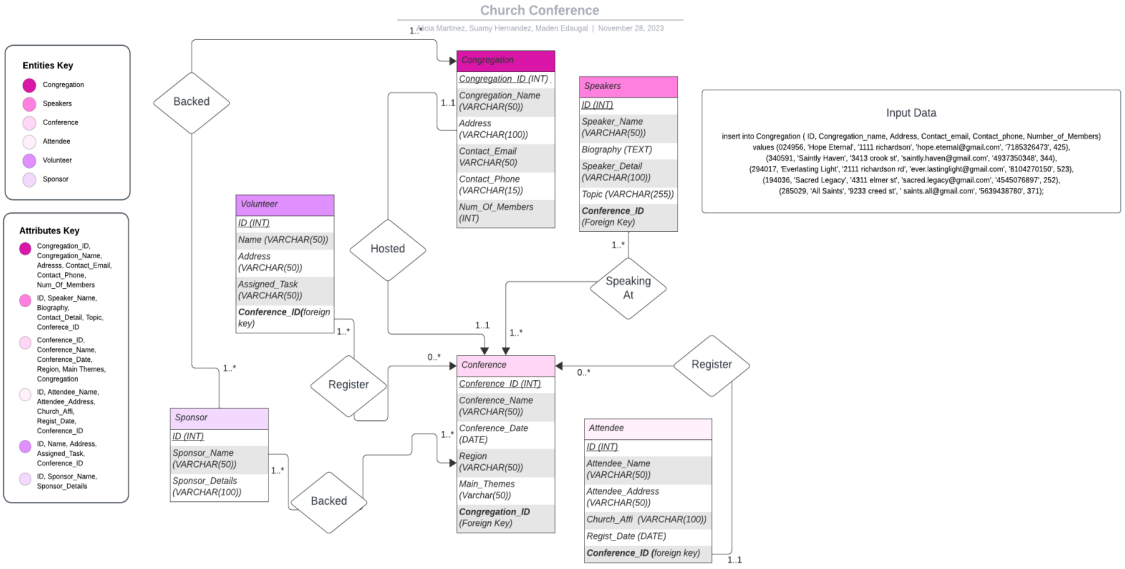
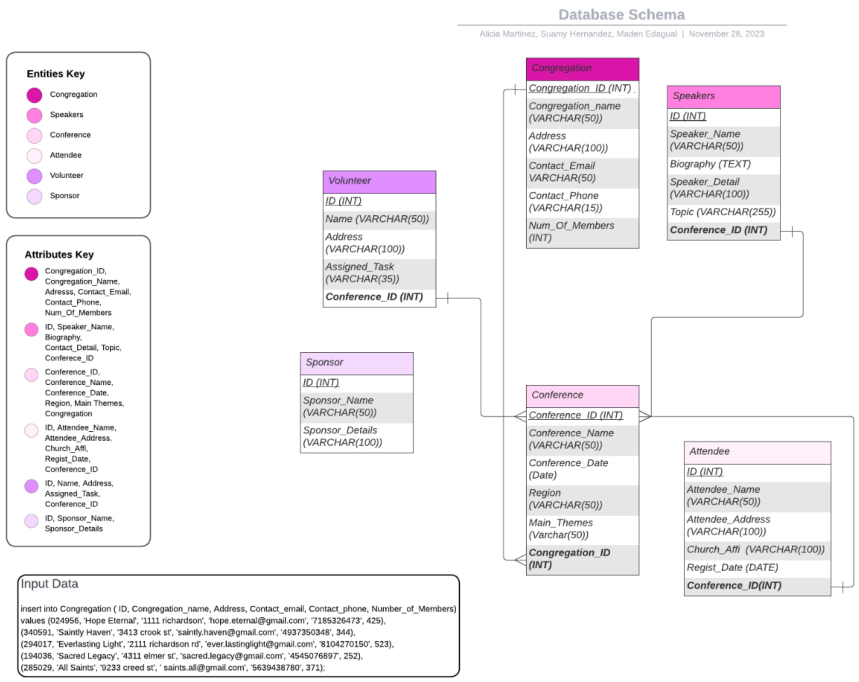


- **Database Schema:**



- **Database Entities and Attributes**: The six primary entities are Congregation, Speakers, Volunteer, Sponsor, Conference, and Attendee. Congregations have the following attributes: Congregation_ID, Congregation_name, Address, Contact_Email, Contact_Phone, and Num_Of_Members. Speakers have the following attributes: ID, Speaker_Name, Biography, Speaker_Detail, Topic, Conference_ID (foreign key from Conference). Volunteer have the following attributes: ID, Name, Address, Assigned Task and Conference_ID (foreign key from Conference). Sponsor have the following

attributes: ID, Sponsor_Name,and Sponsor_Details. Conference have the following attributes: Conference_ID, Conference_Name, Conference_Date, Region, Main_Themes, Congregation ID (foreign key from Congregation). Attendees have the following attributes: ID, Attendee_Name, Attendee_Address, Church_Affi, Regist_Date, and Conference_ID (foreign key from Conference).

- **Database Relationships**: Speakers speak at a Conference hence they're dependent on the Conference to specify who's speaking where. The congregation hosts conferences. Both attendees and volunteers register for specific conferences. Sponsors may back specific conferences. The congregation is also sponsored by sponsors. The relationships among the six attributes help improve its structure.
- **Database Constraints**: Each entity consists of primary keys which will be used as a unique identifier that can be used in the future. Some entities also consist of foreign keys which protects referential integrity as it doesn't add speakers to non-existent conferences and vice versa. A few constraints like not null are also used to make a field mandatory like the name and contact details for a speaker. These constraints uphold relations and data integrity.

5. Implementation Details

- **Relational Database Schema and Constraints**: *Detailed explanation of the schema, including tables, fields, primary keys, foreign keys, and other constraints.*

  Congregation
  - congregation_ID: The constraint has to be not null as it is a primary key. It also has an integer field type.
  - congr_Name: The field type is varchar(50). The maximum is 50 characters for a name.
  - congre_Addressi: The field type is varchar(95). The maximum is 95 characters for address.
  - Contact_email: The field type is varchar(50). The maximum is 50 characters for an email address.
  - Contact_phone: The field type is varchar(15). The maximum is 15 characters.
  - Num_of_members: The field type is an integer.

  Conference
  - conference_ID: The constraint has to be not null as it is a primary key. It also has an integer field type.
  - conf_Name: The field type is varchar(50). The maximum is 50 characters for a name.
  - conf_Date: The field type is Date.

- Region: The field type is varchar(45). The maximum is 45 characters for a region.
- Main_theme: The field type is varchar(50). The maximum is 50 characters for a main theme.
- Congregation_ID (foreign key): Congregation_ID is a foreign key of the sponsor. Each conference is backed by a sponsor.

Speaker

- speaker_ID: The constraint has to be not null as it is a primary key. It also has an integer field type.
- speaker_Name: The field type is varchar(50). The maximum is 50 characters for a name.
- Biography: The field type is varchar(100). The maximum is 100 characters for a biography.
- Speaker_contact: The field type is varchar(100). The maximum is 100 characters for a contact detail.
- Topic: The field type is varchar(50). The maximum is 50 characters for a topic.
- Conference_ID (foreign key): Conference_ID is a foreign key of a conference. Each speaker is speaking at a conference.

Attendee

- attendee_ID: The constraint has to be not null as it is a primary key. It also has an integer field type.
- attendee_Name: The field type is varchar(50). The maximum is 50 characters for a name.
- attendee_Address: The field type is varchar(100). The maximum is 100 characters for an address.
- Church_affi: The field type is varchar(100). The maximum is 100 characters for a church affiliation.
- Regist_date
- Conference_ID (foreign key): Conference_ID is a foreign key of a conference. Each attendee can register for a conference.

Volunteer

- volunteer_ID: The constraint has to be not null as it is a primary key. It also has an integer field type.
- volun_Name: The field type is varchar(50). The maximum is 50 characters for a name.
- volun_Address: The field type is varchar(100). The maximum is 100 characters for an address.
- Assigned_task: The field type is varchar(35). The maximum is 35 characters for an assigned task.

- Conference_ID (foreign key): Conference_ID is a foreign key of a conference. Each volunteer can register for a conference.

Sponsor

- sponsor_ID: The constraint has to be not null as it is a primary key. It also has an integer field type.
- sponsor_Name: The field type is varchar(50). The maximum is 50 characters for a name.
- Sponsor_contact: The field type is varchar(100). The maximum is 100 characters for contact details.

- **Data Definition Language (DDL)**: *Overview of the DDL commands used to create the tables and enforce constraints.*

  Using the database schema, we were able to transition to Data Definition Language more quickly. We created six entities each with their attributes and constraints. We made sure to put primary keys as a unique identifier and foreign keys, allowing two entities to be connected. Some attributes like names and ID have to be not null which ensures the reliability and accuracy of the database.

- **Data Manipulation Language (DML)**: *Description of how sample data for at least five congregations was inputted into the database.*

- insert into Congregation (ID, Congregation_name, Address, Contact_email, Contact_phone, Number_of_Members)
- values (024956, 'Hope Eternal', '1111 richardson', 'hope.eternal@gmail.com', '7185326473', 425),
- (340591, 'Saintly Haven', '3413 crook st', 'saintly.haven@gmail.com', '4937350348', 344),
- (294017, 'Everlasting Light', '2111 richardson rd', 'ever.lastinglight@gmail.com', '8104270150', 523),
- (194036, 'Sacred Legacy', '4311 elmer st', 'sacred.legacy@gmail.com', '4545076897', 252),
- (285029, 'All Saints', '9233 creed st', ' saints.all@gmail.com', '5639438780', 371);

  Five values were inserted into the Congregation table using the insert into statement. The values were inserted into ID, Congregation name, Address, Contact_email, Contact_phone, and Number_of_Members columns.

- **SQL Modifications and Indexes**: *Overview of the SQL queries and indexes implemented for efficient data retrieval and modification.*

- This index implementation will create an index in the congregation name column of the congregation table. This will help with the retrieval of Congregation names. We chose this implementation because searching for congregation names will be useful for those who will want to retrieve this data to see which congregations participated.

  ```
  CREATE INDEX idx_Congregation_name
   ON Congregation (Congregation_name);
  ```

- This index implementation will create an index in the conference date column of the conference table. This will help with the retrieval of Conference dates. We chose this implementation because searching for conference dates will be useful for those who will want to retrieve this data in the future.

  ```
  CREATE INDEX idx_Conference_date
  ON Conference (Conference_date);
  ```

- This index implementation will create an index in the speaker's name column in the speaker table. This will help with the retrieval of speakers who participated in the conference. We chose this implementation because searching for the speaker's name will be useful for those who will want to retrieve this data in the future.

6. **User Interface Design**

- *Description of the user interface elements like dropdowns, buttons, forms, CSS styling, and JavaScript functionalities.*
  Multiple user interface elements were utilized to make it user-friendly. Dropdown menus were used at the main menu to conserve screen space and make it more user-friendly. Buttons were used mostly in forms. Ascii artwork and UTF symbols were used to create a more aesthetically pleasing site for users.

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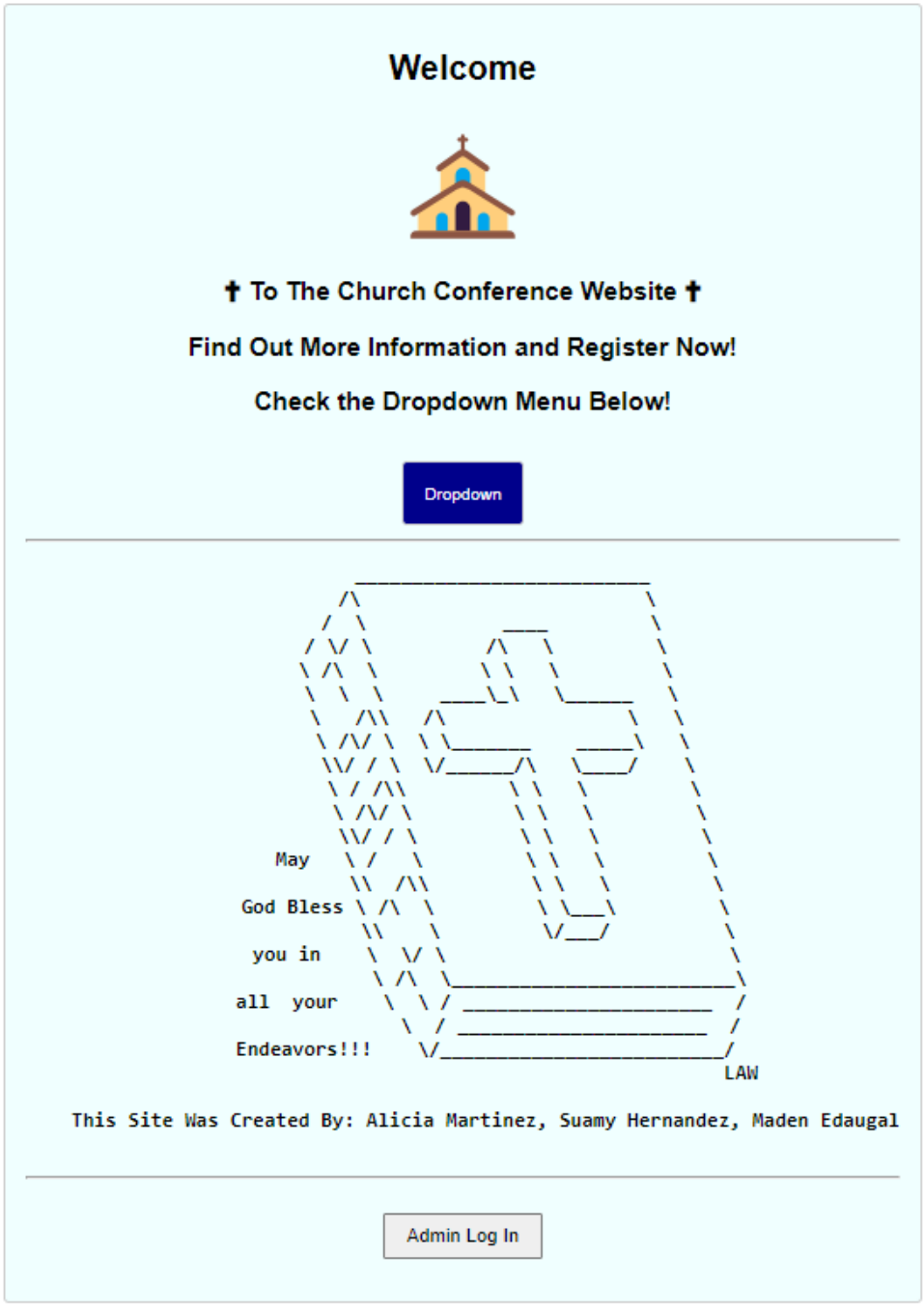

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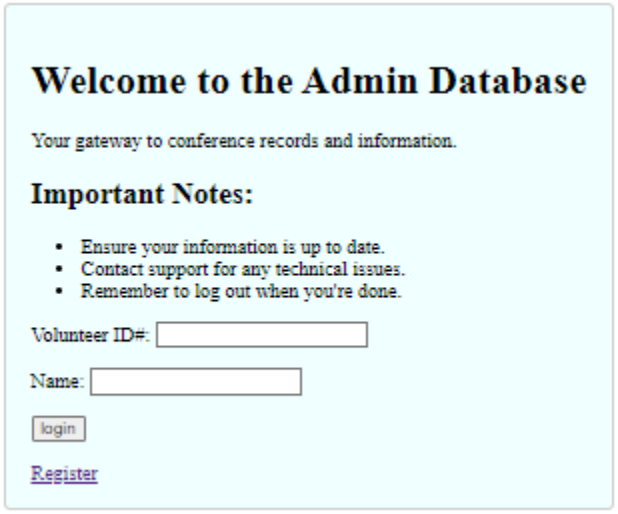

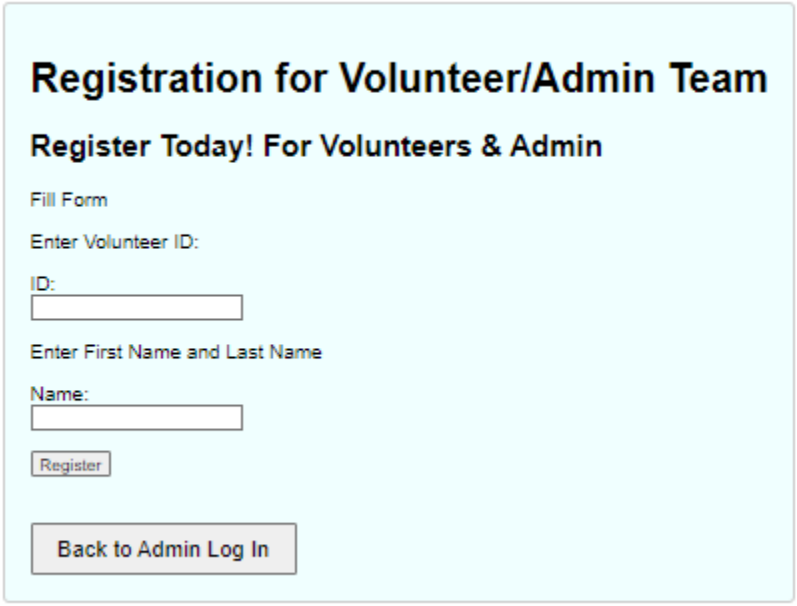

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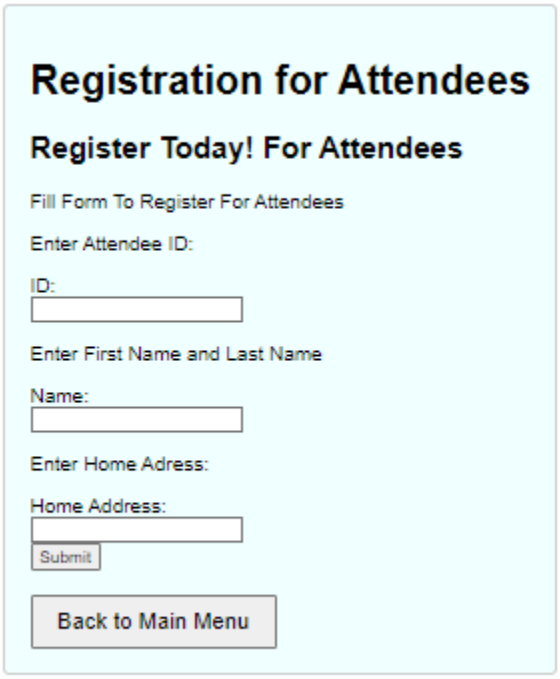

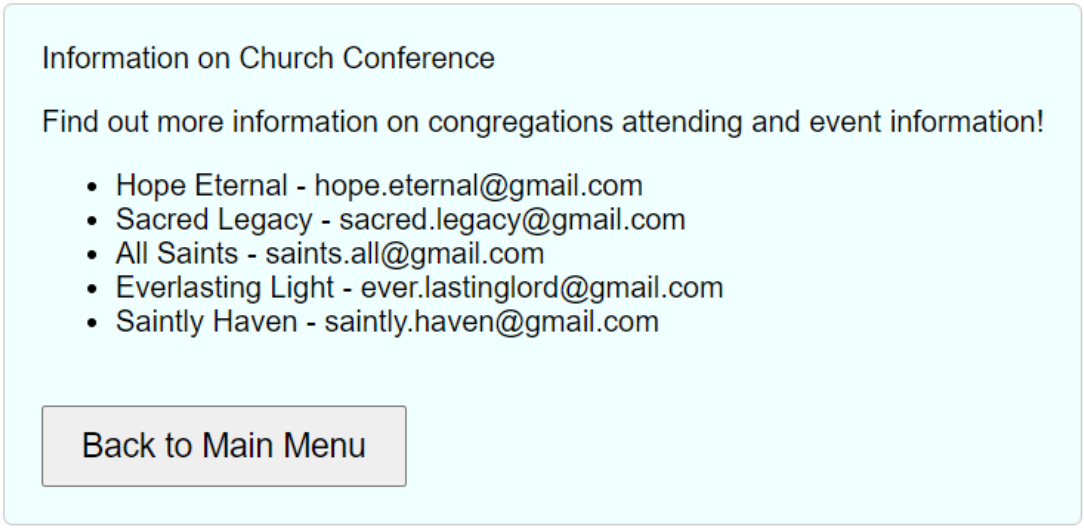

7. SQL Views and Operations

- Description of the two specific SQL views implemented for real-time insights.
    a. CREATE VIEW Attendee_info AS
    SELECT Attendee_name, Registration_Date, Conference_ID

FROM Attendee
WHERE Registration_Date >= CURDATE();
Attendee_info will obtain attendees name along with their conference ID only for those who are registered on or after the current date.

b. CREATE VIEW Conference_info AS

SELECT Conference_name, Conference_date, ID
FROM Conference
WHERE Conference_date >= CURDATE();
Conference_info will obtain the conference's name, associated ID for conferences that are registered on or after the current date.

- Explanation of at least 10 SQL queries for common operations.
  1) UPDATE congregation
     SET Number_of_Me mbers= 500
     WHERE ID= 024956;
     For this query, what was done is that it will update the congregation table. What is going to be updated is the Number_of_Members which changes to 500. where specifically? for the ID number 024956.

  2) INSERT INTO Sponsor (ID, Sponsor_Name, Sponsor_Details)
     VALUES(100123, 'bayou city fellowship', 'located in bayou city');
     For this query, what is being done is that new values will be inserted into the table Sponsor. which include: the id number, sponsor name, and the sponsor details.

  3) UPDATE Sponsor
     SET Sponsor_Details= 'located in bayou city with a devoted community willing to preach about the lord'
     WHERE ID= 100123;
     For this query, what was done is that the Sponsor table was updated. what was specifically updated was the sponsors details, that belong to the ID 100123.

  4) UPDATE Congregation
     SET Contact_Email= 'ever.lastinglord@gmail.com'
     WHERE ID= 294017
     For this query, what was done is that the Congregation table was updated with new information. The specific information updated was the contact email for the ID number 294017

  5) INSERT INTO Conference (ID, Conference_name, Conference_date, Region, Main_Theme, Congregation_ID)

VALUES (930218, 'Norris center', '2023-12-01', 'Texas', 'Love thy neighbor', 024956);

For this query, we inserted new values into the table named Conference. The specific things added are: the ID, Conference_Name,Conference_Date, Region, Main_Theme, and the congregation ID.

6) UPDATE Conference
   SET Conference_date = '2023-12-03'
   WHERE ID = 930218;
   For this query, we updated the conference date for the ID 930218 in the conference table.
7) INSERT INTO Speaker (ID, Speaker_name, Biography, Speaker_details, Topics, Conference_ID)
   VALUES (193357, 'Joel Osteen', 'American pastor, televangelist, businessman and author based in Houston, Texas', 'Devoted pastor and to his community at lakewood church', 'learning to love thy enemies', 930218);
   For this query, we inserted new values for the Speaker table. The new values consist of the ID, speaker name, biography, speaker details, topics, and the conference ID.
8) UPDATE Speaker
   SET Topics = 'learning to forgive and let go'
   WHERE ID = 193357;
   For this query, we updated the topics for the ID 193357 in the speakers table.
9) INSERT INTO Attendee (ID, Attendee_name, Attendee_address, Church_Affiliation, Registration_Date, Conference_ID)
   VALUES (412003, 'marc anthony', '2231 drury lane', 'Redeemer church', '2023-11-16', 930218);
   For this query, we inserted new values into the Attende table. The new values consist of the id number, attendees name, the attendees address, the church they are affiliated with, the date they registered and the conference ID number.
10) UPDATE Attendee
    SET Church_Affiliation = 'Southwind Baptists'
    WHERE ID = 412003;
    For this query, we updated the church affiliation for the ID 412003 in the attendee's table.

8. Technologies Used

- *Detailed discussion on the role of MySQL, PHP, HTML, CSS, JavaScript, Apache, and phpMyAdmin in the project.*
  MySQL stores and manages data information along with its relationships. PHP handles

server-side logic while HTML structures the content. CSS styles the presentation, Apache serves and manages requests. Together, these technologies form a developing and deploying dynamic web applications.

9. Challenges and Solutions

- *Description of major challenges faced during the project and the strategies used to overcome them.*
- Most of the challenges we've faced were from PHP itself as it was a newer concept to us. We struggled with implementing log-in and registering pages for admin/volunteers and regular visitors and allowing them to update our SQL tables we managed to overcome some of these challenges and were able to learn a lot from it.
- We also struggled with understanding how to implement certain aspects of the project into our work. We implemented the necessary changes in our project.
- We learned how to develop forms and dropdown buttons with HTML and using these skills we implemented what we could into our project. We used resources provided by Dr. Mardini and also used other sources like videos and other educational resources like W3 schools for HTML and PHP.

10. User Guide and Installation

- Step-by-step guide on how to set up and use the application.
- Explanation of the installation process and setup requirements.
- (similar details of this section should be also included in the readme.txt file inside the zip file)
    1. Extract all files.
    2. Open MySQL Workbench and connect to your local MySQL server. Open the SQL script file named create_user_fantastic7.sql, db_church_script.sql, and church_project_alicia_suamy_maden.sql. The first SQL file will create a new user fantastic7@localhost. The second file will be The third file will execute the SQL statements in the script to create six tables 'Congregation', 'Speakers', 'Volunteer', 'Sponsor', 'Conference', and 'Attendee'. Additionally, it will insert some initial data into them.
    3. Visit XAMPP Download Page to download the XAMPP installer. During installation, make sure to install it to C:\xampp for easier file management. Once the installation is complete, launch the XAMPP control panel and start Apache and MySQL.Navigate to C:/xampp/htdocs/ in your file explorer and place the PHP files (index3.php, info.php, Register2.php, Register3.php, Login2.php, and Records2.php) from Step 2 into this folder.
    4. Open your web browser and go to http://localhost/index3.php from there access the website and its features.

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11. Conclusion

- *Reflections on the project's outcomes and learning experiences.*
- *Future enhancements or potential improvements*.

- In the future, we would like to use our time to be able to improve log-in features for our users and admin. Along with that, we would like to make a better registration page and allow users to be able to create a user and password as of right now to register and log in all that is needed we would like to improve the form and allow for more information to be placed by the user.
- Along with that, we would like to add more pages to our website, with more information on conferences, speakers, and sponsors. We would also like to include images regarding our conference logos, artwork, and photos and use a wider variety of fonts.
- With the current experience we have gained, we learned a lot about HTML, SQL, and PHP so much so that we would love to carry this knowledge into our future projects.

12. Appendices

- Any additional materials, code snippets, or references.
- https://www.w3schools.com/php/default.asp
    - Reference for php information we used to help with implementation.
- https://www.w3schools.com/charsets/ref_utf_symbols.asp
    - Reference for UTF symbols used for decorating the index page.
- https://www.asciiart.eu/religion/christianity
    - Reference for biblical ASCII art used in the index page.
- https://www.w3schools.com/howto/howto_css_dropdown.asp
    - Used to reference the dropdown button we implemented into our website using HTML.