

UNESCO World Heritage Centre

Team S1_T6

DBMS - IT214

Year - 2021

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Section1: Final version of SRS

A. Introduction

1. Purpose

The purpose of the preservation of cultural heritage is to sustain cultural properties through public understanding. In order to provide convenient and accurate information, a well-constructed and integrated management system is needed for handling vast and diverse data. There are two points of view about data management in the past. One is on demand oriented administration (Policy-orientated), the second one is public-oriented (Public-orientated). The government played an important role in the preservation of cultural heritage. Combined with public opinions, the study promotes a digitalized standard for the management of cultural heritage. The integrative management system should take into account the future possibility of expansion and added value. The database established should meet the demands of the public and the government for its application and dissemination.

Today, detailed comprehensive documentation and recording of the cultural and natural properties are the most important stage at the beginning of preservation works around the world. Because of the rapid urban growth, keeping the urban identity under the pressure of globalization and economic development has negative impacts on the cultural heritage everywhere. Therefore properly prepared national heritage inventory lists became a very important thing and a social responsibility for preparing an acquired world cultural heritage list for developing preservation strategies and policies.

2. Intended Audience and Reading Suggestions

- This SRS document is intended for developers, researchers and students who are working in the DBMS design field. They may use it as reference while working on similar projects.
- Project managers, system analysts and database administrators may use this document as per their convenience.
- End users and other non technical people may skip section E, G and H.
- All other readers should not skip any sections. The given order should be followed for reading.

3. Product Scope

Development of digital technology not only speeds up data collection, it also helps data management, dissemination and application. With a database management system (DBMS), an efficient and convenient platform for the management of cultural properties can be provided. Our database provides an integrated computerized system of heritage sites located across the globe. We can extend the scope of this database in other fields. For example, let's say in the corporate world a real-estate company works on several projects simultaneously. To track their current activity so as to use their resources efficiently. UNESCO also keeps track of how much funds are provided to a particular state/country or how much donation received from a particular state/country. This similar idea can be used in water-body management so that water bodies and governments can track how much water they have for drinking or farming, where it is stored and which supplies can be made to ensure the need is filled. Finally if we need some resource tracking system then this software system can be easily utilized.

Our database will not be able to fully automate. Situations like war are not static or proper chronological, in that case many things are done at a diplomatic level which can not be covered by our database. In the database we have to enter the details manually, it can not be done using any type of scanning software or anything else. Our database will be updated on a daily/weekly basis so it means that it will not be able to keep track of the activities that are currently happening. Our database will have some specific structure

which will lead to non dynamic structure, which simply means that we will not be able to convert this database for many other tasks easily.

4. Description

UNESCO World Heritage Center focuses on the following 5 tasks:

1. Collection of data about World Heritage Sites:
→ This is one of the primary tasks of World Heritage Sites. The World Heritage Center collects data such as history, location, site manager, condition, area, authenticity and integrity, ownership, allotted funds etc. Some of this data is provided by the administration of states. Authenticity of this data is very important. This data can be used as input to other tasks.
2. Collection, management and distribution of funds:
→ This is also an equally important task. UNESCO receives donations/funds from various states/countries. They distribute these funds to various institutions/administrations/states to use it to protect, maintain heritage sites and spread awareness among people. DBMS can play a supportive role to manage these funds effectively by providing specific data. In addition to this, UNESCO collects information about where and how effectively funds are used.
3. Provides Effective response system in extraordinary situations:
→ When a property inscribed on the World Heritage List is threatened by serious and specific dangers, UNESCO considers placing it on the list of World Heritage in danger. After placing it on the list of World Heritage in danger, UNESCO then provides enough funding for its preservation, rebuilding and proper development.
4. Coordination among different bodies of UNESCO World Heritage Center , institutions and countries which are part of the World Heritage Programme:
→ The UNESCO World Heritage Center works as a central body for the World Heritage Convention, 1992. Therefore, it is responsible for coordination among various states and institutions across the world which are part of the World Heritage Convention.
5. Spread awareness about prevention and importance of the world heritage:
→ Spreading awareness about world heritage sites, especially through digital media, is a need of the hour. This is one of the fundamental missions of the World Heritage Convention, 1992. This is possible if we can provide specific pieces of information about heritage sites directly to users. By providing several pieces of information such as locations, history, salient features etc on the internet, we can directly engage people. In such cases, DBMS is very helpful.

B. Fact-Finding Phase

1. Background Reading/s

- Operational Guidelines for the Implementation of the World Heritage Convention. This document is the Operational Guidelines which is periodically revised to reflect the decisions of the World Heritage Committee. It also tells us how different state parties, advisory bodies, and other organizations work under UNESCO. This document also tells us that how UNESCO

manages Danger sites and how institutes and other organizations work under the World Heritage Committee.

- State of Conservation of World Heritage Properties." *A Statistical Analysis*. This document contains a statistical analysis of World Heritage Properties. It also considers factors affecting the Outstanding Universal Value of the World Heritage Properties in the analysis.
- The Standard Of Management And Application of Culture Heritage Documentation. This document contains the management flow of culture properties through digital technology. It also considers an example of a tentative management system for Taiwan.
- A historic resolution to protect cultural heritage. This article is about historic steps taken by UNESCO to preserve cultural heritage.

1.1 References

- <https://en.unesco.org/>
- Wikipedia contributors. (2021, September 23). UNESCO. In *Wikipedia, The Free Encyclopedia*. Retrieved 12:57, September 24, 2021, from <https://en.wikipedia.org/w/index.php?title=UNESCO&oldid=1046019642>
- Ning, Y. Y., Hua, W. K., Ming, C. H., & Shan, H. W. (2011). The standard of management and application of cultural heritage documentation. *Geoinformatics FCE CTU*, 6, 354-363.
- Operational Guidelines for the Implementation of the World Heritage Convention, (10 July 2019). UNESCO.
- Veillon, R. "State of Conservation of World Heritage Properties." *A Statistical Analysis* (2014).
- A historic resolution to protect cultural heritage. October- December 2017
<https://en.unesco.org/courier/2017nian-di-3qi/historic-resolution-protect-cultural-heritage>

1.2 Requirements

- Through the background reading, we found the requirements like implementing a real system to manage all sites, institute/organization, committee members, country details, etc.
- Along with this, consideration should also be given to how danger sites are managed by institutions/organizations and how all the sites are categorized.

2. Interview/s

Interview 1

- **Role Play interview plan**
- **System:** UNESCO World Heritage Database
- **Interviewee:** Meet Gohil, (role-play)
 - **Designation:** Secretary, World Heritage Committee
- **Interviewer:**
 - Manan Diyora(student at DAIICT)
 - Om Thummar (Student at DAIICT)
 - Lukhi Krunalkumar(Student at DAIICT)
- **Date:** 07/10/2021
- **Time:** 4:30 AM
- **Duration:** 20 minutes
- **Place:** Google Meet
- **Purpose of Interview:**
 - Understanding the Vision of the World Heritage Committee behind the new database
- **Agenda:**
 - What is the vision of the World Heritage Committee behind the new DBMS?
 - What are possible future challenges we can expect?
 - Suggestions from Committee

Interview Summary 1

- **System:** UNESCO World Heritage Site Database
- **Interviewee:** Om Thummar(Student)- (Role Play)
 - Designation: User(Traveller)
- **Interviewer:**
 - Meet Gohil(student at DAIICT)
 - Om Thummar (Student at DAIICT)
 - Lukhi Krunalkumar(Student at DAIICT)
- **Date:** 06/10/2021
- **Time:** 11:30 AM
- **Duration:** 30 minutes
- **Place:** Google Meet

- **Summary of Interview:**

- Preliminary meeting to understand the vision of the World Heritage Committee.
- The fundamental mission of the world heritage convention must be addressed.
- The future challenges should be taken into account while designing the database.
- The DBMS should be designed using state of art technology.
- Fund Management and Donation management system are required.
- Provisional danger sites must be addressed.

Interview 2

- **Role Play interview plan**

- **System:** UNESCO World Heritage Site Database

- **Interviewee:** Manan Diyora(Student)

- **Designation:** The project Manager at UNESCO assigned to this project

- **Interviewer:**

- Meet Gohil(student at DAIICT)
- Om Thummar (Student at DAIICT)
- Lukhi Krunalkumar(Student at DAIICT)

- **Date:** 04/10/2021

- **Time:** 09:30 PM

- **Duration:** 30 minutes

- **Place:** Google Meet

- **Purpose of Interview:**

- Preliminary meeting to identify problems and requirements of UNESCO database management system.

- **Agenda:**

- How is UNESCO managing its data?
- What are the problems faced in the current system?
- Initial insights about the new DBMS.
- Basic functionality required from new DBMS

Interview Summary 2

- **System:** UNESCO World Heritage Site Database

- **Interviewee:** Manan Diyora(Student)- (Role Play)

- **Designation:** The project Manager at UNESCO assigned to this project

- **Interviewer:** Project Manager at UNESCO assigned to this project

- Meet Gohil(student at DAIICT)
- Om Thummar (Student at DAIICT)
- Lukhi Krunalkumar(Student at DAIICT)

- **Date:** 04/10/2021
- **Time:** 09:30 PM
- **Duration:** 30 minutes
- **Place:** Google Meet

- **Summary of Interview:**
 - Preliminary meeting to identify problems and requirements regarding decisions of UNESCO.
 - Previously using the traditional file system approach.
 - No standard method for searching, querying data.
 - With the increasing number of Word heritage sites across the globe, UNESCO needs to computerize and digitize its data.
 - Allowing users to directly access some parts of the database.
 - Centralization of data collected by the World Heritage Center.
 - Focus on data of sites, site manager, funds, donations, country, and danger sites
 - Previous data must remain in the database.

Interview 3

- **Role Play interview plan**

- **System:** UNESCO World Heritage Site Database

- **Interviewee:** Om Thummar(Student)- (Role Play)
 - **Designation:** User(Traveller)

- **Interviewer:**
 - Meet Gohil(student at DAIICT)
 - Om Thummar (Student at DAIICT)
 - Lukhi Krunalkumar(Student at DAIICT)

- **Date:** 05/10/2021
- **Time:** 11:30 AM
- **Duration:** 45 minutes
- **Place:** Google Meet

- **Purpose of Interview:**
 - Preliminary meeting to identify the requirements of the user class of DBMS.

- **Agenda:**
 - What type of data does a typical user would like to know about any heritage site?
 - Difficulties faced by users in the current system.
 - The best thing about the current system.
 - Suggestions from users.

Interview Summary 3

- **System:** UNESCO World Heritage Site Database
- **Interviewee:** Meet Gohil,(Role-play)
 - **Designation:** Director, UNESCO World Heritage Programme
- **Interviewer:**
 - Diyora Manan(student at DAIICT)
 - Om Thummar (Student at DAIICT)
 - Lukhi Krunalkumar(Student at DAIICT)
- **Date:** 06/10/2021
- **Time:** 4:30 PM
- **Duration:** 30 minutes
- **Place:** Google Meet
- **Summary of Interview:**
 - Preliminary meeting to know the
 - All of this information is not available on a single platform
 - The accuracy and truthfulness of data available on the internet about heritage sites are questionable.
 - Users suggest a user feedback system about heritage sites.
 - Frequent updates of the database are required.

2.1 Requirements :

- Need to develop front end for user to have access to some data
- Fund and donation detail should be included
- Redundancy must be as minimum as possible
- Data about site, managers, funds, donation, country, and danger sites indicates important relations of schema.
- The world heritage committee must be included in the database as it is the central authority.
- Data history must be stored in the database.

3. Questionnaire/s

For this part we created a google form and sent it to the Bhavnagar district heritage club. We got 55 responses from their side.



UNESCO World Heritage Center Management System

This survey contains several questions about your experience with UNESCO World Heritage sites.

Do you know about UNESCO World Heritage Site? *

Yes

No

Have you ever visited any UNESCO heritage sites previously? *

Yes

No

How frequently do you use UNESCO heritage site? *

Atmost everyday

Weekly

Monthly

Once a year

Using which medium do you find information about UNESCO heritage sites? *

Online

Offline

Both

Where do you find information about heritage sites? *

Friends

Social media

Newspaper

Institution or organization

How difficult is it for you to find all information including history, location, current status of sites, * opening hours etc. about any heritage sites? Rate it from 1-5.

1 2 3 4 5

Yes
 No

Do you trust information about heritage sites provided on internet? *

Yes
 No

Do you think there should be a management system or a technology to manage heritage sites in * a good way?

Yes
 No

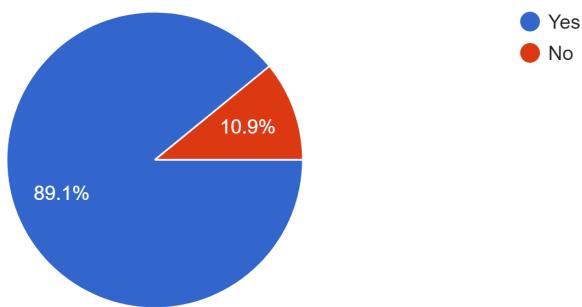
Your suggestions for new DBMS.

Long-answer text

Q1.

Do you know about UNESCO World Heritage Site?

55 responses

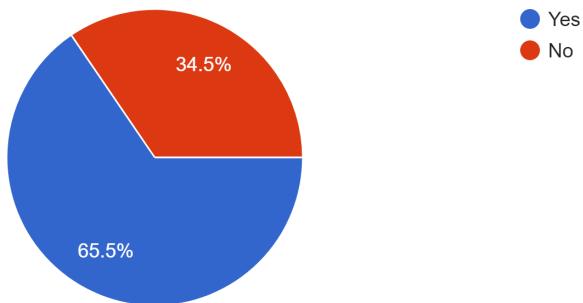


- This is a very basic question on UNESCO world heritage sites. Using the response we get to know that most of the people are aware of UNESCO world heritage sites.

Q2.

Have you ever visited any UNESCO heritage sites previously?

55 responses

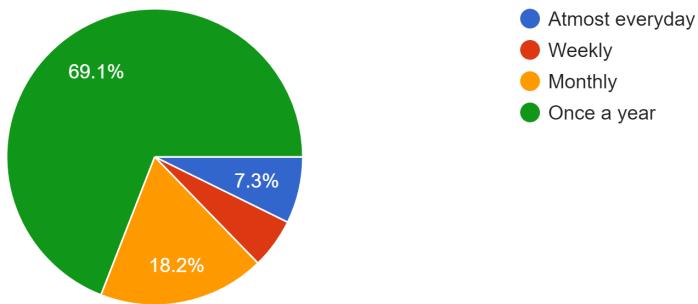


- This is a related question to the first question and using this question, we get to know that people are less in the number who actually visited the site compared to only knowing about the site. However, these differences are not big.
-

Q3.

How frequently do you use UNESCO heritage site?

55 responses

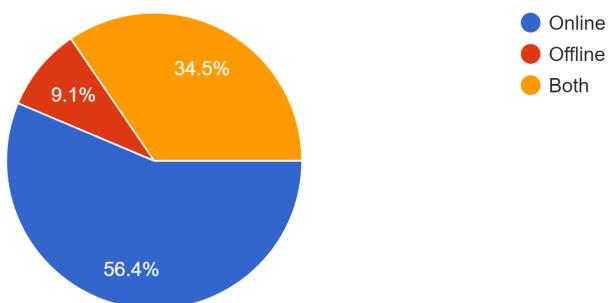


- This is also a related question to the second question and using this question, we get to know about the frequency of visiting the heritage site.
-

Q4.

Using which medium do you find information about UNESCO heritage sites?

55 responses

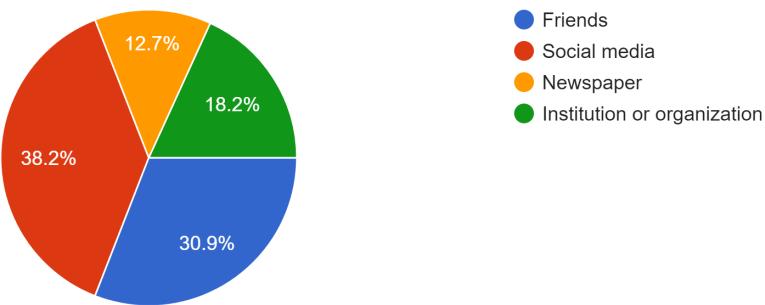


- This question is related to the first question, using this question, we get to know what is the medium of the source from where people heard or known about the UNESCO world heritage site.
-

Q5.

Where do you find information about heritage sites?

55 responses

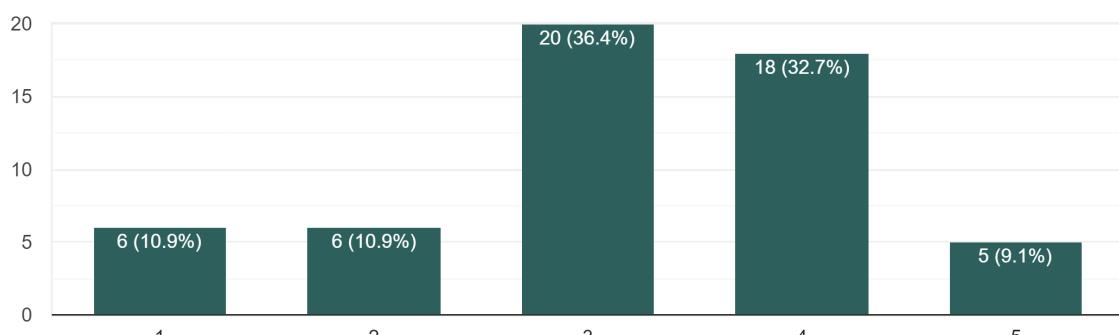


- This question is related to the above question, using this question, we get to know about the medium of the source from where they knew.
-

Q6.

How difficult is it for you to find all information including history, location, current status of sites, opening hours etc. about any heritage sites? Rate it from 1-5.

55 responses

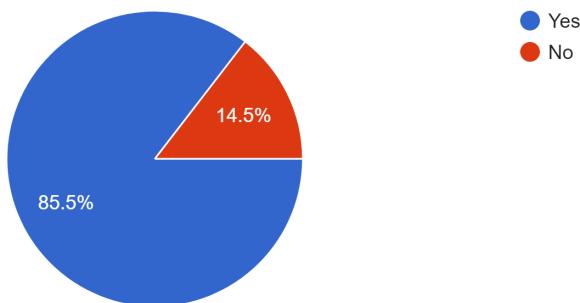


- This question is related to the 4th question. Using this question, we get to know how difficult it is for people to know about the UNESCO world heritage site.

Q7.

Do you trust information about heritage sites provided on internet?

55 responses

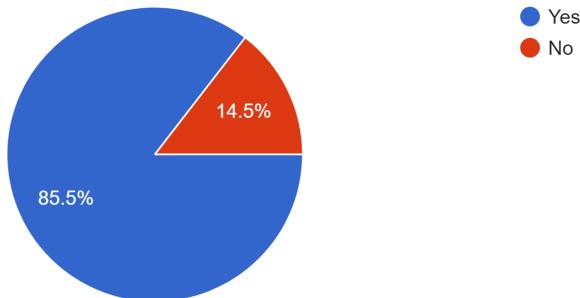


- This question is related to the trustiness of different sources of information. Using this question we get to know how much trust people do have in different sources.

Q8.

Do you think there should be a management system or a technology to manage heritage sites in a good way?

55 responses



- This is a review-type question, using which we get to know how people think on a better system to get all information about the UNESCO world heritage site and its functionalities on a general basis.

Q9. Your suggestions for the new DBMS.

Some of the suggestions are as follows:

- How frequently do you use UNESCO heritage sites? Using which medium do you find information about UNESCO heritage sites? Where do you find information about heritage sites?
- It will be very useful if the database updates regularly.
- Please add a forum regarding the total cost to visit those places & etc. There should be a daily update of opening time and closing time(if there are any changes), also the online ticket booking(if they have), also the information(before a month) of events which are going to happen in the future. If there are guides, then there should be some UNESCO verified guides, and we can also book them online(updating empty slots of guides on the website ASAP).

So, there should be a Website where we can find all names of sites country-wise and state-wise and then a particular page of each site including all of the above features.

- I think that there should be more of these heritage places as it is a great place to gather information of our history out of pages and give a realistic image of the past.

3.1 Requirement

- Database should contain all public details on a single source. So that data can be accessed by the public on one spot. And they also contain some filters so that they can be accessed with some particular filter.
- Database should be straightforward to handle, so the update can be done quickly.
- Database should contain fund details, which helps researchers in their research.
- Database should be available to the online site, so it is available easily to all over the world.

4. Observation/s

System : UNESCO Data System

Observations by: Meet Gohil

Date: 05/10/2021 **Time:** 11:00 AM

Duration: 45 minutes **Place:** UNESCO World Heritage Centre

Observations:

1. Currently using a basic file system to manage data.
2. A considerable amount of data redundancy is observed.
3. The database is accessible only to staff at the data center.
4. Modification of data is a difficult task due to the basic file system approach.
5. Most of the data entry is done by staff at the data center , no arrangement for taking direct input from concerned parties or users.
6. No real-time monitoring of data and funds.
7. Lack of coordination between different departments such as finance department, emergency situation departments, research departments, etc. due to distributed databases.

4.1 Requirements:

- Need to connect the database to the server
- Need a multi-user database management system
- Several data must be monitored in real-time
- Allow data entry from concerned parties.

C. Fact-Finding Chart

Objective	Technique	Subject(s)	Time Commitment
To know what the topic is about, what is the UNESCO work area and other basic things like that.	Initial reading	Online website of UNESCO world heritage site and Wikipedia	3 hour
To know which projects are currently running on by UNESCO or which works are being done by UNESCO and how that is going on etc.	Inside reading	Documents that are published by UNESCO itself and Online available videos	2 day
To know about the process of the inscription of properties on the world heritage list and get information about the world heritage committee, state parties, advisory bodies, and their functions.	Reading	Official Operational Guidelines for the Implementation of the World Heritage Convention	1 day
To know the perspective of the World Heritage Committee, end-users, and project manager	Interviews	Role Play	3 x 45 minutes
To know how they are working and what difficulties they are facing	Visit	World Heritage Center	3 hour
To know what public opinion is and their views on the topic and what are the public suggestions on the topic.	Survey	Using google form, which is shared to Bhavnagar heritage society to fill it	1.5 day
To know what we can do based on interviews and surveys	Reading	Online websites which are similar to UNESCO	2 day

D. List Requirements

- The database should contain all the necessary information about all heritage sites(i.e., Name of site, location details, current site managers, state or region, etc.).
- With the increasing number of Word heritage sites across the globe, UNESCO needs to computerize and digitize its data.
- This Database should be compact, neat, and easily accessible.
- Frequent updates in the database.

- The database must be reliable and fast.
- All the information in the database should be well protected.
- Whoever is involved in the management process of the UNESCO heritage site should have access to the Database.
- The Database should be accessible from the various platforms.
- There should not be any case of redundancy in the Database.
- Should include a software tour so that the user becomes familiar with the U.I. (include a user manual on the homepage of the site and various small tutorials to make the use of the site easier).

E. User classes and Characteristics

1. Database Administrator
 - DBA designs, modifies, and maintains databases. He is responsible for finding bugs, security issues, and root cause analysis.
 - DBA can grant privileges to other user classes.
 - DBA provides resources for memory and processing.
 - In short, DBA controls all three levels of DBMS.
2. Database Designers
 - Work on DDL(data definition language), including tables, views, indexes, constraints, triggers, procedures, etc.
 - Decides how the data should be related to each other.
3. System Analyst
 - Gather the information about end requirements.
 - Check whether these requirements are satisfied or not.
4. Programmers
 - Programmers implement DDL by writing codes in different languages such as PostgreSQL, MySQL, COBOL, etc.
5. End Users:
 - Don't have technical knowledge about DBMS.
 - Most frequent users of Database.

Here, End user can be a tourist who wants to find information about heritage sites.
6. Sophisticated Users
 - Sophisticated users are engineers, data analysts, scientists or any other user who knows how to write a query.
 - They generally write queries to find the desired information.
7. Data Entry Professionals
 - Do data entry in the database. Sometimes data entry can be done by end-users as well.

F. Operating Environment

Software:-

- PostgreSQL version 13.

Recommended browsers:-

- Safari version 7 and above.
- Brave version 1 and above.
- Any other browsers which are based on chromium 90 and above.

Recommended Operating Systems:-

- Windows: 7 or higher
- MAC: OS X v10.7 or higher
- Linux: Ubuntu

Hardware Requirements:-

- Processor: Minimum 1 GHz; Recommended 2GHz or more.
- Hard Drive: Minimum 32 GB; Recommended 64 GB or more.
- Memory (RAM): Minimum 1 GB; Recommended 4 GB or above.
- Internet Connectivity with Ports configured.

G. Production Functions

The database will provide real-time information about the following attributes/objects.

- Various details of Heritage sites such as location, area, ownership, current status, etc.
- Allocation of funds, pending funds, how is a fund used, beneficiaries of funds.
- Donations collected by the World Heritage Programme.
- Data collected from local administrations
- Status report about heritage sites provided by the concerned authority
- Steps were taken by the local government to protect heritage sites.
- History and salient features of heritage sites.
- List of potential candidates for the world heritage list.
- Details of research institutions, academic activities related to the World Heritage Programme.
- Progress reports of ongoing projects funded by the World Heritage Programme on given Heritage sites.
- Details of possible natural or artificial dangers such as flood, war, cyclone, Earthquake etc which can cause damage to the heritage sites.
- Standard set of procedures to tackle above mentioned dangers.

The following points will give a brief idea about the implementation of above functions.

- Database designers need to define relations to store information about heritage sites, funds, donations, Participants of World Heritage Programme, status reports, progress reports.
- Resources will be made available by DBA.
- Programmers will write code in query language to implement the relations defined by Database designers.
- Data entry professionals will structure the collected data and add them into the database.
- Research institutes and scientists will provide their data to data professionals.
- In some cases, we can use third-party software to collect data directly from the end-user in a structured manner. I.e., excel sheets, google forms, etc.

H. Privileges

1. Database Administrator: The role of the Database administrator is to design a database, find bugs, security issues, root cause analysis, and data recovery. These exclusive tasks are only to be performed by the Database administrators. No one except the admin has access to perform these tasks.
2. Database designers, analysts, and programmers: They primarily design and implement efficient databases according to the need. They will have access to the logical level of the database.
3. End-users: End-users have frequent use of the database. They do not have access to inserting, modifying, or deleting in the database. They just avail the services.

I. Assumptions

1. All required numerical information is in accurate form.
2. We have assumed that all required data entries will be filled in an accurate form.
3. UNESCO is able to provide proper infrastructure to the root level so that real-time monitoring becomes ideal.
4. Quick update in the database by respective bodies of UNESCO.
5. Considering the life cycle of data and different types of data usage, data must be stored at different servers according to different data types to provide appropriate services.

J. Business Constraints

- Creation of digital infrastructure, good internet connection, and fast, accessible database server that can handle large amounts of traffic at a time.
- For highly scaled systems, there should be dedicated personnel to maintain and handle the complete system.
- Physical devices and components of DBMS such as memory, processor should be the latest so that system crash can be avoided.
- The data needs to be stored on a server. For large amounts of data, storing it on cloud servers could be an expensive affair.

Section2: Noun Analysis.

A. Problem Description

- UNESCO world heritage center is mainly monitoring all the major heritage sites across the world.
- When UNESCO receives the nomination of properties for inscription on the World Heritage List, it first identifies the properties, Maps, and plans, with the boundaries of the nominated property and buffer zone, description of property which contains physical attributes, geology, habitats, species, and population size, and other significant ecological features and processes.
- Furthermore, site details contain site name, location, address, country, ownership, site manager, category, and the recent conservation history.
- Whenever some of the sites need to improve or need help from the world community then they come into the scene, in which they announce those sites as UNESCO world heritage sites.
- In the case of natural property, the account should cover significant events in history or prehistory that have affected the evolution of the property and give an account of its interaction with humankind. This will include changes in the use of the property and its natural resources for hunting, fishing, or agriculture, or changes brought about by climatic change, floods, earthquakes, or other natural causes.
- Provide the status of visitation to the property. Describe projected levels of visitation due to inscription or other factors. Define the carrying capacity of the property and how its management could be enhanced to meet the current or expected visitor numbers and related development pressure without adverse effects.
- Give the best available statistics or estimate of the number of inhabitants living within the nominated property and any buffer zone. Indicate the year this estimate or count was made.
- After announcing those sites as world heritage sites, they are starting to collect all the data which are required to work on that particular site.
- While they are announcing the site as a world heritage site, they first put these sites to one of the categories which they had defined. Those categories are Cultural heritage, Natural heritage, Mixed (Cultural and Natural heritage), Cultural landscape, Outstanding universal value.
- While categorizing the site, they analyze what the site is about. It is structural architecture or natural scenes or some inscriptions, or something else. Based on this, they categorize the sites.
- Before declaring any site to be a world heritage site, they analyze all the history of the site. This historical data will also be presented in front of the global world for the researcher and students or normal people.
- For further development of the site and to know more about local weather conditions or local communities, they need an accurate location so they collect the accurate location of the heritage site.
- While announcing the world heritage site, they need to know who is the current owner of the site or who is particularly managing the work of the site at the time. After only getting those details, they can go further to declare the site.
- Mainly owners are one of the two types. One is government, and the second is some private organization or some private person. In both of the cases, UNESCO needs information about who is the main authority or body managing the current work. It mainly includes a site manager, local authority, state authority, or some NGOs, etc. And what are the contact details of those authorities or officers, so they can contact them for further development?
- UNESCO also required details of the site in charge who was appointed by the state so that UNESCO could get details directly from her/him. So they collect details of officers like Name, Contact No, Gender, Age, and other required information.

- The site manager creates a report of a particular site. This report is called a *status report*. This report is then passed to the World heritage committee.
- After getting the owner and managing body details, they also need to know about how much funds are invested and how they are doing their work. This information will be used by UNESCO for further needed development. Using these details, UNESCO will decide at what point they need to work.
- They also check the people's engagement of the site, like how people are aware of the site and how much they know about the site, etc.
- These data are very important to allocate funds or to know how much work they need to do. So the authenticity of these data is very important. To check the correctness of the data, they need to check it from other sources also.
- The World Heritage Fund is a trust fund established by UNESCO. The resources of the Fund consist of compulsory and voluntary contributions made by States Parties.
- The purpose of the fund is to assist in the protection of properties forming part of the World Cultural and Natural Heritage of Outstanding Universal.
- The financial period of the fund is two years.
- There shall be established a reserve fund to meet requests for assistance resulting from disasters or natural calamities.
- The Director-General manages accounts related to this fund. Hence, the Director-General should have all privileges related to relation Fund in DBMS.
- The World Heritage Committee coordinates and allocates types of International Assistance in response to State Party requests. The types of International Assistance in order of their priority is

1. Emergency assistance:

Authority for approval: Director of the World Heritage Centre

Budget ceilings per request: UP to 75000 US \$

2. Conservation and Management assistance (incorporating assistance for training and research, technical cooperation and promotion and education)

Authority for approval: Director of the World Heritage Centre

Budget ceilings per request: UP to 30000 US \$

3. Preparatory assistance

Authority for approval: Director of the World Heritage Centre

Budget ceilings per request: UP to 10000 US \$

- when funds available are limited, and a selection has to be made, preference is given to:

1. a Least Developed Country or Low Income Economy as defined by the United Nations Economic and Social Council's Committee for Development Policy, or
2. a Lower Middle Income Country as defined by the World Bank, or
3. a Small Island Developing State (SIDS), or
4. a State Party in a post-conflict situation

- Details donors also need to be maintained.

- The criteria and conditions for placing the heritage sites in the World Heritage List have been developed to evaluate the Outstanding Universal Value of properties and to guide States Parties in the protection and management of World Heritage properties.

- When any World heritage property is found to be threatened by serious and specific dangers, the UNESCO World Heritage Committee considers placing that heritage site on the list of

World Heritage in Danger.

- Whenever the site is found to be in danger, a quick update in the database needs to be done. Furthermore, if the property is found to be in good condition, it has to be removed from the List of World Heritage in Danger.
- The World Heritage Committee consists of several members. These members are supposed to make decisions during their tenure. They are responsible for implementing the missions of the World Heritage Programme.
- The cultural properties which are in danger, such classes are defined such as ascertained danger(significant loss of historical authenticity, serious deterioration of the structure and/or ornamental features), Potential danger(threatening impacts of climatic, geological or other environmental factors) etc.
- By considering the above condition of heritage properties, the committee shall allocate a specific and significant portion of the World Heritage Fund to financing possible assistance to World Heritage properties inscribed on the List of World Heritage in Danger.
- The fund is utilized by local institutions. They are bound to use the fund in a given period of time.
- We need a single database system that unifies the database system of all sub-bodies of the World Heritage Programme in order to have coordination among each other.
- Each body should have limited access to their respective department.
- Informing the people about the cultural heritage and awakening the mindset and the interest of people about the heritage by the promotion of the heritage can be done in different ways such as heritage awards, heritage festivals, heritage walks, and heritage newspapers, etc.
- Heritage awards are one of the ways to promote heritage. UNESCO institute award, named UNESCO Asia Pacific Heritage Awards was initiated with the ambition to protect cultural heritage sites.
- This award is honored with objectives to inspire the interest and talent of the scholars for the appreciative, thoughtful and documentation of heritage buildings, and also cultivate and promote understanding and awareness among students.
- Heritage Festivals are also one of the ways to promote heritage. Many researchers had conducted a study on festivals and special events impacting local development. In their study, they focused on assessing economic influences by use of some form of impact analysis.
- Cultural heritage festivals perform as a vibrant power behind cultural improvement and social connection while bringing in monetary sustenance. The foremost motives for organizing a festival are related to improving and promoting cultural heritage artifacts, attracting tourists, and raising cultural awareness.
- Heritage educational programs are fruitful when the native public comes onward to support, encourage and start heritage interrelated activities.

B. Noun and Verb Analysis

Table 1: All Extracted Nouns & Verbs from Problem Description

Noun	Verbs
Heritage center	Monitoring
Site details	Need
World Heritage Fund	Announce
State Parties	Structure
Mixed Heritage	Fund
Natural Heritage	Condition
Cultural Heritage	Award
Outstanding values	Sources
Amount	Collect
Location	Support
Category	Reserve
Owner	Contact
Organization	Centre
Authority	Coordinate
Site Manager	Study
Doner Name	Give
NGO	Motive
Contact Details	Estimate
World Heritage Fund	Change
State Parties	Allocate
Period	Request
Fund	Improve
Director-General	Meet
Account	Categorize
International Assistance	Impact
Assistance Types	Enhanced

Emergency	Established
Budget	Share
Preparatory Assistance	Insert
Salary	Cultivate
Tenure	Encourage
Details	Use
Donation	Manage
World Heritage properties	Study
Danger	Develop
Criteria	Conduct
Serious Deterioration	Promote
Environmental Factors	Impact
Program	Perform
Age	Improve
Award	Inform
Festivals	Initiative
Newspaper	Change
Gender	Receive
Address	Define
Area	Search
Status report	Given
Buffer Zone	Maintain
Member	Take decision
Representative	Report
Region	given
Mandate	
Award	
Festival	

Table 2: Accepted Noun & Verbs list

Candidate entity set	Candidate attribute set	Candidate relationship set
site detail	s_id site_name address latitude longitude area country_code category buffer_zone historical_detial ownership institute_id	Manage
site manager	m_id s_id name gender age salary working hours contact Joining_date retirement_date	Manage
status report	report_id m_id submission date report details Period of observation	Issued
World Heritage Committee	member_id member name country_code salary tenure contact	Decisions
Member country	country_code country_name donor_id Region representative veto_power	Participate
Official local institution/agency:	institution_id Institution_name address	Administrate

	contact officer	
Provisional Danger Site	s_id intitute_id type of danger steps to prevent cause of danger	Information
Donation	donor_id doner name donor type date_time contact amount	Donates
Fund	f_id total_amount unused_amount used_fund_details allocation_date period fund_type	Given
Award	year category country_code award_details	Given

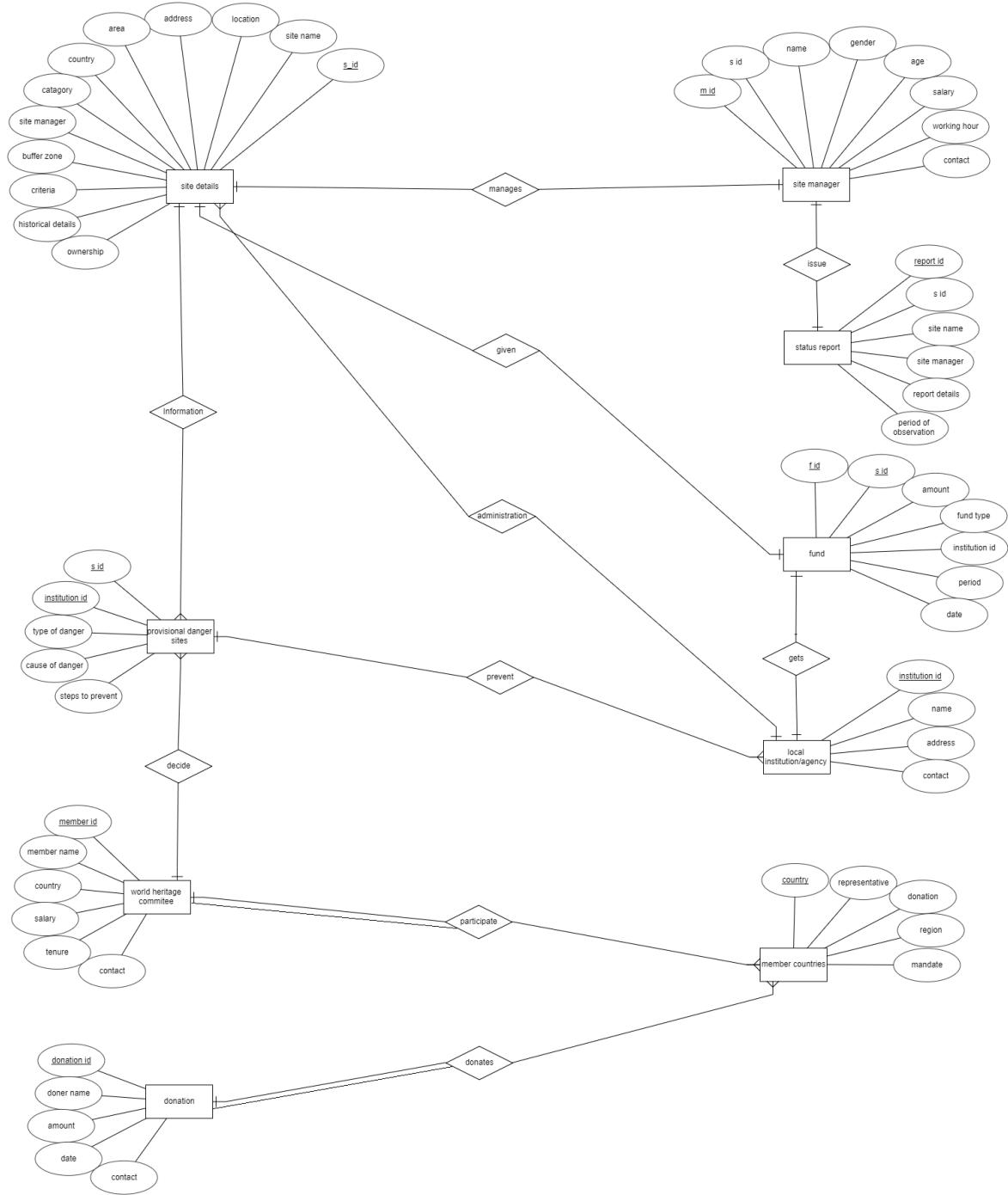
Table 3: Rejected Noun & Verbs list

Noun	Reject reason
Mixed heritage	These are the types of heritage places. We can group them in single attribute called a type of heritage
Cultural heritage	
Natural heritage	
Outstanding value	
Authority	We have used Local institution instead
NGO	
Director-General	Don't qualify to be the attribute

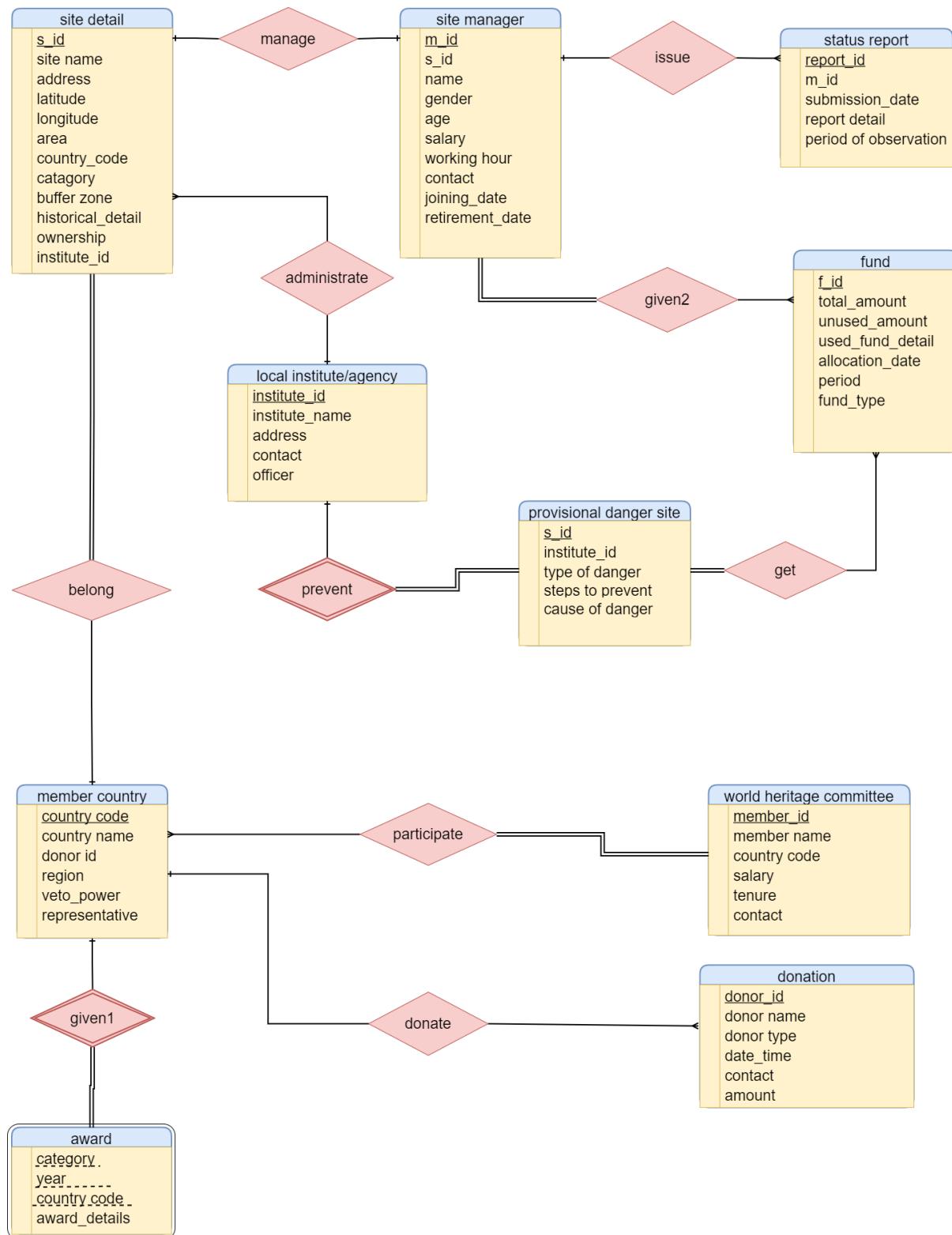
Account	
International Assistance Types	fund_types
Emergency	It is a type of situation which is described in type of dangers
Preparatory Assistance	
Serious Deterioration	
Environmental Factors	Included in the cause of danger attribute
Programs	These are the unnecessary attributes.
Festivals	
Newspaper	
Award	

Section3: ER-Diagrams all versions.

A. ERD V1:



B. Final ERD:



Section4: Conversion of Final ER-Diagram to Relational Model.

A. Mapping E-R Model to Relational Model

site_detail (**s_id**, site_name, address, latitude, longitude, area, country_code, category, buffer_zone, historical_detail, ownership, institute_id)

site_manager (**m_id**, s_id, name, gender, age, salary, working_hours, contact, joining_date, retirement_date)

status_report (**report_id**, m_id, submission_date, report_details, period_of_observation)

world_heritage_committee (**member_id**, member_name, country_code, salary, tenure, contact)

member_country (**country_code**, country_name, donor_id, region, representative, veto_power)

local_institute_agency (**institution_id**, institution_name, officer, address, contact)

provisional_danger_site (**s_id**, intitute_id, type_of_danger, step_to_prevent, cause_of_danger)

donation (**donor_id**, donor_name, donor_type, amount, date,time, contact)

fund (**f_id**, total_amount, unused_amount, used_fund_details, period, allocation_date, fund_type)

award (year, category, **country_code**, award_detail)

B. DDL Scripts

```
CREATE TABLE site_detail
(
    s_id numeric NOT NULL,
    site_name character varying(100),
    institute_id numeric,
    location character varying(30),
    address character varying(100),
    country_code character varying(30),
    ownership character varying(30),
    category character varying(50),
    historical_detail character varying(5000),
    area character varying(30),
    buffer_zone character varying(20),
    festival character varying(50),
    PRIMARY KEY (s_id),
    FOREIGN KEY (institute_id) REFERENCES local_institute_agency(institute_id),
    FOREIGN KEY (country_code) REFERENCES member_country(country_code)
);
```

```
CREATE TABLE status_report
(
    report_id numeric NOT NULL,
    m_id numeric NOT NULL,
    report_details character varying(5000),
    submission_date DATE,
    period_of_observation character varying(30),
    PRIMARY KEY (report_id),
    FOREIGN KEY (m_id) REFERENCES site_manager );
```

```
CREATE TABLE site_manager
(
    m_id numeric NOT NULL,
    s_id numeric NOT NULL,
    f_id numeric NOT NULL,
    name character varying(500) NOT NULL,
    salary numeric,
    working_hours character varying(),
    contact character varying(10),
    gender character varying(6),
    age numeric NOT NULL,
    PRIMARY KEY (m_id),
    FOREIGN KEY (s_id) REFERENCES site_detail(s_id),
);

```

```
CREATE TABLE world_heritage_committee
(
    member_name character varying(50) NOT NULL,
    country_code numeric NOT NULL,
    tenure character varying(15) ,
    salary numeric,
    contact numeric,
    PRIMARY KEY(country_code, member_name),
    FOREIGN KEY(country_code) REFERENCES member_country
);

```

```
CREATE TABLE member_country
(
    country_code numeric NOT NULL,
    country_name character varying(30) NOT NULL ,
    region character varying(30) {},
    representative character varying(50),
    donor_id numeric NOT NULL,
    veto_power bool,
    PRIMARY KEY(country_code),
    FOREIGN KEY(donor_id) REFERENCES donation);

```

```
CREATE TABLE provisional_danger_site
(
    s_id numeric NOT NULL,
    f_id numeric NOT NULL,
    institute_id numeric NOT NULL,
    type_of_danger character varying(30),
    steps_to_prevent character varying (5000),
    cause_of_danger character varying (5000),
    PRIMARY KEY(s_id),
    FOREIGN KEY(institute_id) REFERENCES local_institute_agency,
    FOREIGN KEY (f_id) REFERENCES fund );

```

```
CREATE TABLE local_institute_agency
(
    institute_id numeric NOT NULL,
    institute_name character varying(100),
    officer_name character varying(50),
    address character varying(200),
    contact character varying(10),
    PRIMARY KEY(institute_id)
);
```

```
CREATE TABLE fund
(
    f_id numeric NOT NULL,
    total_amount numeric,
    unused_amount numeric,
    used_fund_details character varying(5000),
    period character varying(30),
    allocation_date DATE,
    fund_type character varying(30),
    PRIMARY KEY(f_id)
);
```

```
CREATE TABLE donation
(
    donor_id numeric NOT NULL,
    donor_name character varying(50),
    donor_type character varying(30),
    amount numeric,
    date_time timestamp,
    contact character varying(30),
    PRIMARY KEY(donor_id)
);
```

```
CREATE TABLE award
(
    category character varying(30) NOT NULL,
    year numeric NOT NULL,
    country_code numeric NOT NULL,
    award_detail character varying(1000),
    PRIMARY KEY(year,country_code,category),
    FOREIGN KEY(country_code) REFERENCES member_country
);
```

Section5: Normalization and Schema Refinement.

A. Schema Refinement Process till 3NF/BCNF.

- **site_detail** (**s_id**, site_name, address, latitude, longitude, area, country_code, category, buffer_zone, historical_detail, ownership, institute_id)
 - Primary key: s_id
 - Foreign key: country_code, institute_id
 - Functional dependency: $s_id \rightarrow site_name$,
 $s_id \rightarrow address$,
 $s_id \rightarrow latitude$,
 $s_id \rightarrow longitude$,
 $s_id \rightarrow area$,
 $s_id \rightarrow country_code$,
 $s_id \rightarrow category$,
 $s_id \rightarrow buffer_zone$,
 $s_id \rightarrow historical_detail$,
 $s_id \rightarrow ownership$,
 $s_id \rightarrow institute_id$
 - $latitude, longitude \rightarrow s_id$,
 $latitude, longitude \rightarrow site_name$,
 $latitude, longitude \rightarrow address$,
 $latitude, longitude \rightarrow area$,
 $latitude, longitude \rightarrow country_code$,
 $latitude, longitude \rightarrow category$,
 $latitude, longitude \rightarrow buffer_zone$,
 $latitude, longitude \rightarrow historical_detail$,
 $latitude, longitude \rightarrow ownership$,
 $latitude, longitude \rightarrow institute_id$
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF and there is no partial dependency in this table. Hence our relationship is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency, or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, the LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.
- **site_manager** (**m_id**, s_id, name, gender, age, salary, working_hours, contact, joining_date, retirement_date)
 - Primary key: m_id
 - Foreign key: s_id
 - Functional dependency: $m_id \rightarrow s_id$,
 $m_id \rightarrow name$,
 $m_id \rightarrow gender$,
 $m_id \rightarrow age$,
 $m_id \rightarrow salary$,
 $m_id \rightarrow working_hours$,
 $m_id \rightarrow contact$,
 $m_id \rightarrow joining_date$,
 $m_id \rightarrow retirement_date$,
 - There is no Partial dependency in this table.

- There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, the LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.
- **provisional_danger_site (s_id, intitute_id, type_of_danger, step_to_prevent, cause_of_danger)**
 - Primary key: s_id
 - Foreign key: institute_id
 - Functional dependency: $s_id \rightarrowtail institute_id$,

$$\begin{aligned} s_id &\rightarrow type_of_danger, \\ s_id &\rightarrow step_to_prevent, \\ s_id &\rightarrow cause_of_danger \end{aligned}$$
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.
- **status_report (report_id, m_id, submission_date, report_detail, period_of_observation)**
 - Primary key: report_id
 - Foreign key: m_id
 - Functional dependency: $report_id \rightarrowtail m_id$

$$\begin{aligned} report_id &\rightarrow submission_date \\ report_id &\rightarrow report_detail \\ report_id &\rightarrow period_of_observation \end{aligned}$$
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, the LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.
- **local_institute_agency (institution_id, institution_name, officer, address, contact)**
 - Primary key: institution_id
 - Functional dependency: $institution_id \rightarrowtail institution_name$,

$$institution_id \rightarrowtail officer,$$

$\text{institute_id} \rightarrow \text{address}$,
 $\text{institute_id} \rightarrow \text{contact}$

- There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.
- **fund(f_id, total_amount, unused_amount, used_fund_details, period, allocation_date, fund_type)**
 - Primary key: f_id
 - Functional dependency: $f_id \rightarrow \text{total_amount}$
 - $f_id \rightarrow \text{unused_amount}$
 - $f_id \rightarrow \text{used_fund_details}$
 - $f_id \rightarrow \text{period}$
 - $f_id \rightarrow \text{allocation_date}$
 - $f_id \rightarrow \text{fund_type}$
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, the LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.
- **other_fund(f_id, m_id)**
 - Primary key: f_id
 - Foreign key: m_id
 - Functional dependency: $f_id \rightarrow m_id$
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, the LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.
- **danger_site_fund(f_id, s_id)**
 - Primary key: f_id
 - Foreign key: s_id

- Functional dependency: $f_id \rightarrow s_id$
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, the LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.

- **world_heritage_committee (member_id, member_name, country_code, salary, tenure, contact)**
 - Primary key: member_id
 - Foreign key: country_code
 - Functional dependency: $member_id \rightarrow member_name$
 - $member_id \rightarrow country_code$
 - $member_id \rightarrow salary$
 - $member_id \rightarrow tenure$
 - $member_id \rightarrow contact$
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.

- **member_country (country_code, country_name, donor_id, region, representative, veto_power)**
 - Primary key: country_code
 - Foreign key: donor_id
 - Functional dependency: $country_code \rightarrow country_name$,
 - $country_code \rightarrow donor_id$,
 - $country_code \rightarrow region$,
 - $country_code \rightarrow representative$,
 - $country_code \rightarrow veto_power$
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF, and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency, or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.

- BCNF: For a valid BCNF, LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.

- **donation** (**donor_id**, donor_name, donor_type, amount, date, time, contact)
 - Primary key: donor_id
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - Redundancy: In this table, if donor gives a donation more than one time, then donor_name, donor_type, and contact will repeat. For this, we break the donation table as given below.
 - **donation** (**transaction_id**, donor_id, date, time, amount)
 - **donor_detail**(**donor_id**, donor_name, donor_type, contact)
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF, and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency, or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, LHS of each functional dependency should be CK/SK..

- **award** (**year**, **category**, **country_code**, award_detail)
 - Candidate key: year, category, country_code
 - Foreign key: country_code
 - There is no Partial dependency in this table.
 - There is no Transitive dependency.
 - Anomalies: There are no insertion, deletion, or update anomalies in this table.
 - First normal form: Our relation is already in 1NF because there is no multivalued(atomic) attribute.
 - Second normal form: The relation is 1NF, and there is no partial dependency in this table. Hence our relation is already in 2NF.
 - Third normal form: The relation is in 1NF and 2NF. There is no transitive dependency, or no non-prime attribute is dependent on another non-prime attribute. Hence our relation is already in 3NF.
 - BCNF: For a valid BCNF, the LHS of each functional dependency should be CK/SK. Hence our relation is already in BCNF.

B. New DDL Script of all tables

```

CREATE TABLE site_detail
(
    s_id numeric NOT NULL,
    site_name character varying(1000),
    address character varying(1000),
    latitude numeric,
    longitude numeric,
    area numeric,
    country_code numeric,
    category character varying(50),
    buffer_zone numeric,
    historical_detail character varying(5000),
    ownership character varying(1000),
    institute_id numeric,
    PRIMARY KEY (s_id),
    FOREIGN KEY (institute_id) REFERENCES local_institute_agency(institute_id) ON DELETE SET
    NULL,
    FOREIGN KEY (country_code) REFERENCES member_country(country_code) ON DELETE SET
    NULL
);

```

The screenshot shows the pgAdmin 4 interface with the 'unesco_st16' database selected. In the left sidebar, the 'Tables' folder is expanded, showing 13 tables. The 'site_detail' table is currently selected and highlighted in blue. The main pane displays the SQL code for creating the table:

```

--(1) to get information about sites
CREATE TABLE site_detail
(
    s_id numeric NOT NULL,
    site_name character varying(1000),
    address character varying(1000),
    latitude numeric,
    longitude numeric,
    area numeric,
    country_code numeric,
    category character varying(50),
    buffer_zone numeric,
    historical_detail character varying(5000),
    ownership character varying(1000),
    institute_id numeric,
    PRIMARY KEY (s_id),
    FOREIGN KEY (institute_id) REFERENCES local_institute_agency(institute_id) ON DELETE SET NULL,
    FOREIGN KEY (country_code) REFERENCES member_country(country_code) ON DELETE SET NULL
);

```

Below the code, a 'Data Output' tab is open, showing the following data:

s_id	site_name	address	latitude	longitude	area	country_code	category	buffer_zone	historical_detail
1	Subconjunctival Inject	6 3rd Crossing	-29.2231867	-51.3423619	8331	113	Natural	416	In quis j.
2	Spleen operation NEC	77028 Moland Point	37.520481	115.251124	1377	104	Mixed	68	Fusee cc
3	Closillary fistul NEC	7 Dwight Pass	50.64274	15.2540856	8685	119	Outstanding Universal Value	434	Integer a
4	Coronary bld flow monit	39419 Katie Place	-26.4051075	30.447285	3003	70	Monument	200	Quint
5	Rad electrocan-rect les	40728 Northridge Road	-7.2119433	108.1591737	3003	70	Monument	200	Quint

A green success message at the bottom right of the data grid states: 'Successfully run. Total query runtime: 147 msec. 150 rows affected.'

Number of records: 150

```

CREATE TABLE site_manager
(
    m_id numeric NOT NULL,
    s_id numeric,
    name character varying(100) NOT NULL,
    gender character varying(30),
    age numeric NOT NULL,
    salary numeric,
    working_hours numeric,
    contact character varying(20),
)

```

```

joining_date DATE,
retirement_date DATE,
PRIMARY KEY (m_id),
FOREIGN KEY (s_id) REFERENCES site_detail(s_id) ON DELETE SET NULL
);

```

The screenshot shows the pgAdmin 4 interface with the following details:

- Sidebar:** Shows the database schema with various objects like unesco_s1_t6, Tables (13), and site_manager.
- Query Editor:** Displays the SQL code for creating the site_manager table and selecting all rows from it.


```

22 select* from site_detail;
23
24 --(2) site manager information
25 CREATE TABLE site_manager
26 (
27   m_id numeric NOT NULL,
28   s_id numeric,
29   name character varying(100) NOT NULL,
30   gender character varying(30),
31   age numeric NOT NULL,
32   salary numeric,
33   working_hours numeric,
34   contact character varying(20),
35   joining_date DATE,
36   retirement_date DATE,
37   PRIMARY KEY (m_id),
38   FOREIGN KEY (s_id) REFERENCES site_detail(s_id) ON DELETE SET NULL
39 );
40 select* from site_manager;
41
      
```
- Data Output:** Shows the results of the query, displaying 300 rows of data for site managers. The columns are: m_id, s_id, name, gender, age, salary, working_hours, contact, joining_date, and retirement_date.
- Messages:** A green message at the bottom right indicates "Successfully run. Total query runtime: 112 msec. 300 rows affected."

Number of records: 300

```

CREATE TABLE status_report
(
    report_id numeric NOT NULL,
    m_id numeric,
    submission_date DATE,
    report_details character varying(5000),
    period_of_observation character varying(30),
    PRIMARY KEY (report_id),
    FOREIGN KEY (m_id) REFERENCES site_manager ON DELETE SET NULL
);

```

unesco_s1_t6

```

CREATE TABLE status_report
(
    report_id numeric NOT NULL,
    m_id numeric,
    submission_date DATE,
    report_details character varying(5000),
    period_of_observation character varying(30),
    PRIMARY KEY (report_id),
    FOREIGN KEY (m_id) REFERENCES site_manager ON DELETE SET NULL
);
select* from status_report;

--(4) information of danger sites
CREATE TABLE provisional_danger_site
(
    s_id numeric NOT NULL,
    institute_id numeric,
    type_of_danger character varying(30),
    steps_to_prevent character varying(5000),
    cause_of_danger character varying(5000),
    PRIMARY KEY(s_id),
    FOREIGN KEY(institute_id) REFERENCES local_institute_agency ON DELETE SET NULL
);

```

Data Output Explain Messages Notifications

report_id	m_id	submission_date	report_details
1	1	84	2020-12-15
2	2	54	2021-08-19
3	3	116	2020-11-14
4	4	35	2021-04-27
5	5	164	2021-09-17

Successfully run. Total query runtime: 107 msec. 500 rows affected.

Number of records: 500

```

CREATE TABLE provisional_danger_site
(
    s_id numeric NOT NULL,
    institute_id numeric,
    type_of_danger character varying(30),
    steps_to_prevent character varying(5000),
    cause_of_danger character varying(5000),
    PRIMARY KEY(s_id),
    FOREIGN KEY(institute_id) REFERENCES local_institute_agency ON DELETE SET NULL
);

```

unesco_s1_t6

```

CREATE TABLE provisional_danger_site
(
    s_id numeric NOT NULL,
    institute_id numeric,
    type_of_danger character varying(30),
    steps_to_prevent character varying(5000),
    cause_of_danger character varying(5000),
    PRIMARY KEY(s_id),
    FOREIGN KEY(institute_id) REFERENCES local_institute_agency ON DELETE SET NULL
);
select* from provisional_danger_site;

--(5) institute/agency that manages the sites
CREATE TABLE local_institute_agency
(
    institute_id numeric NOT NULL,
    institute_name character varying(500)
);

```

Data Output Explain Messages Notifications

s_id	institute_id	type_of_danger	steps_to_prevent
1	2	27	potential
2	6	55	potential
3	10	98	potential
4	14	84	ascertained
5	18	19	potential

Successfully run. Total query runtime: 258 msec. 30 rows affected.

Number of records: 30

```

CREATE TABLE local_institute_agency
(
    institute_id numeric NOT NULL,
    institute_name character varying(500)
);

```

```

officer character varying(100),
address character varying (1000),
contact character varying(20),
PRIMARY KEY(institute_id)
);

```

The screenshot shows the pgAdmin interface with the 'Query Editor' tab active. The code in the editor creates the 'local_institute_agency' table with columns: f_id (PK numeric), institute_name (character varying(500)), officer (character varying(100)), address (character varying(1000)), and contact (character varying(20)). It includes a primary key constraint on f_id and a foreign key constraint referencing the 'institute_id' column in the 'fund' table. A select* query is run against the table, returning 100 rows of data.

```

CREATE TABLE local_institute_agency
(
    f_id numeric NOT NULL,
    institute_name character varying(500),
    officer character varying(100),
    address character varying(1000),
    contact character varying(20),
    PRIMARY KEY(f_id)
);

select* from local_institute_agency;

```

f_id	institute_name	officer	address	contact
1	Goyette, Kutch and Mann	Chen McCarver	668 Cambridge Drive	+86 936 736 4975
2	Sawany, Wyman and D'Amore	Nananne Thornycraft	158 3rd Park	+33 632 312 3517
3	Emmerich-Stokes	Vincenz Sicily	47 Kennedy Drive	+55 616 918 9170
4	Doyle Glover	Tiler Barrus	52997 Golf Point	+62 214 540 3339
5	Aufderhar-Gleason	Dusty Jacobowitz	7 Ludington Lane	+62 4 240 4333

Successfully run. Total query runtime: 922 msec. 100 rows affected.

Number of records: 100

```

CREATE TABLE fund
(
    f_id numeric NOT NULL,
    total_amount numeric,
    unused_amount numeric,
    used_fund_details character varying(5000),
    allocation_date DATE,
    fund_period character varying(30),
    fund_type character varying(100),
    PRIMARY KEY(f_id)
);

```

The screenshot shows the pgAdmin interface with the 'Query Editor' tab active. The code creates the 'fund' table with columns: f_id (PK numeric), total_amount (numeric), unused_amount (numeric), and used_fund_details (character varying(5000)). It includes a primary key constraint on f_id. A select* query is run against the table, returning 700 rows of data.

```

CREATE TABLE fund
(
    f_id numeric NOT NULL,
    total_amount numeric,
    unused_amount numeric,
    used_fund_details character varying(5000),
    allocation_date DATE,
    fund_period character varying(30),
    fund_type character varying(100),
    PRIMARY KEY(f_id)
);

select* from fund;

```

f_id	total_amount	unused_amount	used_fund_details
1	379357.53	37935.753	Fusce consequat. Nulla nisl. Nunc nisl.
2	310496.02	310496.02	Aenean fermentum. Donec ut mauris eget massa tempor convallis. Nulla neque libero, convallis eget, eleifend luctus, ultricies eu, nibh.
3	6078.38	607.838	Etiam vel augue. Vestibulum rutrum rutrum neque. Aenean auctor gravida sem.
4	319773.0	31977.3	Quisque porta voluptatibus erat. Quisque erat eros, viverra eget, congue quisque.
5	745894.66	745894.66	Vestibulum nuquam varius ut blandit non. Interdum et malesuada fames ac turpis est.

Successfully run. Total query runtime: 141 msec. 700 rows affected.

Number of records: 700

```

CREATE TABLE other_fund
(
    f_id numeric NOT NULL,
    m_id numeric,
    PRIMARY KEY(f_id),
    FOREIGN KEY(m_id) REFERENCES site_manager ON DELETE SET NULL
);

```

The screenshot shows the pgAdmin interface with the 'Query Editor' tab active. The code area contains the SQL command to create the 'other_fund' table. The data output pane shows a table with 5 rows of data:

f_id	m_id
1	2
2	3
3	4
4	5
5	6

A green success message at the bottom right indicates: "Successfully run. Total query runtime: 139 msec. 470 rows affected."

Number of records: 470

```

CREATE TABLE danger_site_fund
(
    f_id numeric NOT NULL,
    s_id numeric,
    PRIMARY KEY(f_id),
    FOREIGN KEY(s_id) REFERENCES site_detail ON DELETE SET NULL
);

```

The screenshot shows the pgAdmin interface with the 'Query Editor' tab active. The code area contains the SQL command to create the 'danger_site_fund' table. The data output pane shows a table with 5 rows of data:

f_id	s_id
1	110
2	82
3	62
4	6
5	50

A green success message at the bottom right indicates: "Successfully run. Total query runtime: 112 msec. 230 rows affected."

Number of records: 230

```

CREATE TABLE member_country
(
country_code numeric NOT NULL,
    country_name character varying(100) NOT NULL,
    donor_id numeric,
    region character varying(100),
    veto_power bool,
    representative character varying(100),
    PRIMARY KEY(country_code),
    FOREIGN KEY(donor_id) REFERENCES donor_detail ON DELETE SET NULL);

```

The screenshot shows the pgAdmin 4 interface with the 'Query Editor' tab active. The code area contains the SQL for creating the 'member_country' table, which includes columns for country_code (PK), country_name, donor_id, region, veto_power, and representative. A comment indicates the table is for member countries. The code also includes a primary key constraint on country_code and a foreign key constraint referencing the 'donor_detail' table's donor_id column.

The Data Output tab displays the results of a 'select * from member_country;' query. The table has 5 rows with the following data:

country_code	country_name	donor_id	region	veto_power	representative
1	Afghanistan	3	Arab States	true	Vanya Rampley
2	Albania	7	Africa	false	Lionello Bazelle
3	Algeria	11	Latin America and the Caribbean	true	Link Hewell
4	Andorra	13	Africa	false	
5	Angola	14	Associate Member	false	

A green success message at the bottom right of the data grid states: "Successfully run. Total query runtime: 108 msec. 176 rows affected."

Number of records: 176

```

CREATE TABLE donation
(
    transection_id numeric NOT NULL,
    donor_id numeric ,
    amount numeric,
    date DATE,
    Time character varying(30),
    PRIMARY KEY(transection_id),
    FOREIGN KEY(donor_id) REFERENCES donor_detail ON DELETE SET NULL
);

```

unesco_s1_t6

```

114    region character varying(100),
115    veto_power bool,
116    representative character varying(100),
117    PRIMARY KEY(country_code),
118    FOREIGN KEY(donor_id) REFERENCES donor_detail ON DELETE SET NULL
119  );
120
121  --(10) donation details
122  CREATE TABLE donation
123  (
124    transection_id numeric NOT NULL,
125    donor_id numeric,
126    amount numeric,
127    date DATE,
128    Time character varying(30),
129    PRIMARY KEY(transection_id),
130    FOREIGN KEY(donor_id) REFERENCES donor_detail ON DELETE SET NULL
131  );
132  select* from donation;
133

```

	transection_id	donor_id	amount	date	time
1	64595894	220	786399	2021-09-06	21:03:12
2	4938868253	347	523185	2021-07-10	1:54:59
3	9621483506	225	191804	2021-04-29	2:46:32
4	7042854284	500	852295	2021-07-12	21:42:55
5	4074131056	126	993459	2021-04-16	21:46:52

Successfully run. Total query runtime: 312 msec. 1000 rows affected.

Number of records: 1000

CREATE TABLE donor_detail

```

(
    donor_id numeric NOT NULL,
    donor_name character varying(100),
    donor_type character varying(20),
    contact char varying(20),
    PRIMARY KEY(donor_id)
);

```

unesco_s1_t6

```

126    Time character varying(30),
127    PRIMARY KEY(transection_id),
128    FOREIGN KEY(donor_id) REFERENCES donor_detail ON DELETE SET NULL
129  );
130
131
132  --(11) donor details
133  CREATE TABLE donor_detail
134  (
135    donor_id numeric NOT NULL,
136    donor_name character varying(100),
137    donor_type character varying(20),
138    contact char varying(20),
139    PRIMARY KEY(donor_id)
140  );
141  select* from donor_detail;
142
143  --(12) world heritage committee details
144  CREATE TABLE world_heritage_committee
145  (
146    member_id numeric NOT NULL,
147    member_name character varying(100) NOT NULL,

```

	donor_id	donor_name	donor_type	contact
1	1	Manny Cheetham	organization	+7 481 871 2027
2	2	Shoshanna Mugleston	individual	+55 905 502 7448
3	3	Sharleen Radleigh	country	+86 706 139 7345
4	4	Audrey Huegett	organization	+970 518 662 7278
5	5	Janey Halshaw	organization	+62 942 216 3757

Successfully run. Total query runtime: 154 msec. 500 rows affected.

Number of records: 500

```

CREATE TABLE world_heritage_committee
(
    member_id numeric NOT NULL,
    member_name character varying(100) NOT NULL,
    country_code numeric NOT NULL,
    tenure character varying(30),
    salary numeric,
    contact character varying(20),
    PRIMARY KEY(member_id),
    FOREIGN KEY(country_code) REFERENCES member_country ON DELETE CASCADE);

```

The screenshot shows the pgAdmin 4 interface with the 'Query Editor' tab active. The left sidebar displays the database schema, including tables like 'unesco_s1_t6', 'award', 'danger_site_fund', etc. The main pane shows the SQL code for creating the 'world_heritage_committee' table and a subsequent select query:

```

--(12) world heritage committee details
CREATE TABLE world_heritage_committee
(
    member_id numeric NOT NULL,
    member_name character varying(100) NOT NULL,
    country_code numeric NOT NULL,
    tenure character varying(30),
    salary numeric,
    contact character varying(20),
    PRIMARY KEY(member_id),
    FOREIGN KEY(country_code) REFERENCES member_country ON DELETE CASCADE
);

select* from world_heritage_committee;

```

Below the code, the 'Data Output' tab is selected, showing the results of the query:

member_id	member_name	country_code	tenure	salary	contact
1	Kikella Coot	41	6 year	3512	+62 456 537 0837
2	Alexis Gantzman	157	3 year	5666	+52 240 371 8238
3	Maison Sollas	110	2 year	3827	+48 215 562 7659
4	Arlene Vurley	123	3 year	1924	+86 143 387 6514
5	Rycza Troke	101	3 year	4216	+62 854 685 1

A green message bar at the bottom right indicates: "Successfully run. Total query runtime: 110 msec. 15 rows affected."

Number of records: 15

```

CREATE TABLE award
(
    category character varying(50) NOT NULL,
    year numeric NOT NULL,
    country_code numeric,
    award_detail character varying (5000),
    PRIMARY KEY(year, country_code, category),
    FOREIGN KEY(country_code) REFERENCES member_country ON DELETE SET NULL);

```

unesco_s1_16

```

> Collations
> Domains
> FTS Configurations
> FTS Dictionaries
> FTS Parsers
> FTS Templates
> Foreign Tables
> Functions
> Materialized Views
> Procedures
> Sequences
> Tables (13)
  > award
  > danger_site_fund
  > donation
  > donor_detail
  > fund
  > local_institute_agency
  > member_country
  > other_fund
  > provisional_danger_si
  > site_detail
  > site_manager
  > status_report
  > world_heritage_commi
> Trigger Functions
> Types
> Views
> Subscriptions
  > Login/Group Roles
  > Tablespaces

```

unesco/postgres@PostgreSQL 13 ▾

Query Editor Query History

```

152   tenure character varying(30) ,
153   salary numeric,
154   contact character varying(20),
155   PRIMARY KEY(member_id),
156   FOREIGN KEY(country_code) REFERENCES member_country ON DELETE CASCADE
157 );
158 select* from world_heritage_committee;
159
160 --(13) award details
161 CREATE TABLE award
162 (
163   category character varying(50) NOT NULL,
164   year numeric NOT NULL,
165   country_code numeric,
166   award_detail character varying (5000),
167   PRIMARY KEY(year, country_code, category),
168   FOREIGN KEY(country_code) REFERENCES member_country ON DELETE SET NULL
169 );
170 select* from award;
171

```

Data Output Explain Messages Notifications

category	[PK] character varying (50)	year	[PK] numeric	country_code	[PK] numeric	award_detail
1	Award of Excellence	1990	63	Fusce posuere felis sed lacus. Morbi sem mauris, laoreet ut, rhoncus aliquet, pulvinar sed, nisl. Nunc rhoncus dui vel sem.		
2	Award of Distinction	1990	27	Integer ac leo. Pellentesque ultrices mattis odio. Donec vitae nisi.		
3	Award of Merit	1990	117	In hac habitasse plates dictumst. Etiam faucibus cursus urna. Ut tellus.		
4	Honourable Mention	1990	138	Fusce posuere felis sed lacus. Morbi sem mauris, laoreet ut, rhoncus aliquet, pulvinar sed, nisl. Nunc rhoncus dui vel sem.		
5	New Design in Heritage Contexts	1991	112	Suspendisse potenti. In eleifend nunc a odio. In		✓ Successfully run. Total query runtime: 107 msec. 128 rows affected.

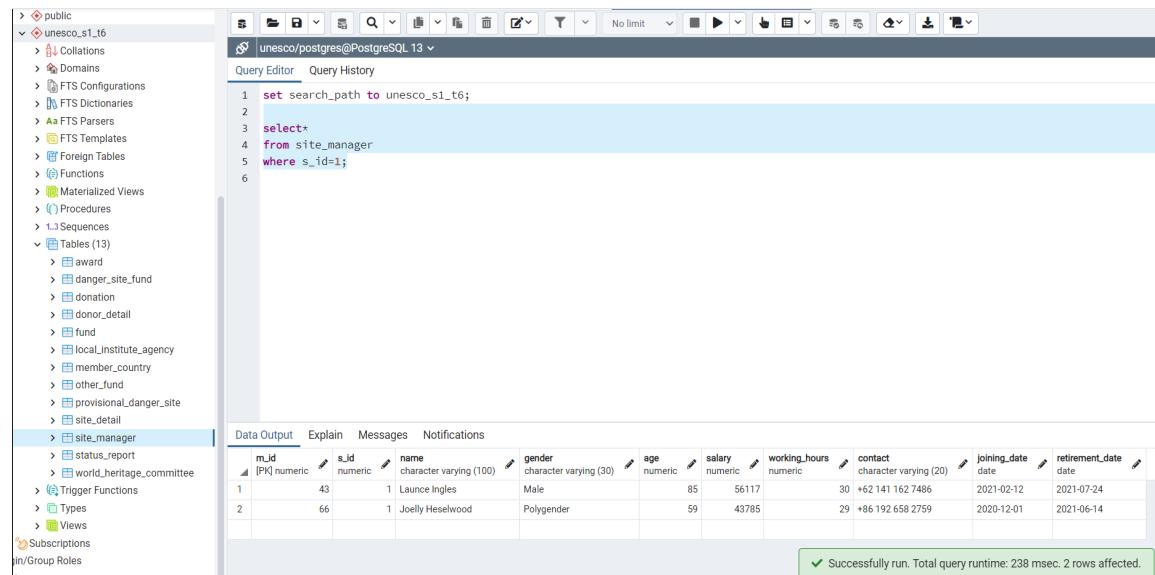
Number of records: 128

Section6: SQL, Final DDL Scripts,
Insert statements, 40 SQL Queries
with Snapshots of output of each
query.

A. SQL Queries:

- 1) Find all managers who had worked on-site with site_id 1.

SQL: `select*`
`from site_manager`
`where s_id=1;`



The screenshot shows the pgAdmin 4 interface with the 'Query Editor' tab active. The left sidebar displays the database schema, including the 'site_manager' table. The main area shows the following SQL code:

```

1 set search_path to unesco_s1_t6;
2
3 select*
4 from site_manager
5 where s_id=1;
6

```

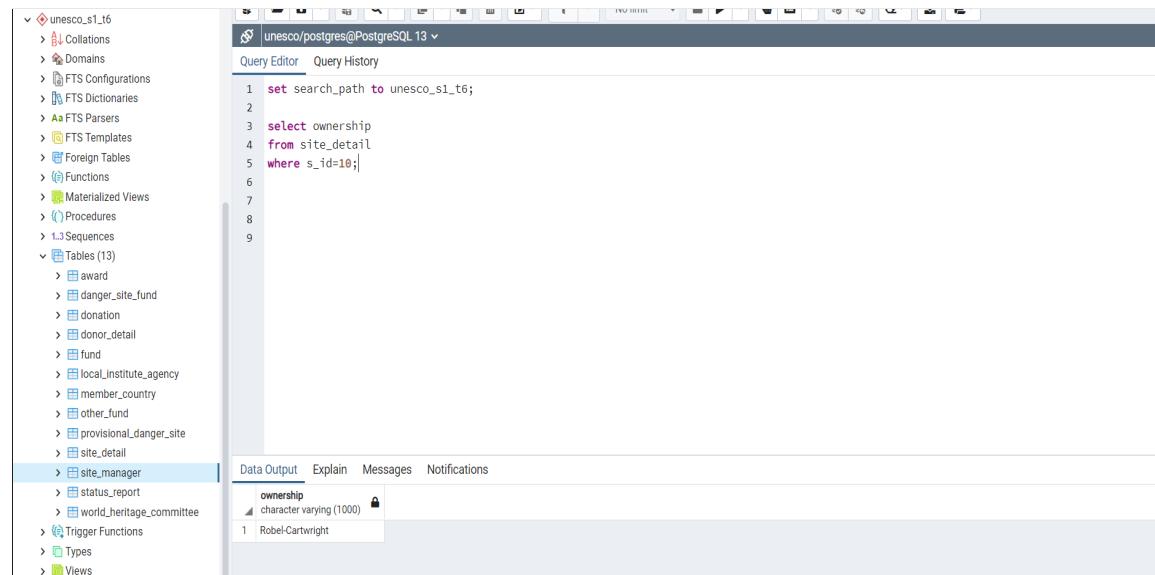
The results are displayed in a table titled 'Data Output' with the following columns: m_id, s_id, name, gender, age, salary, working_hours, contact, joining_date, and retirement_date. The data shows two rows:

m_id	s_id	name	gender	age	salary	working_hours	contact	joining_date	retirement_date
1	43	Launce Ingles	Male	85	56117	30	+62 141 162 7486	2021-02-12	2021-07-24
2	66	Joelly Heselwood	Polygender	59	43785	29	+86 192 658 2759	2020-12-01	2021-06-14

At the bottom right, a green success message indicates: "Successfully run. Total query runtime: 238 msec. 2 rows affected."

- 2) Find the owner of the site with site_id 10.

SQL: `select ownership`
`from site_detail`
`where s_id=10;`



The screenshot shows the pgAdmin 4 interface with the 'Query Editor' tab active. The left sidebar displays the database schema, including the 'site_detail' table. The main area shows the following SQL code:

```

1 set search_path to unesco_s1_t6;
2
3 select ownership
4 from site_detail
5 where s_id=10;
6
7
8
9

```

The results are displayed in a table titled 'Data Output' with the following column: ownership. The data shows one row:

ownership
Robel-Cartwright

- 3) Find the institutes which are working on danger sites.

SQL: `select local_institute_agency.institute_id, site_detail.site_name`
`from local_institute_agency, provisional_danger_site, site_detail`
`where local_institute_agency.institute_id=provisional_danger_site.institute_id and`
`site_detail.s_id=provisional_danger_site.s_id;`

The screenshot shows the pgAdmin interface with the 'unesco' database selected. On the left, the schema browser displays tables like 'local_institute_agency', 'provisional_danger_site', and 'site_detail'. A temporary table 'unesco_si_t6' is open in the Query Editor. The query selects 'institute_id' and 'site_name' from these tables where they match. The Data Output tab shows 30 rows of medical procedures. A message at the bottom right indicates the query was successfully run.

```

1 set search_path to unesco_si_t6;
2
3 select local_institute_agency.institute_id, site_detail.site_name
4 from local_institute_agency, provisional_danger_site, site_detail
5 where local_institute_agency.institute_id=provisional_danger_site.institute_id and site_detail.s_id=provisional_danger_site.s_id;
6
7
8
9
10
11
12
13
14
15

```

	institute_id	site_name
1	27	Spleen operation NEC
2	55	Opn reduc disloc-hand
3	98	Epiglottidectomy
4	84	Amputation through foot
5	19	Upper limb lymphangiogram
6	73	Hip surface, cermo/cermc
7	78	Unilat lung transplant
8	18	Oth intraop mag res imag
9	91	Femoral wedge osteotomy
10	71	Heterograft to skin
11	61	Achillototomy
12	29	CV cath plcmnt w guidance
13	5	Renal repair NEC
14	22	Failed forceps
15	80	Rev hip repl-acetab/fem

✓ Successfully run. Total query runtime: 59 msec. 30 rows affected.

- 4) Show number of members in the world heritage committee from each country.

SQL: `select count(member_id), country_name
from world_heritage_committee, member_country
where world_heritage_committee.country_code = member_country.country_code
group by country_name;`

The screenshot shows the pgAdmin interface with the 'unesco' database selected. On the left, the schema browser displays tables like 'member_country', 'provisional_danger_site', and 'status_report'. A temporary table 'unesco_si_t6' is open in the Query Editor. The query counts members by country code. The Data Output tab shows 15 countries. A message at the bottom right indicates the query was successfully run.

```

1 set search_path to unesco_si_t6;
2
3 select count(member_id), country_name
4 from world_heritage_committee, member_country
5 where world_heritage_committee.country_code = member_country.country_code
6 group by country_name;
7
8
9

```

	count	country_name
1	1	Singapore
2	1	Malta
3	1	Cote d'Ivoire
4	1	Kyrgyzstan
5	1	Algeria
6	1	France
7	1	Philippines
8	1	Taiwan
9	1	Saint Vincent and the Grenadines
10	1	Marshall Islands
11	1	Namibia

✓ Successfully run. Total query runtime: 65 msec. 15 rows affected.

- 5) Find the fund allocated to each provisional danger site.

SQL: `select sum(fund.total_amount), danger_site_fund.s_id
from fund, danger_site_fund
where fund.f_id=danger_site_fund.f_id
group by(danger_site_fund.s_id);`

The screenshot shows the pgAdmin interface with a database connection named 'unesco/postgres@PostgreSQL_13'. In the left sidebar, under the 'provisional_danger_site' table, the 'Columns' section is expanded, showing columns like s_id, institute_id, type_of_danger, steps_to_prevent, and cause_of_danger. The 'status_report' section is also expanded, showing columns report_id, m_id, submission_date, report_details, and period_of_observation. The 'Query Editor' tab is active, displaying the following SQL query:

```

1 set search_path to unesco_s1_t6;
2
3 select sum(fund.total_amount), danger_site_fund.s_id
4   from fund, danger_site_fund
5  where fund.f_id=danger_site_fund.f_id
6 group by(danger_site_fund.s_id);
7
8
9
10

```

The 'Data Output' tab shows the results of the query:

	sum	s_id
1	6280174.81	14
2	4043564.11	74
3	1132046.76	42
4	6423743.19	66
5	2923146.58	34
6	4455593.47	106
7	3186903.85	82
8	3502171.69	78
9	2144112.17	98
10	3516077.97	90
11	2605210.75	18

A green success message at the bottom right of the data grid states: 'Successfully run. Total query runtime: 56 msec. 30 rows affected.'

- 6) Count the number of danger sites from each country.

SQL: `select count(provisional_danger_site.s_id), country_name
from provisional_danger_site, site_detail, member_country
where provisional_danger_site.s_id = site_detail.s_id and member_country.country_code =
site_detail.country_code
group by country_name;`

The screenshot shows the pgAdmin interface with the same database connection. The left sidebar shows the 'provisional_danger_site' table with its columns expanded. The 'status_report' section is also expanded. The 'Query Editor' tab is active, displaying the following SQL query:

```

1 set search_path to unesco_s1_t6;
2
3
4 select count(provisional_danger_site.s_id), country_name
5   from provisional_danger_site, site_detail, member_country
6  where provisional_danger_site.s_id = site_detail.s_id and member_country.country_code = site_detail.country_code
7 group by country_name;
8
9
10

```

The 'Data Output' tab shows the results of the query:

	count	country_name
1	2	Indonesia
2	1	Czech Republic
3	1	Fiji
4	1	Palau
5	1	Cambodia
6	1	Macedonia
7	1	San Marino
8	1	Côte d'Ivoire
9	2	Liechtenstein
10	1	Azerbaijan
11	1	Egypt

A green success message at the bottom right of the data grid states: 'Successfully run. Total query runtime: 65 msec. 28 rows affected.'

- 7) Count the number of awards given to each country.

SQL: `select country_name, count(award.country_code)
from award join member_country on member_country.country_code = award.country_code
group by member_country.country_code;`

```

> Procedures
> Sequences
-> Tables (13)
  > award
    > Columns (4)
      category
      year
      country_code
      award_detail
  > Constraints
  > Indexes
  > RLS Policies
  > Rules
  > Triggers
-> danger_site_fund
-> donation
-> donor_detail
-> fund
-> local_institute_agency
-> member_country
  > Columns (6)
    country_code
    country_name
    donor_id
    region
    veto_power
    representative
  > Constraints
  > Indexes
  > RLS Policies
  > Rules
  > Triggers

```

Query Editor: unesco/postgres@PostgreSQL 13

```

182
183
184
185   select country_name, count(award.country_code)
186   from award join member_country on member_country.country_code = award.country_code
187   group by member_country.country_code;
188
189

```

Data Output

country_name	count
Honduras	1
Korea, South	1
Georgia	3
Tanzania	2
Ecuador	1
Sweden	3
Jamaica	1
Sudan	1
Qatar	1
Mauritania	2
Kosovo	1
Belize	2
Saint Vincent and the Grenadines	1
Palau	1
New Zealand	1

Messages: Notifications: Successfully run. Total query runtime: 407 msec. 92 rows affected.

- 8) Find report detail of each provisional danger site.

SQL: `select site_name, report_details`

```

from status_report, site_manager, provisional_danger_site, site_detail
where status_report.m_id=site_manager.m_id and
site_manager.s_id=provisional_danger_site.s_id and
provisional_danger_site.s_id=site_detail.s_id;

```

```

-> Foreign Tables
-> Functions
-> Materialized Views
-> Procedures
-> Sequences
-> Tables (13)
  > award
  > danger_site_fund
  > donation
  > donor_detail
  > fund
  > local_institute_agency
  > member_country
  > other_fund
  > provisional_danger_si
  > site_detail
  > site_manager
  > status_report
  > Columns (5)
    report_id
    m_id
    submission_da
    report_details
    period_of_observ
  > Constraints
  > Indexes
  > RLS Policies
  > Rules
  > Triggers
  > world_heritage_com
  > Trigger Functions

```

Query Editor: unesco/postgres@PostgreSQL 13

```

183
184
185 --q8
186 select site_name, report_details
187 from status_report, site_manager, provisional_danger_site, site_detail
188 where status_report.m_id=site_manager.m_id and site_manager.s_id=provisional_danger_site.s_id and provisional_danger_site.s_id=site_detail.s_id;
189
190
191

```

Data Output

site_name	report_details
Fallen forces	Maecenas leo odio, condimentum id, luctus nec, molestie sed, justo. Pellentesque viverra pede ac diam. Cras pellentesque volutpat dui. Nullam porttitor lacus at turpis. Donec posuere metus vitae ipsum. Aliquam non mauris.
Cystostomy closure	Cras non velit nec nisi vulputate nonummy. Maecenas tincidunt focus at velit. Vivamus vel nulla eget eros elementum pellentesque.
Pelvic dye contrast xray	Nullam porttitor lacus at turpis. Donec posuere metus vitae ipsum. Aliquam non mauris.
CV cath plcmnt w guidance	In hac habitasse pláteae dictumst. Etiam faucibus cursus urna. Ut tellus.
Failed forces	Aliquam quis turpis eget elit sodales scelerisque. Mauris sit amet eros. Suspendisse accumsan tortor quis turpis.
Rev hip replacement/fem	Proin eu mi. Nulla ac enim. In tempor, turpis nec euismod scelerisque, quam turpis adipiscing lorem, vitae mattis nibh ligula nec sem.
Vesicostomy	Curabitur gravida nisi at nibh. In hac habitasse platea dictumst. Aliquam augue quam, sollicitudin vitae, consectetuer eget, rutrum at, lorem.
Resect ext seg lg bowel	Duis aliquam convallis nunc. Proin at turpis a pede posuere nonummy. Integer non velit.
CV cath plcmnt w guidance	Cras mi pede, malesuada in, imperdiet et, commodo vulputate, justo. In blandit ultrices enim. Lorem ipsum dolor sit amet, consectetuer adipiscing elit.
Failed forces	Phasellus in felis. Donec semper sapien a libero. Nam dui.
Renal repair NEC	Morbi non lectus. Aliquam sit amet diam in magna bilobum imperdiet. Nullam orci pede, venenatis non, sodales sed, tincidunt eu, felis.
Lap total abdominal hyster	Duis aliquam convallis nunc. Proin at turpis a pede posuere nonummy. Integer non velit.
Spleen operation NEC	Integer ac leo. Pellentesque ultrices mattis odio. Donec vitae nisi.

Messages: Notifications: Successfully run. Total query runtime: 135 msec. 109 rows affected.

- 9) Show the used fund detail of all emergency funds.

SQL: `select used_fund_details`

```

from fund
where fund_type='Emergency';

```

```

176 select* from award;
177
178
179
180 --q9
181 select used_fund_details
182 from fund
183 where fund_type='Emergency';
184

Data Output Explain Messages Notifications

used_fund_details
character varying (5000)
1 Aenean fermentum. Donec ut mauris eget massa tempor convallis. Nulla neque libero, convallis eget, eleifend luctus, ultricies eu, nibh.
2 Etiam vel augue. Vestibulum rutrum rutrum neque. Aenean auctor gravida sem.
3 Quisque porta volutpat erat. Quisque erat eros, viverra eget, congue eget, semper rutrum, nulla. Nunc purus.
4 Vestibulum quam sapien, varius ut, blandit non, interdum in, ante. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Duis faucibus accumsan odio. Curabitur convallis.
5 Proin interdum mauris non ligula pellentesque ultrices. Phasellus id sapien in sapien iaculis congue. Vivamus metus arcu, adipiscing molestie, hendrerit at, vulputate vitae, nisl.
6 Cras non velit nec nisi vulputate nonummy. Maecenas tincidunt lacus at velit. Vivamus vel nulla eget eros elementum pellentesque.
7 Mauris enim leo, rhoncus sed, vestibulum sit amet, cursus id, turpis. Integer aliquet, massa id lobortis convallis, tortor risus dapibus augue, vel accumsan tellus nisi eu orci. Mauris lacinia sapien quis libero.
8 Duis bibendum, felis sed interdum venenatis, turpis enim blandit mi, in porttitor pede justo eu massa. Donec dapibus. Duis at velit eu est congue elementum.
9 Suspendisse potenti. In eleifend quam a odio. In hac habitasse platea dictumst.
10 Cras mi pede, malesuada in, imperdiet et, commodo vulputate, justo. In blandit ultrices enim. Lorem ipsum dolor sit amet, consectetur adipiscing elit.
11 In hac habitasse platea dictumst. Etiam faucibus cursus urna. Ut tellus.
12 Cras mi pede, malesuada in, imperdiet et, commodo vulputate, justo. In blandit ultrices enim. Lorem ipsum dolor sit amet, consectetur adipiscing elit.
13 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin risus. Praesent lectus.
14 Aenean fermentum. Donec ut mauris eget massa tempor convallis. Nulla neque libero, convallis eget, eleifend luctus, ultricies eu, nibh.

Successfully run. Total query runtime: 122 msec. 242 rows affected.

```

- 10) Count the number of times the country has donated to the UNESCO world heritage center.

SQL: `select country_name, count(transection_id)`
`from donation, member_country`
`where donation.donor_id=member_country.donor_id`
`group by (country_name);`

```

178
179
180 --q10
181 select country_name, count(transection_id)
182 from donation, member_country
183 where donation.donor_id=member_country.donor_id
184 group by (country_name);
185
186

Data Output Explain Messages Notifications

country_name
character varying (100)
count
bigint
1 Indonesia
2 Bangladesh
3 Cameroon
4 Kiribati
5 Czech Republic
6 Sweden
7 Dominican Republic
8 Ireland
9 Cambodia
10 Macedonia
11 Singapore
12 Papua New Guinea
13 Sri Lanka
14 Laos
15 Botswana

Successfully run. Total query runtime: 70 msec. 150 rows affected.

```

- 11) Find the site manager with the highest salary paid.

SQL: `with temp as`
`select max(salary) as mxsal`
`from site_manager)`
`select name, mxsal`
`from temp,site_manager`
`where salary=mxsal;`

The screenshot shows the pgAdmin 4 interface. On the left is a tree view of database objects. In the center is a Query Editor window with the following SQL code:

```

180 --q11
181 with temp as (
182     select max(salary) as mxsal
183     from site_manager
184 )
185 select name, mxsal
186 from temp,site_manager
187 where salary=mxsal;
188

```

The Data Output tab shows the results:

name	mxsal
Andreas Lobe	59914

A green success message at the bottom right says: "Successfully run. Total query runtime: 57 msec. 1 rows affected."

- 12) Find the number of the retired manager.

SQL: `select count(*)
from site_manager
where retirement_date<CURRENT_DATE;`

The screenshot shows the pgAdmin 4 interface. In the center is a Query Editor window with the following SQL code:

```

178
179
180 --q12
181 select count(*)
182 from site_manager
183 where retirement_date<CURRENT_DATE;
184
185
186

```

The Data Output tab shows the results:

count
150

A green success message at the bottom right says: "Successfully run. Total query runtime: 61 msec. 1 rows affected."

- 13) Find the site with the “Outstanding Universal Value” category.

SQL: `select*
from site_detail
where category='Outstanding Universal Value';`

```

donor_detail
fund
local_institute_agency
member_country
other_fund
provisional_danger_site
site_detail
Columns (12)
s_id
site_name
address
latitude
longitude
area
country_code
category
buffer_zone
historical_detail
ownership
institute_id
Constraints
Indexes
RLS Policies
Rules
Triggers
site_manager
status_report
world_heritage_committee
Trigger Functions
Types
Views

```

unesco/postgres@PostgreSQL 13

Query Editor Query History

```

178
179
180 ~~q13
181 select*
182 from site_detail
183 where category='Outstanding Universal Value';

```

Data Output Explain Messages Notifications

s_id	site_name	address	latitude	longitude	area	country_code	category	buffer_zone	historical_detail
1	Clos billary fistul NEC	7 Dwight Pass	50.64274	15.2540856	8685	119	Outstanding Universal Value	434	Integer ac
2	Mid & inner ear biopsy	22 Shelley Road	-7.7218793	113.4785837	4841	42	Outstanding Universal Value	242	Maecenas
3	Amputation through foot	33593 Monument Crossing	24.191374	97.801697	1260	79	Outstanding Universal Value	63	Mauris enim
4	Skin & subq incision NEC	892 Raven Street	48.759003	2.323941	3906	171	Outstanding Universal Value	195	Mauris enim
5	Hair transplant	9 Manitowish Road	14.3876884	121.0011959	3182	108	Outstanding Universal Value	159	Duis cons
6	Tendon transfr/transplant	21562 Sachs Circle	41.3336366	-8.5749394	3793	136	Outstanding Universal Value	189	Phasellus
7	CV cath plcmnt w guidance	76016 Arizona Trail	14.6355044	121.016279	8063	46	Outstanding Universal Value	403	Loem ipsum
8	Renal repair NEC	598 Manley Court	-8.4428564	112.6973355	9364	137	Outstanding Universal Value	468	Aenean fe
9	Imp epiretinal prost	643 Crest Line Circle	45.1310529	33.5941067	2460	141	Outstanding Universal Value	123	Nullam sit
10	Form cutan ureterostomy	009 Rigney Center	-16.67787	46.109699	4438	22	Outstanding Universal Value	221	Nullam po
11	Liver operation NEC	73552 Riverside Junction	41.30278	20.83028	2548	64	Outstanding Universal Value	127	In quis jus
12	Rev hip repl-acetab/fem	2074 Johnson Crossing	10.5308066	105.1609838	3299	87	Outstanding Universal Value	164	Mauris eni
13	Limited consultation	5209 Anzinger Terrace	48.9097908	2.7104352	2682	176	Outstanding Universal Value	134	Proin inter
14	Male genital x-ray NEC	9554 David Street	3.799339	-75.194595	680				

Successfully run. Total query runtime: 52 msec. 39 rows affected.

- 14) List all the individual donors.

SQL: `select*`
`from donor_detail`
`where donor_type='individual';`

```

Collations
Domains
FTS Configurations
FTS Dictionaries
FTS Parsers
FTS Templates
Foreign Tables
Functions
Materialized Views
Procedures
Sequences
Tables (13)
award
danger_site_fund
donation
donor_detail
Columns (4)
donor_id
donor_name
donor_type
contact
Constraints
Indexes
RLS Policies
Rules
Triggers
fund
local_institute_agency
member_country
other_fund
provisional_danger_site

```

unesco/postgres@PostgreSQL 13

Query Editor Query History

```

177
178
179
180 ~~q14
181 select*
182 from donor_detail
183 where donor_type='individual';
184
185

```

Data Output Explain Messages Notifications

donor_id	donor_name	donor_type	contact
1	Shoshanna Mugleston	individual	+55 905 502 7448
2	Janeva Jakuszewski	individual	+55 637 464 2111
3	Martie Damerell	individual	+7 840 377 9604
4	Ruby Pendergrast	individual	+381 158 714 3213
5	Alick Birkin	individual	+63 142 205 2210
6	Querida De Pero	individual	+86 816 871 3219
7	Burlie Judge	individual	+387 976 710 0292
8	Vale Maycey	individual	+967 821 709 9609
9	Guenevere Drew	individual	+351 540 630 7040
10	Ollie Varney	individual	+359 304 563 3687
11	Greer Groom	individual	+7 777 121 8292
12	Pierre Stockall	individual	+385 951 554 6454
13	Arvin McAllinden	individual	+62 429 410 1274
14	Carlynn Adshed	individual	+7 695 324 9701
15	Karla Hindleham	individual	+62 671 828 7958

Successfully run. Total query runtime: 47 msec. 159 rows affected.

- 15) Count the number of sites from each region.

SQL: `select count(s_id),region`
`from member_country,site_detail`
`where member_country.country_code=site_detail.country_code`
`group by region;`

```

set search_path to unesco_s1_t6;
select count(s_id),region
from member_country,site_detail
where member_country.country_code=site_detail.country_code
group by region;

```

region	count
Asia and the Pacific	14
Arab States	29
Associate Member	26
Africa	20
Europe and North America	31
Latin America and the Caribbean	30

Successfully run. Total query runtime: 120 msec. 6 rows affected.

- 16) Find the total donation received from each country in 2021.

SQL: `select country_name,sum(amount)
from donation,member_country
where donation.donor_id=member_country.donor_id and (donation.date between '2021-01-01'
and '2021-12-31')
group by country_name;`

```

set search_path to unesco_s1_t6;
select country_name,sum(amount)
from donation,member_country
where donation.donor_id=member_country.donor_id and (donation.date between '2021-01-01' and '2021-12-31')
group by country_name;

```

country_name	sum
Indonesia	380977
Cameroon	538084
Kiribati	1933533
Czech Republic	2186383
Sweden	1640350
Dominican Republic	2090036
Ireland	1059471
Cambodia	818472
Thailand	75560

Successfully run. Total query runtime: 124 msec. 144 rows affected.

- 17) Find the provisional danger site and its total unused funds.

SQL: `select site_name,sum(unused_amount)
from site_detail,danger_site_fund,fund
where site_detail.s_id=danger_site_fund.s_id and fund.f_id=danger_site_fund.f_id
group by site_name;`

```

set search_path to unesco_s1_t6;
select site_name,sum(unused_amount)
from site_detail,danger_site_fund,fund
where site_detail.s_id=danger_site_fund.s_id and fund.f_id=danger_site_fund.f_id
group by site_name;

```

site_name	sum
Oth intraop mag res imag	294136.419
Replace large bowel tube	916497.508
Spleen operation NEC	292535.925
Bone graft to patella	214411.217
Femoral wedge osteotomy	292314.658
Resect ext seg lg bowel	122967.766
Amputation through foot	628017.481
Cystostomy closure	350217.169
Down bilateral NOS	462147.700

Successfully run. Total query runtime: 146 msec. 30 rows affected.

- 18) Find the all cultural heritage sites which are also in provisional danger list.

SQL: `select site_name`

```

from provisional_danger_site, site_detail
where provisional_danger_site.s_id=site_detail.s_id and category='Cultural';

```

```

set search_path to unesco_s1_t6;
select site_name
from provisional_danger_site, site_detail
where provisional_danger_site.s_id=site_detail.s_id and category='Cultural';

```

site_name
Opn reduc disloc-hand
Upper limb lymphangiogram
Unilat lung transplant
Achillotenotomy
Vesicostomy
Pelvic dye contrast xray
Radical vag hyst NEC/NOS

Successfully run. Total query runtime: 51 msec. 7 rows affected.

- 19) Find the member detail of world heritage committee who has worked for a long period.

SQL: `select member_name`

```

from world_heritage_committee
where tenure = ( select max(tenure) from world_heritage_committee );

```

The screenshot shows the pgAdmin interface with the following details:

- Browser:** Shows the database schema with tables like `provisional_danger_site` and `site_detail`.
- Query Editor:** Contains the following SQL code:


```
1 set search_path to unesco_si_t6;
2
3 select member_name
4   from world_heritage_committee
5  where tenure=(6
6 select max(tenure)
7   from world_heritage_committee
8 );
```
- Data Output:** Displays the results of the query:

member_name
Kikelia Coot
Gregorius Huff
Dyna Pattillo
Alvie Linch
Martica Crissil
Chadd Siri
- Message:** A green box at the bottom right indicates "Successfully run. Total query runtime: 113 msec. 6 rows affected."

- 20) Find top-5 individual donors.

SQL: `select donor_name,sum(amount) amt
from donation,donor_detail
where donor_detail.donor_id=donation.donor_id and donor_type='individual'
group by donor_name
order by amt desc limit 5;`

The screenshot shows the pgAdmin interface with the following details:

- Browser:** Shows the database schema with tables like `provisional_danger_site` and `site_detail`.
- Query Editor:** Contains the following SQL code:


```
1 set search_path to unesco_si_t6;
2
3 select donor_name,sum(amount) amt
4   from donation,donor_detail
5  where donor_detail.donor_id=donation.donor_id and donor_type='individual'
6 group by donor_name
7 order by amt desc limit 5;
8
```
- Data Output:** Displays the results of the query:

donor_name	amt
Madella Ungerecht	4072840
Marley O'Spillane	3602546
Concordia Algata	3503120
Katharine Penwright	3227498
Randa Meth	2897183
- Message:** A green box at the bottom right indicates "Successfully run. Total query runtime: 162 msec. 5 rows affected."

- 21) Find the category distribution of sites.

SQL: `create or replace view nat as`

`select count(*) as n from site_detail where category='Natural';`

`create or replace view cul as`

`select count(*) as c from site_detail where category='Cultural';`

`create or replace view mix as`

`select count(*) as m`

```

from site_detail
where category='Mixed';

create or replace view ouv as
select count(*) as o
from site_detail
where category='Outstanding Universal Value';

select n*100/(n+c+m+o) as natural, c*100/(n+c+m+o) as cultural, m*100/(n+c+m+o) as
mixed, o*100/(n+c+m+o) as outstanding_universal_value
from nat, cul, mix, ouv;

```

The screenshot shows the pgAdmin 4 interface with a database connection named 'unesco/postgres@PostgreSQL 13'. In the left sidebar, the 'site_detail' table is selected, revealing its 12 columns: s_id, site_name, address, latitude, longitude, area, country_code, category, buffer_zone, historical_detail, ownership, and institute_id. The main pane displays the SQL code for creating three views: cul, mix, and ouv, along with their respective SELECT statements. The 'Data Output' tab shows the results of the last query, which is a single row with four columns: natural, cultural, mixed, and outstanding_universal_value, all having a value of 26. A green success message at the bottom right indicates the query was run successfully.

natural	cultural	mixed	outstanding_universal_value
26	26	26	26

✓ Successfully run. Total query runtime: 55 msec. 1 rows affected.

- 22) Find the gender distribution in the site manager.

SQL: **create or replace view** m **as**

```

select count(*) cnt
from site_manager
where site_manager.gender='male';

```

create or replace view f **as**

```

select count(*) cnt
from site_manager
where site_manager.gender='female';

```

create or replace view o **as**

```

select count(*) cnt
from site_manager
where site_manager.gender='other';

```

select m.cnt*100/(m.cnt+f.cnt+o.cnt) **as** male_in_percentage,f.cnt*100/(m.cnt+f.cnt+o.cnt) **as**
female_in_percentage,o.cnt*100/(m.cnt+f.cnt+o.cnt) **as** other_in_percentage
from m,f,o;

```

> Columns (10)
> Constraints
> Indexes
> RLS Policies
> Rules
> Triggers
> status_report
> world_heritage_committee
Trigger Functions
Types
Views
bscriptions
dup Roles
ces

186
187
188 create or replace view m as
189 select count(*) cnt
190 from site_manager
191 where site_manager.gender='male';
192
193 create or replace view f as
194 select count(*) cnt
195 from site_manager
196 where site_manager.gender='female';
197
198 CREATE or replace VIEW o as
199 select count(*) cnt
200 from site_manager
201 where site_manager.gender='other';
202
203 select m.cnt*100/(m.cnt+f.cnt+o.cnt) as male_in_percentage,f.cnt*100/(m.cnt+f.cnt+o.cnt) as female_in_percentage,o.cnt*100/(m.cnt+f.cnt+o.cnt) as other_in_percentage
204 from m,f,o;
205
206
207
208
209

```

Data Output Explain Messages Notifications

	male_in_percentage	female_in_percentage	other_in_percentage
1	32	30	38

Successfully run. Total query runtime: 75 msec. 1 rows affected.

- 23) List the managers who are paid more than the average salary.

SQL: `select name`

```

from site_manager
where salary >= (select avg(salary) from site_manager);

```

```

> institute_id
> Constraints
> Indexes
> RLS Policies
> Rules
> Triggers
> site_manager
> Columns (10)
> Constraints
> Indexes
> RLS Policies
> Rules
> Triggers
> status_report
> Columns
> Constraints
> Indexes
> RLS Policies
> Rules

```

Query Editor Query History

```

1 set search_path to unesco_s1_t6;
2
3 select name
4 from site_manager
5 where salary >= (select avg(salary) from site_manager);

```

Data Output Explain Messages Notifications

	name
1	Federico Tooke
2	Keelia Tarplee
3	Scottie Pferther
4	Lorain Crowther
5	Giraldo Gheorghe
6	Gaby Emrison
7	Lucinda Milby
8	Crosby Tinsley
9	Audrey Labe

Successfully run. Total query runtime: 128 msec. 164 rows affected.

- 24) Find the member countries, which has donated most amount.

SQL: `create or replace view donation_detail as`

```

select donor_detail.donor_id, sum(amount) amt
from donation, donor_detail
where donor_detail.donor_id=donation.donor_id and donor_type='country'
group by donor_detail.donor_id

```

```

select member_country.country_code, country_name, donation_detail.donor_id, region,
veto_power, representative, amt as max_donation
from donation_detail, member_country
where donation_detail.donor_id=member_country.donor_id
order by amt desc limit 1;

```

The screenshot shows the pgAdmin interface with a database connection named 'unesco/postgres@PostgreSQL 13'. In the left sidebar, there is a tree view of the database schema, including tables like 'award', 'danger_site_fund', 'donation', and 'other_fund'. The 'award' table is currently selected. The main pane displays a SQL query editor with the following code:

```

176 select* from award;
177
178 create or replace view donation_detail as
179   select donor_detail.donor_id, sum(amount) amt
180   from donation, donor_detail
181   where donor_detail.donor_id=donation.donor_id and donor_type='country'
182   group by donor_detail.donor_id
183
184 select member_country.country_code, country_name, donation_detail.donor_id, region, veto_power, representative, amt as max_donation
185 from donation_detail, member_country
186 where donation_detail.donor_id=member_country.donor_id
187 order by amt desc limit 1;
188
189
190

```

Below the code, the 'Data Output' tab is active, showing the results of the query:

country_code	country_name	donor_id	region	veto_power	representative	max_donation
56	Eritrea	160	Latin America and the Caribbean	false	Sara-ann Torra	4217555

A green success message at the bottom right of the results pane says: "Successfully run. Total query runtime: 52 msec. 1 rows affected."

- 25) Find fund amount,fund allocation date, site name and name of manager which were managed by the retired site manager.

SQL: **select** site_name,site_manager.name **as** manager_name, total_amount, allocation_date
from site_detail **join** site_manager **on** site_detail.s_id=site_manager.s_id
join other_fund **on** other_fund.m_id=site_manager.m_id
join fund **on** fund.f_id=other_fund.f_id
where retirement_date<**current_date**;

The screenshot shows the pgAdmin interface with a database connection named 'unesco/postgres@PostgreSQL 13'. In the left sidebar, there is a tree view of the database schema, including tables like 'mix', 'nat', 'ouv', 'country_detail', 'cul', 'donation_country', 'status_report', 'world_heritage_committee', 'provisional_danger_site', 'site_detail', 'site_manager', 'other_fund', and 'fund'. The 'mix' table is currently selected. The main pane displays a SQL query editor with the following code:

```

205
206
207 select site_name,site_manager.name as manager_name, total_amount, allocation_date
208 from site_detail join site_manager on site_detail.s_id=site_manager.s_id
209   join other_fund on other_fund.m_id=site_manager.m_id
210   join fund on fund.f_id=other_fund.f_id
211 where retirement_date<current_date;
212
213
214

```

Below the code, the 'Data Output' tab is active, showing the results of the query:

site_name	manager_name	total_amount	allocation_date
Amputation of cervix	Kirstin Dust	798734.86	2011-09-22
Femoral wedge osteotomy	Moyna Arran	349240.92	2012-11-30
Triple arthrodesis	Aeriel Monnery	341893.43	2020-09-08
Repair ob laceration NEC	Frannie Bloor	438003.45	2014-06-21
Lap remove both ovaries	Durante Jutson	371833.0	2020-09-04
Lap total abdominal hyst	Gilbert Arkin	322858.42	1995-04-23
Liver operation NEC	Aurthur Soloway	50860.22	2004-07-06
Other resp procedures	Alla Seth	749737.55	1992-04-17
Male genital x-ray NEC	Aeriel Chazelle	333356.66	2000-04-21
Male genital x-ray NEC	Bron Jerromes	598960.79	1990-03-21
Rad electrocoag-rect les	Amandy Balsdon	794075.11	2021-04-18
Replace large bowel tube	Amabel Standing	153528.84	2000-06-19
Thor abnl lung les/tis	Melisenda Collinge	21456.25	1995-11-28
Intraop cardiac pacemak	Janette Houlden	462683.68	2014-07-26

A green success message at the bottom right of the results pane says: "Successfully run. Total query runtime: 56 msec. 170 rows affected."

- 26) Find the average donation from countries.

SQL: `create or replace view country_donation as(`

```

        select sum(amount) as td
        from member_country,donation
        where member_country.donor_id=donation.donor_id
        group by country_name );

        select avg(td)
        from country_donation;
```

The screenshot shows the pgAdmin 4 interface. On the left is the object browser with the schema tree. In the center is the Query Editor window containing the SQL code for creating a view and calculating the average donation. Below the Query Editor is the Data Output pane, which displays the result of the query: an average value of 1269641.833333333333. A green success message at the bottom right indicates the query was run successfully with a runtime of 116 msec and 1 row affected.

```

3  create or replace view country_donation as(
4    select sum(amount) as td
5      from member_country,donation
6      where member_country.donor_id=donation.donor_id
7      group by country_name
8  );
9
10 select avg(td)
11   from country_donation;
12
13
```

avg	numeric
1	1269641.833333333333

Successfully run. Total query runtime: 116 msec. 1 rows affected.

- 27) Find the site name, site manager name and fund given to that manager.

SQL: `select site_name,name,total_amount`

```

from site_detail join site_manager on site_detail.s_id=site_manager.m_id
join other_fund on other_fund.m_id=site_manager.m_id
join fund on fund.f_id=other_fund.f_id;
```

The screenshot shows the pgAdmin 4 interface. The object browser on the left shows the schema with tables like 'site_detail', 'site_manager', and 'fund'. The Query Editor contains the SQL query for joining these three tables to find the site name, manager name, and total amount. The Data Output pane shows the results of the query, listing 10 rows of data. A green success message at the bottom right indicates the query was run successfully with a runtime of 207 msec and 300 rows affected.

site_name	name	totalAmount
Subconjunctival inject	Federico Tooké	310496.02
Spleen operation NEC	Loralyne Bouts	6078.38
Clos biliary fistul NEC	Ally Quesne	319773.0
Coronary bid flow mon	Doy Girardet	745894.66
Rad electrocoag rect les	Theodora Mapples	991073.07
Opn reduc disloc-hand	Keelia Tarplee	147542.45
Lumbar sympathectomy	Scottie Pferther	827144.32
Music therapy	Roberto Stiff	474781.16
Uterine endotracheal	Lorraine Grouther	219595.0

Successfully run. Total query runtime: 207 msec. 300 rows affected.

- 28) Find the agencies which are managing more than one sites.

SQL: `create or replace view temp as(`

```

        select institute_name,count(s_id) cnt
```

```

from site_detail,local_institute_agency
where site_detail.institute_id=local_institute_agency.institute_id
group by institute_name);

select institute_name,cnt
from temp
where cnt>1;

```

institute_name	cnt
Hill, MacGyver and Padberg	4
Tillman LLC	2
Sporer, Hickle and Emmerich	2
Nikolaus-Pfannerstill	4
Klocko-Mertz	4
Sawayn, Wyman and D'Amore	3
Lubowitz and Sons	2
Schoen, Rohan and Schneider	2
Upton, D'Amore and Larson	2

Successfully run. Total query runtime: 133 msec. 46 rows affected.

- 29) Find the member countries which has not got any award.

SQL:

```

select country_name
from member_country
where country_code in
(      select country_code
from member_country
except
select country_code
from award
);

```

```

set search_path to unesco_s1_t6;
select country_name
from member_country
where country_code in
(select country_code
from member_country
except
select country_code
from award);

```

country_name
Nauru
Taiwan
Cambodia
Bangladesh
Algeria
India
Colombia
Israel
Eritrea

Successfully run. Total query runtime: 176 msec. 84 rows affected.

- 30) Find top-5 donor countries.

SQL:

```

create or replace view donation_detail as
  select donor_detail.donor_id, sum(amount) amt
  from donation, donor_detail
  where donor_detail.donor_id=donation.donor_id and donor_type='country'
  group by donor_detail.donor_id

  select country_name, donation_detail.donor_id, amt
  from donation_detail, member_country
  where donation_detail.donor_id=member_country.donor_id
  order by amt desc limit 5;

```

```

create or replace view donation_detail as
  select donor_detail.donor_id, sum(amount) amt
  from donation, donor_detail
  where donor_detail.donor_id=donation.donor_id and donor_type='country'
  group by donor_detail.donor_id

  select country_name, donation_detail.donor_id, amt
  from donation_detail, member_country
  where donation_detail.donor_id=member_country.donor_id
  order by amt desc limit 5;

```

country_name	donor_id	amt
Eritrea	160	4217555
Belarus	39	3458589
Marshall Islands	309	3268131
Sweden	473	3214805
Ghana	179	3158822

Successfully run. Total query runtime: 61 msec. 5 rows affected.

- 31) Find the site name, manager name, and manager contact, whose status report has not been submitted.

```
SQL: select site_name, name, contact
      from site_manager, site_detail
      where site_detail.s_id=site_manager.s_id and m_id in
            (select m_id
             from site_manager
             except
             select m_id
             from status_report);
```

site_name	name	contact
Limb shorten-radius/ulna	Hayley Johanssen	+55 436 149 8752
Dressing of wound NEC	Donica Elstone	+687 328 571 6796
Parastology-endocrin	Martita Kringe	+48 286 107 6522
Tooth extraction NEC	Lewiss Pughslay	+48 494 907 1204
Tympanoplasty revision	Burty Sambidge	+92 689 978 6060
Dressing of wound NEC	Kerrill Tully	+7 743 489 8490
Dressing of wound NEC	Philippa Bourgeois	+223 448 165 6466
Limited consultation	Lorita Nelli	+55 972 488 9677

- 32) Find the site name, its manager name, and total fund to that manager.

```
SQL: create or replace view manager_fund as
      select other_fund.m_id, sum(total_amount) total_amt
      from fund, site_manager, other_fund
      where site_manager.m_id=other_fund.m_id and other_fund.f_id=fund.f_id
      group by other_fund.m_id;
      select site_name, name as manager_name, total_amt
      from manager_fund, site_manager, site_detail
      where manager_fund.m_id = site_manager.m_id and site_manager.s_id=site_detail.s_id;
```

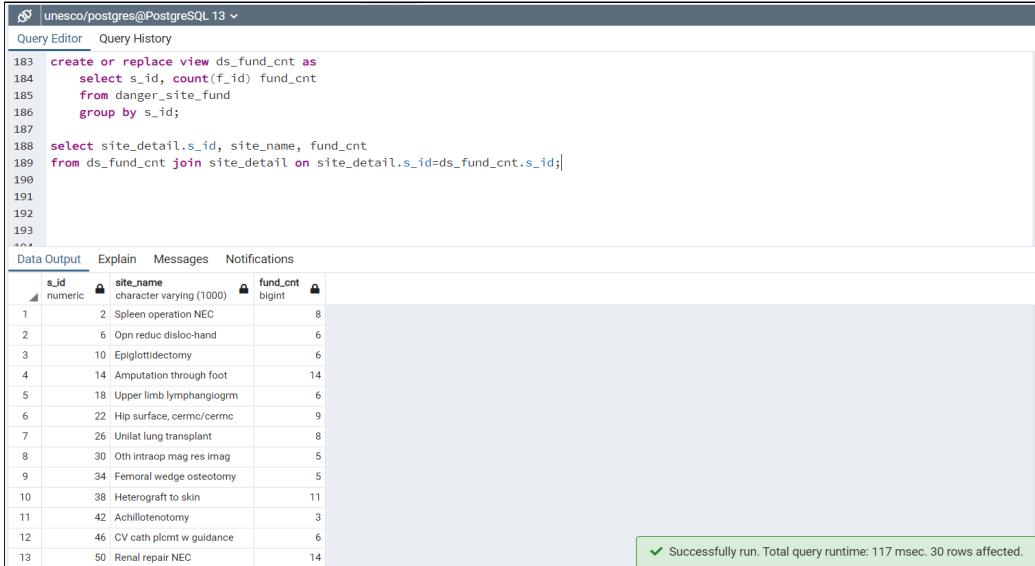
site_name	manager_name	total_amt
Subconjunctival inject	Federico Tooke	988265.48
Spleen operation NEC	Lorain Bouts	167193.80
Clos biliary fistul NEC	Ally Quesne	360157.09
Coronary bld flow monit	Doy Girardet	1261444.18
Rad electrocoag-rect les	Theodora Mapples	1587379.37
Opn reduc disloc-hanc	Keelia Tarplee	306473.30
Lumbar sympathectomy	Scottie Pferther	1380273.03
Music therapy	Roberto Stiff	1228290.82
Lid recons-part thic NEC	Lorain Crowther	604234.57
Epiglottidectomy	Halley Grishin	920640.11
Open renal biopsy	Nilson Kimmence	164941.52
Sialoadenectomy NOS	Marji Rawlins	1516918.04
Mid & inner ear biopsy	Dyane Ebsworth	329509.08

- 33) Find the sites who has been funded more than one time under provisional danger.

SQL: `create or replace view ds_fund_cnt as`

```
    select s_id, count(f_id) fund_cnt
    from danger_site_fund
    group by s_id;
```

```
    select site_detail.s_id, site_name, fund_cnt
    from ds_fund_cnt join site_detail on site_detail.s_id=ds_fund_cnt.s_id;
```



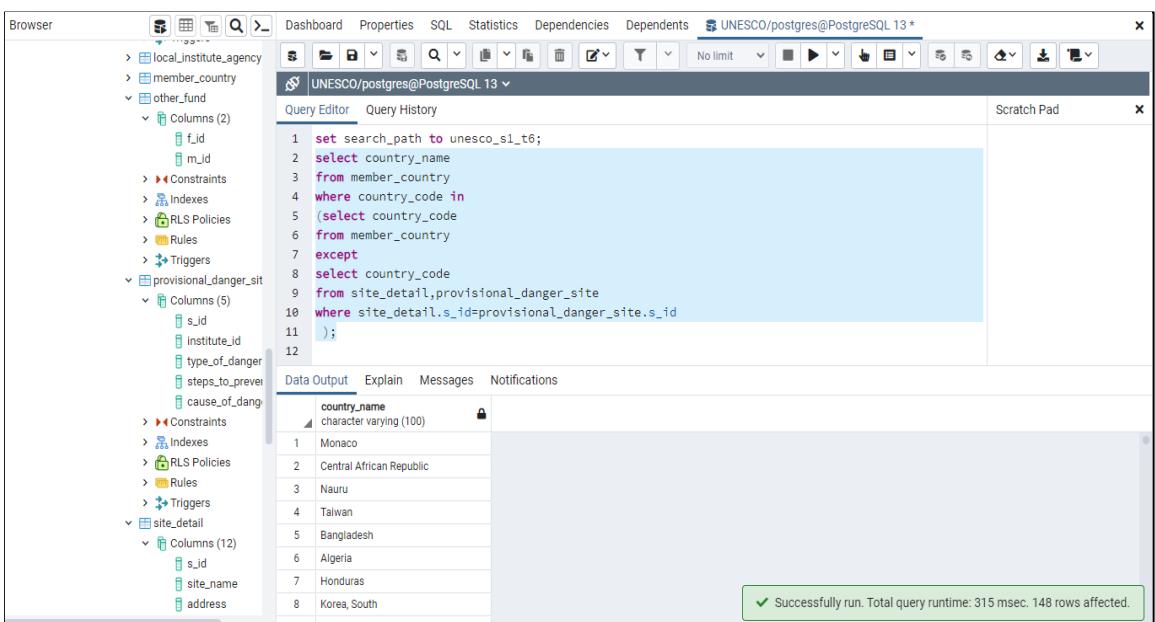
s_id	site_name	fund_cnt
1	Spleen operation NEC	8
2	Open reduc disloc-hand	6
3	Epiglottidectomy	6
4	Ampputation through foot	14
5	Upper limb lymphangiogram	6
6	Hip surface, cermc/cermc	9
7	Unilat lung transplant	8
8	Oth intraop mag res imag	5
9	Femoral wedge osteotomy	5
10	Heterograft to skin	11
11	Achillotomotomy	3
12	CV cath plmmt w guidance	6
13	Renal repair NEC	14

Successfully run. Total query runtime: 117 msec. 30 rows affected.

- 34) List the name of countries which has no provisional danger sites.

SQL: `select country_name`

```
    from member_country
    where country_code in
    (select country_code
    from member_country
    except select country_code from site_detail,provisional_danger_site
    where site_detail.s_id=provisional_danger_site.s_id );
```



country_name
Monaco
Central African Republic
Nauru
Taiwan
Bangladesh
Algeria
Honduras
Korea, South
Greece

Successfully run. Total query runtime: 315 msec. 148 rows affected.

- 35) Find the institute detail which administrates the highest number of sites.

SQL: **create or replace view temp as**

```
select institute_id, count(s_id) cnt
from site_detail
group by institute_id;
```

```
select *
from temp, local_institute_agency
where temp.institute_id = local_institute_agency.institute_id and cnt = (select max(cnt) from
temp);
```

institute_id	cnt	institute_id	institute_name	officer	address	contact
97	5	97	Williamson Inc	Averilli Di Matteo	86 Superior Road	+62 639 881 7070

Successfully run. Total query runtime: 152 msec. 1 rows affected.

- 36) List all veto power countries with their last one year's total donation.

SQL: **create or replace view donation_detail as**

```
select donor_detail.donor_id, sum(amount) amt
from donation, donor_detail
where donor_detail.donor_id = donation.donor_id and donor_type='country' and
date >= '2020-01-01' and date <= '2021-01-01'
group by donor_detail.donor_id
```

```
select member_country.country_code, country_name, donation_detail.donor_id, region,
representative, amt
from donation_detail, member_country
where donation_detail.donor_id = member_country.donor_id and veto_power='true'
```

```

unesco/postgres@PostgreSQL 13 ~
Query Editor Query History
176 select* from award;
177
178 create or replace view donation_detail as
179     select donor_detail.donor_id, sum(amount) amt
180     from donation, donor_detail
181     where donor_detail.donor_id=donation.donor_id and donor_type='country' and date>='2020-01-01' and date<='2021-01-01'
182     group by donor_detail.donor_id
183
184 select member_country.country_code, country_name, donation_detail.donor_id, region, representative, amt
185 from donation_detail, member_country
186 where donation_detail.donor_id=member_country.donor_id and veto_power='true'
187
188
189
190
Data Output Explain Messages Notifications
country_code numeric
country_name character varying(100)
donor_id numeric
region character varying(100)
representative character varying(100)
amt numeric
1 16 Belarus 39 Associate Member Jeanette Keesman 605958
2 58 Ethiopia 163 Europe and North America Pietra Hofner 739046
3 66 Ghana 179 Associate Member Gayle Ardy 951335
4 78 Indonesia 204 Europe and North America Andreea Osgarby 380977
5 104 Macedonia 285 Latin America and the Caribbean El Swannick 75540
6 120 Morocco 330 Africa Graeme De Vile 813080
7 125 Nepal 336 Europe and North America Maudie Paragreen 654107
8 132 Oman 356 Africa Ethelred Einchcombe 436145

```

Successfully run. Total query runtime: 44 msec. 8 rows affected.

- 37) List all provisional danger sites with their managing agency and ownership.

SQL: `select ownership,institute_name`

```

from site_detail,provisional_danger_site,local_institute_agency
where site_detail.s_id=provisional_danger_site.s_id and
site_detail.institute_id=local_institute_agency.institute_id

```

```

Browser
institute_id
type_of_danger
steps_to_preve...
cause_of_dang...
> Constraints
> Indexes
> RLS Policies
> Rules
> Triggers
> site_detail
> Columns (12)
s_id
site_name
address
latitude
longitude
area
country_code
category
buffer_zone
historical_detai...
ownership
institute_id
> Constraints
> Indexes
> RLS Policies
> Rules
> Triggers
> site_manager
UNESCO/postgres@PostgreSQL 13 *
Query Editor Query History
1 set search_path to unesco_s1_t6;
2
3 select ownership,institute_name
4 from site_detail,provisional_danger_site,local_institute_agency
5 where site_detail.s_id=provisional_danger_site.s_id and site_detail.institut...
6

Data Output Explain Messages Notifications
ownership character varying(1000)
institute_name character varying(500)
1 Kessler, Simonis and Haley Sawayn, Wyman and D'Amore
2 Streich, Lang and Renner Emmerich-Stokes
3 Waelchi Inc Aufderhar-Gleason
4 Jacobson-Beatty Hahn, Rolfsen and Zemlak
5 Berge Group Hahn, Rolfsen and Zemlak
6 Beer-Daugherty Ziemann-Crist
7 King-Sipes Dibbert, Klein and Ward
8 Treutel, Mraz and Runolfsdottir Sporer, Hickle and Emmerich
9 Buerklin, Leach and Gleason Dickinson Group

```

Successfully run. Total query runtime: 136 msec. 30 rows affected.

- 38) Show the total conservation and management fund available to each institute.

SQL: `select institute_name,sum(total_amount)`

```

from local_institute_agency, site_detail, danger_site_fund, fund
where local_institute_agency.institute_id=site_detail.institute_id and
site_detail.s_id=danger_site_fund.s_id and danger_site_fund.f_id=fund.f_id
group by institute_name;

```

```

set search_path to unesco_s1_t6;
select institute_name,sum(total_amount)
from local_institute_agency,site_detail,danger_site,fund
where local_institute_agency.institute_id=site_detail.institute_id and site_detail.s_id=danger_
group by institute_name;

```

institute_name	sum
Sporer, Hickle and Emmerich	4377755.61
Klocko-Mertz	6657688.59
Sawayn, Wyman and D'Amore	3516077.97
Hegmann, D'Amore and Legros	3430516.19
Bradtke-Leuschke	3467012.30
Kovacek, Yundt and O'Hara	3795796.47
Dibbert, Klein and Ward	3186903.85
Hansen Inc	15002140.30

Successfully run. Total query runtime: 134 msec. 24 rows affected.

- 39) Create a stored procedure to insert a new danger site record in a table.

SQL: **CREATE OR REPLACE PROCEDURE**

```

insert_danger_site(s_id numeric, institute_id numeric, type_of_danger character varying(30),
steps_to_prevent character varying (5000),cause_of_danger character varying (5000))
LANGUAGE 'plpgsql'
AS $BODY$
```

BEGIN

```

INSERT INTO provisional_danger_site(s_id, institute_id, type_of_danger,
steps_to_prevent, cause_of_danger) values (s_id, institute_id, type_of_danger,
steps_to_prevent, cause_of_danger);
COMMIT;
```

END

\$BODY\$;

CALL insert_danger_site(151,100,'potential','this are the steps', 'terrorist attack');

```

CREATE OR REPLACE PROCEDURE insert_danger_site(s_id numeric, institute_id numeric, type_of_danger character varying(30), steps_to_prevent
LANGUAGE 'plpgsql'
AS $BODY$
BEGIN
    INSERT INTO provisional_danger_site(s_id,
    COMMIT;
END
$BODY$;

CALL insert_danger_site(151, 100, 'potential'

```

s_id	institute_id	type_of_danger	steps_to_prevent	cause_of_danger
21	82	34	ascertained	Morbi non lectus. Aliquam sit amet diam in ... Phasellus in felis.
22	86	94	ascertained	Morbi porttitor lorem id ligula. Suspendisse o... Duis aliquam con...
23	90	41	potential	Maecenas ut massa quis augue luctus tincid... Sed ante. Vivamu...
24	94	51	potential	In hac habitasse platea dictumst. Morbi vesti... Duis bibendum. N...
25	98	9	ascertained	Phasellus in felis. Donec semper sapien a lib... Phasellus in felis.
26	102	64	ascertained	Phasellus in felis. Donec semper sapien a lib... Phasellus in felis.
27	106	42	ascertained	Mauris enim leo, rhoncus sed, vestibulum sit ... In congue. Etiam...
28	110	35	potential	Aliquam quis turpis eget elit sodales sceleris... Nulla ut erat id m...
29	114	47	ascertained	Nulla ut erat id mauris vulputate elementum... Nulla ut erat id m...
30	118	24	potential	Morbi porttitor lorem id ligula. Suspendisse o... Phasellus sit ame...
31	151	100	potential	this are the steps terrorist attack

- 40) Add a column with the name ‘site_count’ in the member_count table. Write trigger function to update site_count column as soon as the site is added or deleted.

SQL: **alter table** member_country **add** site_count numeric;

```
with temp_relation(t_c_code,cnt) as
(
  select member_country.country_code,count(*)
  from site_detail join member_country
  on site_detail.country_code=member_country.country_code
  group by member_country.country_code
)
update member_country
set site_count=(select cnt from temp_relation where country_code=t_c_code );
```

```
update member_country
set site_count=0
where site_count is null;
```

```
CREATE OR REPLACE FUNCTION site_count_update()
RETURNS trigger
```

```
LANGUAGE 'plpgsql'
AS $BODY$
BEGIN
if(TG_ARGV[0]='insert')then
  update member_country set site_count = site_count+1
  where country_code=new.country_code;
  else
    update member_country set site_count=site_count+(1-2)
    where country_code=old.country_code;

  update member_country
  set site_count=site_count+1
  where country_code=new.country_code;
  end if;
  return new;
END
$BODY$;
```

```
CREATE TRIGGER trig_update1
AFTER INSERT
ON site_detail
FOR EACH ROW
EXECUTE PROCEDURE site_count_update('insert');
CREATE TRIGGER trig_update2
AFTER DELETE
ON site_detail
FOR EACH ROW
EXECUTE PROCEDURE site_count_update('delete');
CREATE TRIGGER trig_update3
AFTER UPDATE
ON site_detail
FOR EACH ROW
```

```

EXECUTE PROCEDURE site_count_update('update');

insert into site_detail
values(151, 'avvav', 'avfsva', 45.12121, 43.12000, 1222.5, 160, 'Natural', 122.2,
'adbahsbvfkces', 'ram', 50);

update site_detail
set country_code=2
where country_code=161

delete
from site_detail
where s_id=151;

select site_count
from member_country
where country_code=161

```

The screenshot shows the pgAdmin 4 interface with the following details:

- Browser:** Shows a tree view of database objects including columns, constraints, indexes, RLS Policies, rules, triggers, and trigger functions.
- Query Editor:** Contains the following SQL code:


```

53 EXECUTE PROCEDURE site_count_update('update');
54
55 insert into site_detail
56 values(151, 'avvav', 'avfsva', 45.12121, 43.12000, 1222.5, 160, 'Natural', 122.2,
57 'adbahsbvfkces', 'ram', 50);
58
59 delete
60 from site_detail
61 where s_id=151;
62
63 select site_count
64 from member_country
65 where country_code=160
      
```
- Data Output:** A table showing the result of the last query:

	site_count
1	0
- Status Bar:** Displays a green message: "Successfully run. Total query runtime: 174 msec. 1 rows affected."

The screenshot shows the pgAdmin 4 interface. On the left is a tree view of the database schema, including tables like 'name', 'gender', 'age', etc., and various system objects like functions, triggers, and rules. The main window contains a query editor with the following SQL code:

```
53 EXECUTE PROCEDURE site_count_update('update');
54
55 insert into site_detail
56 values(151, 'avvav', 'avfsva', 45.12121, 43.12000, 1222.5, 160, 'Natural', 122.2, 'adbahsbvbj'
57
58 delete
59 from site_detail
60 where s_id=151;
61
62 select site_count
63 from member_country
64 where country_code=160
```

The 'Messages' tab shows the output:

INSERT 0 1
Query returned successfully in 123 msec.

The screenshot shows the pgAdmin 4 interface with the same schema tree on the left. The main window displays the results of the previous query in the 'Data Output' tab:

site_count	numeric
1	1

A green success message at the bottom right states: "Successfully run. Total query runtime: 105 msec. 1 rows affected."

UNESCO/postgres@PostgreSQL 13

```

Query Editor Query History
Scratch Pad

53 EXECUTE PROCEDURE site_count_update('update');
54
55 insert into site_detail
56 values(151, 'avvav', 'avfsva', 45.12121, 43.12000, 1222.5, 160, 'Natural', 122.2, 'adbahsbvfj'
57
58 delete
59 from site_detail
60 where s_id=151;
61
62 select site_count
63 from member_country
64 where country_code=160

```

Data Output Explain Messages Notifications

	site_count
	numeric
1	0

site_detail (1)

site_count_update()

site_manager (5)

country_donation

UNESCO/postgres@PostgreSQL 13

```

Query Editor Query History
Scratch Pad X

57
58 update site_detail
59 set country_code=2
60 where country_code=161
61
62 delete
63 from site_detail
64 where s_id=151;
65
66 select site_count
67 from member_country
68 where country_code=2

```

Data Output Explain Messages Notifications

	site_count
	numeric
1	1

site_detail (1)

site_manager (10)

m_id
s_id
name
gender
age
salary
working_hours
contact
joining_date
retirement_date

Constraints
Indexes
RLS Policies
Rules
Triggers

site_manager (10)

site_count_update()

site_manager (10)

site_detail (1)

country_donation

✓ Successfully run. Total query runtime: 143 msec. 1 rows affected.

The screenshot shows the pgAdmin 4 interface. On the left is a tree view of the database schema, including tables like area, country_code, category, buffer_zone, historical_detail, ownership, institute_id, site_detail, member_country, and site_manager, along with their respective columns and various database objects like constraints, indexes, RLS Policies, Rules, and Triggers.

In the center, the Query Editor window displays the following SQL code:

```
50 values(151, 'AVANSA', 'AVANSA', 45.121111, 45.12000, 1222.5, 100, 'NATURAL', 122.2, 'aquaandsovi')
51
52 update site_detail
53 set country_code=161
54 where country_code=2
55
56 delete
57 from site_detail
58 where s_id=151;
59
60 select site_count
61 from member_country
62 where country_code=2
```

Below the Query Editor, the Data Output tab shows the result of the last query:

UPDATE 1

Query returned successfully in 143 msec.

A green success message at the bottom right indicates: ✓ Query returned successfully in 143 msec.

This screenshot shows the pgAdmin 4 interface with the same schema structure as the first one. The Query Editor window contains the same SQL code as the first screenshot.

The Data Output tab shows the results of the final query:

site_count	numeric
1	0

A green success message at the bottom right indicates: ✓ Successfully run. Total query runtime: 139 msec. 1 rows affected.

The screenshot shows a PostgreSQL client interface with the following details:

- Database:** UNESCO/postgres@PostgreSQL 13
- Query Editor:** Contains the following SQL code:

```
57
58 update site_detail
59 set country_code=161
60 where country_code=2;
61
62 delete
63 from site_detail
64 where s_id=151;
65
66 select site_count
67 from member_country
68 where country_code=161;
```
- Data Output:** Shows a single row of results:

site_count
1
- Message Bar:** Displays a green success message: "Successfully run. Total query runtime: 123 msec. 1 rows affected."

The screenshot shows a PostgreSQL client interface with the following details:

- Database:** UNESCO/postgres@PostgreSQL 13*
- Query Editor:** Contains the same SQL code as the first screenshot:

```
57
58 update site_detail
59 set country_code=2
60 where country_code=161;
61
62 delete
63 from site_detail
64 where s_id=151;
65
66 select site_count
67 from member_country
68 where country_code=161;
```
- Data Output:** Shows a single row of results:

site_count
0
- Message Bar:** Displays a green success message: "Successfully run. Total query runtime: 107 msec. 1 rows affected."

Section7: Project Code with output screenshots.

A. Code:

```
<!--index.html-->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO World Heritage Center Database</title>
    <style>
        body {
            background-color:lightgray;
            font-family: Arial,Verdana,sans-serif;
            font-size: 0.83em;
            margin: 0;
            line-height: 17px;
        }
        a:link {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        a:visited {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        .div {
            display:block;
        }
        .allside {
            display: table;
            width: 100%;
            table-layout: fixed;
            list-style-type: none;
            padding-left: 0;
            padding-top: 0;
            padding-bottom: 0;
            padding-right: 0;
            margin-left: 0;
            margin-right: 0;
        }
        .g33 {
            width: 50%;
        }
        .allleft {
            float: left;
            margin-left: 15px;
        }
        .leftside {
            width: 85%;
            background-color: #eee;
            padding: 0 5px 0 0;
        }
        .allmid {
            float: right;
            margin: 0;
        }
    </style>

```

```

.midside {
    width: 96%;
    background-color: #eee;
    padding: 0 5px 20px;
}
.allright {
    float:right;
    margin: 0;
}
.rightside {
    width: 96%;
    background-color: #eee;
    padding: 0 0 0 5px;
}
.category {
    padding-top:2px;
    padding-left:15px;
    padding-bottom:15px;
}
input[type=checkbox] {
    border:none;
    vertical-align:middle;
    width: 1.1em;
    height: 1.1em;
    margin: 2px 4px 4px 0;
    padding: 0;
}
input[type=radio] {
    border:none;
    vertical-align:middle;
    width: 1.1em;
    height: 1.1em;
    margin: 2px 4px 4px 0;
    padding: 0;
    cursor: default;
    appearance: auto;
}
.searchsite {
    padding:13%;
}
.searchbutton {
    font-size:20px;
}
tr:hover {
    background-color: whitesmoke;
}
</style>
</head>
<body>
    <center>
        <h1 style="text-align:center; padding-left:140px;"><a
style="color:black;" href="{% url 'homepage' %}"> UNESCO World Heritage
Center Database</a><span><a style="float:right; font-size:0.7em;
padding-right:10px;" href="{% url 'login' %}">Admin log-in</a></span></h1>
        <hr/>
        <hr/>
    </center>
    <br>
    <form method="POST" action="{% url 'search-site' %}">
        {% csrf_token %}

```

```

<div class="allside linearize-level-1">

    <div class="g33 allleft">
        <div class="leftside">
            <div class="category">
                <h3>Category</h3>
                <div>
                    <input type="checkbox" id="cult" name="scategory" value="Cultural">
                    <label for="cult"> Cultural</label><br>
                    <input type="checkbox" id="nat" name="scategory" value="Natural">
                    <label for="nat"> Natural</label><br>
                    <input type="checkbox" id="mix" name="scategory" value="Mixed">
                    <label for="mix"> Mixed</label><br>
                    <input type="checkbox" id="out" name="scategory" value="Outstanding Universal Value">
                    <label for="out"> Outstanding Universal Value</label><br>
                </div>
            </div>
        </div>
        <br>
        <br>
        <center style="padding-right:20px;">
            <button class="searchbutton" type="submit">Search</button>
        </center>
    </form>
    <br>
    <center>
        <table border="1">
            <tr>
                <th>Site ID</th>
                <th>Site name</th>
                <th>Address</th>
                <th>Latitude</th>
                <th>Longitude</th>
                <th>Area</th>
                <th>Country Code</th>
                <th>Category</th>
                <th>Buffer Zone</th>
                <th>Historical Detail</th>
                <th>Ownership</th>
                <th>Institute ID</th>
            </tr>
            {% for result in data %}
            <tr>
                <td>{{result.s_id}}</td>
                <td>{{result.site_name}}</td>
                <td>{{result.address}}</td>
                <td>{{result.latitude}}</td>
                <td>{{result.longitude}}</td>
                <td>{{result.area}}</td>
                <td>{{result.country_code}}</td>
                <td>{{result.category}}</td>
                <td>{{result.buffer_zone}}</td>
                <td>{{result.historical_detail}}</td>
            </tr>
            {% endfor %}
        </table>
    </center>

```

```

        <td>{{result.ownership}}</td>
        <td>{{result.institute_id}}</td>
    </tr>
    {% endfor %}
</table>
</center>
</body>
</html>

```

```

<!--log in-->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO database log-in</title>
    <link
href="//maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
rel="stylesheet" id="bootstrap-css">
    <script
src="//maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
>
    <script
src="//cdnjs.cloudflare.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>
<!----- Include the above in your HEAD tag ----->
    <style>
body {
    background-color:lightgray;
    font-family: Arial,Verdana,sans-serif;
    font-size: .83em;
    margin: 0;
    line-height: 17px;
}
a {
color: #92badd;
display:inline-block;
text-decoration: none;
font-weight: 400;
}
h2 {
text-align: center;
font-size: 16px;
font-weight: 600;
text-transform: uppercase;
display:inline-block;
margin: 40px 8px 10px 8px;
color: #cccccc;
}
/* STRUCTURE */
.wrapper {
display: flex;
align-items: center;
flex-direction: column;
justify-content: center;
width: 100%;
min-height: 100%;
```

```
padding: 20px;
}
#formContent {
-webkit-border-radius: 10px 10px 10px 10px;
border-radius: 10px 10px 10px 10px;
background: #fff;
padding: 30px;
width: 90%;
max-width: 450px;
position: relative;
padding: 0px;
-webkit-box-shadow: 0 30px 60px 0 rgba(0,0,0,0.3);
box-shadow: 0 30px 60px 0 rgba(0,0,0,0.3);
text-align: center;
}
#formFooter {
background-color: #f6f6f6;
border-top: 1px solid #dce8f1;
padding: 25px;
text-align: center;
-webkit-border-radius: 0 0 10px 10px;
border-radius: 0 0 10px 10px;
}
/* TABS */
h2.inactive {
color: #cccccc;
}
h2.active {
color: #0d0d0d;
border-bottom: 2px solid #5fbae9;
}
/* FORM TYPOGRAPHY*/
input[type=button], input[type=submit], input[type=reset] {
background-color: #56baed;
border: none;
color: white;
padding: 15px 80px;
text-align: center;
text-decoration: none;
display: inline-block;
text-transform: uppercase;
font-size: 13px;
-webkit-box-shadow: 0 10px 30px 0 rgba(95,186,233,0.4);
box-shadow: 0 10px 30px 0 rgba(95,186,233,0.4);
-webkit-border-radius: 5px 5px 5px 5px;
border-radius: 5px 5px 5px 5px;
margin: 5px 20px 40px 20px;
-webkit-transition: all 0.3s ease-in-out;
-moz-transition: all 0.3s ease-in-out;
-ms-transition: all 0.3s ease-in-out;
-o-transition: all 0.3s ease-in-out;
transition: all 0.3s ease-in-out;
}
input[type=button]:hover, input[type=submit]:hover,
input[type=reset]:hover {
background-color: #39ace7;
}
input[type=button]:active, input[type=submit]:active,
input[type=reset]:active {
-moz-transform: scale(0.95);
```

```
-webkit-transform: scale(0.95);
-o-transform: scale(0.95);
-ms-transform: scale(0.95);
transform: scale(0.95);
}
input[type=text] {
background-color: #f6f6f6;
border: none;
color: #0d0d0d;
padding: 15px 32px;
text-align: center;
text-decoration: none;
display: inline-block;
font-size: 16px;
margin: 5px;
width: 85%;
border: 2px solid #f6f6f6;
-webkit-transition: all 0.5s ease-in-out;
-moz-transition: all 0.5s ease-in-out;
-ms-transition: all 0.5s ease-in-out;
-o-transition: all 0.5s ease-in-out;
transition: all 0.5s ease-in-out;
-webkit-border-radius: 5px 5px 5px 5px;
border-radius: 5px 5px 5px 5px;
}
input[type=text]:focus {
background-color: #fff;
border-bottom: 2px solid #5fbae9;
}
input[type=text]:placeholder {
color: #cccccc;
}
/* ANIMATIONS */
/* Simple CSS3 Fade-in-down Animation */
.fadeInDown {
-webkit-animation-name: fadeInDown;
animation-name: fadeInDown;
-webkit-animation-duration: 1s;
animation-duration: 1s;
-webkit-animation-fill-mode: both;
animation-fill-mode: both;
}

@-webkit-keyframes fadeInDown {
0% {
    opacity: 0;
    -webkit-transform: translate3d(0, -100%, 0);
    transform: translate3d(0, -100%, 0);
}
100% {
    opacity: 1;
    -webkit-transform: none;
    transform: none;
}
}

@keyframes fadeInDown {
0% {
    opacity: 0;
    -webkit-transform: translate3d(0, -100%, 0);
}
```

```
        transform: translate3d(0, -100%, 0);
    }
100% {
    opacity: 1;
    -webkit-transform: none;
    transform: none;
}
}

/* Simple CSS3 Fade-in Animation */
@-webkit-keyframes fadeIn { from { opacity:0; } to { opacity:1; } }
@-moz-keyframes fadeIn { from { opacity:0; } to { opacity:1; } }
@keyframes fadeIn { from { opacity:0; } to { opacity:1; } }

.fadeIn {
opacity:0;
-webkit-animation:fadeIn ease-in 1;
-moz-animation:fadeIn ease-in 1;
animation:fadeIn ease-in 1;

-webkit-animation-fill-mode:forwards;
-moz-animation-fill-mode:forwards;
animation-fill-mode:forwards;

-webkit-animation-duration:1s;
-moz-animation-duration:1s;
animation-duration:1s;
}

.fadeIn.first {
-webkit-animation-delay: 0.4s;
-moz-animation-delay: 0.4s;
animation-delay: 0.4s;
}

.fadeIn.second {
-webkit-animation-delay: 0.6s;
-moz-animation-delay: 0.6s;
animation-delay: 0.6s;
}

.fadeIn.third {
-webkit-animation-delay: 0.8s;
-moz-animation-delay: 0.8s;
animation-delay: 0.8s;
}

.fadeIn.fourth {
-webkit-animation-delay: 1s;
-moz-animation-delay: 1s;
animation-delay: 1s;
}

/* Simple CSS3 Fade-in Animation */
.underlineHover:after {
display: block;
left: 0;
bottom: -10px;
width: 0;
height: 2px;
```

```

background-color: #56baed;
content: "";
transition: width 0.2s;
}

.underlineHover:hover {
color: #0d0d0d;
}

.underlineHover:hover:after{
width: 100%;
}
/* OTHERS */
*:focus {
outline: none;
}
#icon {
width:60%;
}

```

</style>

</head>

<body>

<div class="wrapper fadeInDown">

<div id="formContent">

 <!-- Tabs Titles -->

 <!-- Icon -->

 <!-- Login Form -->

 <form method="POST" action="/adminun">

 { % csrf_token %}

 <input type="text" id="login" class="fadeIn second" name="login" placeholder="Enter Username" required>

 <input type="text" id="password" class="fadeIn third" name="login" placeholder="Enter Password" required>

 <input type="submit" class="fadeIn fourth" value="Log In">

 </form>

 <!-- Remind Passowrd -->

 <div id="formFooter">

 Forgot Password?

 Home page

 </div>

</div>

</div>

</body>

</html>

```

<!--adminun.html-->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO World Heritage Center Database</title>
    <!--<link rel="icon" href="unesco_logo.png" type="image/png" sizes="16x16"-->
    <style>
        body {

```

```

background-color:lightgray;
font-family: Arial,Verdana,sans-serif;
font-size: .83em;
margin: 0;
line-height: 17px;
}
a:link {
color:blue;
background-color: transparent;
text-decoration: underline;
}
a:visited {
color:blue;
background-color: transparent;
text-decoration: underline;
}
table {
width: 600px;
margin: auto;
text-align: center;
table-layout: fixed;
}

/* Applying css properties
to table components */
table,
td,
tr {
padding: 12px;
background: rgb(245, 243, 243);
border: 1px solid black;
border-collapse: collapse;
font-size: 20px;
font-family: 'Lucida Sans',
'Lucida Sans Regular',
'Lucida Grande',
'Lucida Sans Unicode',
Geneva, Verdana, sans-serif;
}
/* Apply hover effect to td */
td:hover {
background: rgb(216, 214, 212);
}
</style>

</head>
<body>
<center>
<p><b style="font-size:2em; padding-left:70px;
text-align:center;">Welcome Admin</b>
<span><a style="font-size:1.3em; float:right; padding-right:10px;" href="{% url 'homepage' %}">Log out</a></span></p>
<!--<div id="logo">
<a target="_blank" href="https://whc.unesco.org">

</a>
</div>-->
<hr/>
<hr/>

```

```

<br>
<table>
  <tr>
    <td><a href="#"><% url 'showinst' %>Institute Database</a></td>
  </tr>
  <tr>
    <td><a href="#"><% url 'showsight' %>Site Database</a></td>
  </tr>
  <tr>
    <td><a href="#"><% url 'showcountry' %>Member Country</a></td>
  </tr>
</table>
</center>
</body>
</html>

```

```

<!--institute.html-->
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>UNESCO World Heritage Center Database</title>
  <!--<link rel="icon" href="unesco_logo.png" type="image/png"
sizes="16x16">-->
  <style>
    body {
      background-color: lightgray;
      font-family: Arial, Verdana, sans-serif;
      font-size: .83em;
      margin: 0;
      line-height: 17px;
    }
    a:link {
      color: blue;
      background-color: transparent;
      text-decoration: none;
    }
    a:visited {
      color: blue;
      background-color: transparent;
      text-decoration: none;
    }
    tr:hover {
      background-color: whitesmoke;
    }
  </style>
</head>
<body>
  <center>
    <h1 style="text-align: center;">Institute Database</h1>
    <!--<div id="logo">
      <a target="_blank" href="https://whc.unesco.org">
        
      </a>
    </div>
  </center>

```

```

</div>-->
<hr/>
<hr/>
<br>
    <a style="font-size:1.4em;" href="#"><% url 'insertinst' %}>Add new
Institute</a>
    <a style="text-align:right; margin-right:20px; margin-left:80px;
font-size:1.4em;" href="#"><% url 'adminlogin' %}>Back</a>
    <br>
    <br>
    <table border="1">
        <tr>
            <th>Institute id</th>
            <th>Institute name</th>
            <th>Officer</th>
            <th>Address</th>
            <th>Contact</th>
        </tr>
        {%
            for result in data%
        <tr>
            <td>{{result.institute_id}}</td>
            <td>{{result.institute_name}}</td>
            <td>{{result.officer}}</td>
            <td>{{result.address}}</td>
            <td>{{result.contact}}</td>
            <td><a href="#"><% url 'edit/{{result.institute_id}}' %}>Edit</a></td>
            <td><a href="#"><% url 'delinst' result.institute_id %}>
onclick = "return confirm('Are you sure you want to delete the
record?')">Delete</a></td>
            </tr>
        {% endfor %}
        </table>
    </center>
</body>
</html>

```

```

<!--insertinst.html-->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO</title>
    <style>
        body {
            background-color:lightgray;
            font-family: Arial,Verdana,sans-serif;
            font-size: .83em;
            margin: 0;
            line-height: 17px;
        }
        a:link {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        a:visited {

```

```

        color:blue;
        background-color: transparent;
        text-decoration: none;
    }

```

```

<!--editinst.html-->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO</title>
    <style>
        body {
            background-color:lightgray;
            font-family: Arial,Verdana,sans-serif;
            font-size: .83em;
            margin: 0;
            line-height: 17px;
        }
        a:link {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        a:visited {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
    </style>
</head>
<body>
    <center>
        <h1>Edit in Institute Database</h1>
        <hr/>
        <br>
        <a style="font-size:1.4em;" href="#"><% url 'showinst' %}>Back</a>
        <br>
        <br>
        <form method="POST" action="/update/{{InstModel.institute_id}}">
            {% csrf_token %}
            <table border="1">
                <tr>
                    <td>Institute id</td>
                    <td><input type="text" name="institute_id"
value="{{InstModel.institute_id}}" readonly></td>
                </tr>
                <tr>
                    <td>Institute name</td>
                    <td><input type="text" name="institute_name"
value="{{InstModel.institute_name}}"></td>
                </tr>
                <tr>
                    <td>Officer</td>
                    <td><input type="text" name="officer"
value="{{InstModel.officer}}"></td>
                </tr>
                <tr>
                    <td>Address</td>
                    <td><input type="text" name="address"
value="{{InstModel.address}}"></td>

```

```

        </tr>
        <tr>
            <td>Contact</td>
            <td><input type="text" name="contact"
value="{{InstModel.contact}}"></td>
        </tr>
        <tr>
            <td><input type="submit" value="Update Record"></td>
            <td>
                { % if messages %}
                { % for mess in messages %}
                <b style="color:green;">{{mess}}</b>
                { % endfor %}
                { % endif %}
            </td>
        </tr>
    </table>
    </form>
</center>
</body>
</html>

```

```

<!--site.html-->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO World Heritage Center Database</title>
    <!--<link rel="icon" href="unesco_logo.png" type="image/png"
sizes="16x16">-->
    <style>
        body {
            background-color:lightgray;
            font-family: Arial,Verdana,sans-serif;
            font-size: .83em;
            margin: 0;
            line-height: 17px;
        }
        a:link {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        a:visited {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        tr:hover {
            background-color: whitesmoke;
        }
    </style>
</head>
<body>

```

```

<center>
    <h1 style="text-align:center;">Site Database</h1>
    <!--<div id="logo">
        <a target="_blank" href="https://whc.unesco.org">
            
        </a>
    </div>-->
    <hr/>
    <hr/>
    <br>
    <a style="font-size:1.4em;" href="#"><% url 'insertsite' %}>Add new
Site</a>
    <a style="text-align:right; margin-right:20px; margin-left:80px;
font-size:1.4em;" href="#"><% url 'adminlogin' %}>Back</a>
    <br>
    <br>
    <table border="1">
        <tr>
            <th>Site ID</th>
            <th>Site name</th>
            <th>Address</th>
            <th>Latitude</th>
            <th>Longitude</th>
            <th>Area</th>
            <th>Country Code</th>
            <th>Category</th>
            <th>Buffer Zone</th>
            <th>Historical Detail</th>
            <th>Ownership</th>
            <th>Institute ID</th>
        </tr>
        {%
            for result in data%
        <tr>
            <td>{{result.s_id}}</td>
            <td>{{result.site_name}}</td>
            <td>{{result.address}}</td>
            <td>{{result.latitude}}</td>
            <td>{{result.longitude}}</td>
            <td>{{result.area}}</td>
            <td>{{result.country_code}}</td>
            <td>{{result.category}}</td>
            <td>{{result.buffer_zone}}</td>
            <td>{{result.historical_detail}}</td>
            <td>{{result.ownership}}</td>
            <td>{{result.institute_id}}</td>
            <td><a href="edits/{{result.s_id}}">Edit</a></td>
            <td><a href="deletes/{{result.s_id}}" onclick =
"return
confirm('Are you sure you want to delete the record?')">Delete</a></td>
        </tr>
        {% endfor %}
    </table>
</center>
</body>
</html>

```

```
<!--insertsite.html-->
```

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO</title>
    <style>
        body {
            background-color:lightgray;
            font-family: Arial,Verdana,sans-serif;
            font-size: .83em;
            margin: 0;
            line-height: 17px;
        }
        a:link {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        a:visited {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
    </style>
</head>
<body>
    <center>
        <h1>Insert in Site Database</h1>
        <hr/>
        <hr/>
        <br>
        <a style="font-size:1.4em;" href="#"><% url 'showsite' %}>Back</a>
        <br>
        <br>
        <form method="POST">
            {%
                csrf_token
            %}
            <table border="1">
                <tr>
                    <td>Site ID</td>
                    <td><input type="text" placeholder="Enter Site ID" name="s_id" required></td>
                </tr>
                <tr>
                    <td>Site name</td>
                    <td><input type="text" placeholder="Enter site name" name="site_name"></td>
                </tr>
                <tr>
                    <td>Address</td>
                    <td><input type="text" placeholder="Enter Address" name="address"></td>
                </tr>
                <tr>
                    <td>Latitude</td>
                    <td><input type="text" placeholder="Enter Latitude" name="Latitude"></td>
                </tr>
            </table>
        </form>
    </center>
</body>

```

```

        <td>Longitude</td>
        <td><input type="text" placeholder="Enter Longitude"
name="Longitude"></td>
        </tr>
        <tr>
            <td>Area</td>
            <td><input type="text" placeholder="Enter area"
name="area"></td>
        </tr>
        <tr>
            <td>Country Code</td>
            <td><input type="text" placeholder="Enter country code"
name="country_code"></td>
        </tr>
        <tr>
            <td>Category</td>
            <td><input type="text" placeholder="Enter site category"
name="category"> </td>
        </tr>
        <tr>
            <td>Buffer Zone</td>
            <td><input type="text" placeholder="Enter Buffer Zone"
name="buffer_zone"></td>
        </tr>
        <tr>
            <td>Historical Detail</td>
            <td><input type="text" placeholder="Enter Historical
Detail" name="historical_detail"></td>
        </tr>
        <tr>
            <td>Ownership</td>
            <td><input type="text" placeholder="Enter Ownership"
name="ownership"></td>
        </tr>
        <tr>
            <td>Institute ID</td>
            <td><input type="text" placeholder="Enter Institute ID"
name="institute_id"></td>
        </tr>
        <tr>
            <td><center><input type="submit"
value="insert"/></center>
            <td>
                {%
                    if messages %}
                    {%
                        for mes in messages %}
                            <b style="color:green;">{ {mes} }</b>
                    {%
                        endfor %}
                    {%
                        endif %}
                </td>
            </tr>
        </table>
    </form>
</center>
</body>
</html>
```

```
<!--editsite.html-->
```

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO</title>
    <style>
        body {
            background-color:lightgray;
            font-family: Arial,Verdana,sans-serif;
            font-size: .83em;
            margin: 0;
            line-height: 17px;
        }
        a:link {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        a:visited {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
    </style>
</head>
<body>
    <center>
        <h1>Edit in Site Database</h1>
        <hr/>
        <br>
        <a style="font-size:1.4em;" href="{% url 'showsitem' %}">Back</a>
        <br>
        <br>
        <form method="POST" action="/updates/{{SiteModel.s_id}}">
            {% csrf_token %}
            <table border="1">
                <tr>
                    <td>Site id</td>
                    <td><input type="text" name="s_id" value="{{SiteModel.s_id}}" readonly></td>
                </tr>
                <tr>
                    <td>Site name</td>
                    <td><input type="text" name="site_name" value="{{SiteModel.site_name}}"></td>
                </tr>
                <tr>
                    <td>Address</td>
                    <td><input type="text" name="address" value="{{SiteModel.address}}"></td>
                </tr>
                <tr>
                    <td>Latitude</td>
                    <td><input type="text" name="latitude" value="{{SiteModel.latitude}}"></td>
                </tr>
                <tr>
                    <td>Longitude</td>

```

```

        <td><input type="text" name="longitude"
value="{{SiteModel.longitude}}"></td>
        </tr>
        <tr>
            <td>Area</td>
            <td><input type="text" name="area"
value="{{SiteModel.area}}" readonly></td>
        </tr>
        <tr>
            <td>Country Code</td>
            <td><input type="text" name="country_code"
value="{{SiteModel.country_code}}"></td>
        </tr>
        <tr>
            <td>Category</td>
            <td><input type="text" name="category"
value="{{SiteModel.category}}"></td>
        </tr>
        <tr>
            <td>Buffer Zone</td>
            <td><input type="text" name="buffer_zone"
value="{{SiteModel.buffer_zone}}"></td>
        </tr>
        <tr>
            <td>Historical Detail</td>
            <td><input type="text" name="historical_detail"
value="{{SiteModel.historical_detail}}"></td>
        </tr>
        <tr>
            <td>Ownership</td>
            <td><input type="text" name="ownership"
value="{{SiteModel.ownership}}"></td>
        </tr>
        <tr>
            <td>Institute ID</td>
            <td><input type="text" name="institute_id"
value="{{SiteModel.institute_id}}"></td>
        </tr>
        <tr>
            <td><input type="submit" value="Update Record"></td>
            <td>
                {%
                    if messages %}
                {%
                    for mes in messages %}
                <b style="color:green;">{{mes}}</b>
                {%
                    endfor %}
                {%
                    endif %}
            </td>
        </tr>
    </table>
    </form>
</center>
</body>
</html>

```

```
<!--country.html-->
```

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO World Heritage Center Database</title>
    <!--<link rel="icon" href="unesco_logo.png" type="image/png" sizes="16x16"-->
<style>
    body {
        background-color:lightgray;
        font-family: Arial,Verdana,sans-serif;
        font-size: .83em;
        margin: 0;
        line-height: 17px;
    }
    a:link {
        color:blue;
        background-color: transparent;
        text-decoration: none;
    }
    a:visited {
        color:blue;
        background-color: transparent;
        text-decoration: none;
    }
    tr:hover {
        background-color: whitesmoke;
    }
</style>
</head>
<body>
    <center>
        <h1 style="text-align:center;">Country Database</h1>
        <hr/>
        <hr/>
        <br>
        <a style="font-size:1.4em;" href="{% url 'insertcountry' %}">Add new Country</a>
        <a style="text-align:right; margin-right:20px; margin-left:80px; font-size:1.4em;" href="{% url 'adminlogin' %}">Back</a>
        <br>
        <br>
        <table border="1">
            <tr>
                <th>Country Code</th>
                <th>Country Name</th>
                <th>Donor ID</th>
                <th>Region</th>
                <th>Veto power</th>
                <th>Representative</th>
            </tr>
            {% for result in data%}
            <tr>
                <td>{{result.country_code}}</td>
                <td>{{result.country_name}}</td>
                <td>{{result.donor_id}}</td>
                <td>{{result.region}}</td>
                <td>{{result.veto_power}}</td>
            </tr>
        {% endfor %}
    </table>
</center>

```

```

        <td>{{result.representative}}</td>
        <td><a href="editcnt/{{result.country_code}}">Edit</a></td>
        <td><a href="deletecnt/{{result.country_code}}" onclick =
"return confirm('Are you sure you want to delete the
record?')">Delete</a></td>
    </tr>
    { % endfor %}
</table>
</center>
</body>
</html>

```

```

<!--insertcountry.html-->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO</title>
    <style>
        body {
            background-color:lightgray;
            font-family: Arial,Verdana,sans-serif;
            font-size: .83em;
            margin: 0;
            line-height: 17px;
        }
        a:link {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        a:visited {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
    </style>
</head>
<body>
    <center>
        <h1>Insert in Country Database</h1>
        <hr/>
        <hr/>
        <br>
        <a style="font-size:1.4em;" href="#"><% url 'showcountry' %}>Back</a>
        <br>
        <br>
        <form method="POST">
            { % csrf_token %}
            <table border="1">
                <tr>
                    <td>Country Code</td>
                    <td><input type="text" placeholder="Enter Country Code"
name="country_code" required></td>
                </tr>

```

```

        <tr>
            <td>Country name</td>
            <td><input type="text" placeholder="Enter Country name"
name="country_name"></td>
        </tr>
        <tr>
            <td>Donor ID</td>
            <td><input type="text" placeholder="Enter Donor ID"
name="donor_id"></td>
        </tr>
        <tr>
            <td>Region</td>
            <td><input type="text" placeholder="Enter Region"
name="region"></td>
        </tr>
        <tr>
            <td>Veto power</td>
            <td><input type="text" placeholder="Enter Veto power"
name="veto_power"></td>
        </tr>
        <tr>
            <td>Representative</td>
            <td><input type="text" placeholder="Enter
Representative" name="representative"></td>
        </tr>
        <tr>
            <td><center><input type="submit"
value="insert"/></center>
            <td>
                {%
                    if messages %
                    for mess in messages %
                        <b style="color:green;">{{mess}}</b>
                    endfor %
                    endif %
                </td>
            </tr>
        </table>
    </form>
</center>
</body>
</html>

```

```

<!--editcountry.html-->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UNESCO</title>
    <style>
        body {
            background-color:lightgray;
            font-family: Arial,Verdana,sans-serif;
            font-size: .83em;
            margin: 0;
            line-height: 17px;

```

```

        }
        a:link {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
        a:visited {
            color:blue;
            background-color: transparent;
            text-decoration: none;
        }
    
```

</style>

</head>

<body>

<h1>Edit in Country Database</h1>

<hr/>

<% url 'showcountry' %}>Back

<form method="POST"

action="/updatecnt/{{CountryModel.country_code}}">

{<% csrf_token %>}

<table border="1">

<tr>

<td>Country Code</td>

<td><input type="text" name="country_code" value="<{{CountryModel.country_code}}" readonly></td>

</tr>

<tr>

<td>Country name</td>

<td><input type="text" name="country_name" value="<{{CountryModel.country_name}}"></td>

</tr>

<tr>

<td>Donor ID</td>

<td><input type="text" name="donor_id" value="<{{CountryModel.donor_id}}"></td>

</tr>

<tr>

<td>Region</td>

<td><input type="text" name="region" value="<{{CountryModel.region}}"></td>

</tr>

<tr>

<td>Veto power</td>

<td><input type="text" name="veto_power" value="<{{CountryModel.veto_power}}"></td>

</tr>

<tr>

<td>Representative</td>

<td><input type="text" name="representative" value="<{{CountryModel.representative}}"></td>

</tr>

<tr>

<td><input type="submit" value="Update Record"></td>

<td>

{<% if messages %>

{<% for mess in messages %}

```

        <b style="color:green;">{{mess}}</b>
        {% endfor %}
        {% endif %}
    </td>
    </tr>
</table>
</form>
</center>
</body>
</html>

```

```

#views.py
from django.shortcuts import render
from django.shortcuts import redirect
from django.contrib import messages
from django.http import HttpResponseRedirect
from CRUD_UNESCO.models import SiteModel
from CRUD_UNESCO.forms import SiteForms
from CRUD_UNESCO.models import InstModel
from CRUD_UNESCO.forms import InstForms
from CRUD_UNESCO.models import CountryModel
from CRUD_UNESCO.forms import CountryForms

def homepage(request):
    return render(request, 'index.html')

def search_site(request):
    q = request.POST.getlist('scategory')
    if 'Natural' in q:
        sites=SiteModel.objects.filter(category__contains='Natural')
    elif 'Cultural' in q:
        sites=SiteModel.objects.filter(category__contains='Cultural')
    elif 'Mixed' in q:
        sites=SiteModel.objects.filter(category__contains='Mixed')
    elif 'Outstanding Universal Value' in q:
        sites=SiteModel.objects.filter(category__contains='Outstanding Universal Value')
    else:
        sites=SiteModel.objects.all()
    context = {"data":sites}
    return render(request, 'index.html', context)

def adminlogin(request):
    return render(request, 'adminun.html')

def login(request):
    return render(request, 'login.html')

def showinst(request):
    showall=InstModel.objects.all()
    return render(request,'institute.html', {"data":showall})

def insertinst(request):
    if request.method=='POST':
        if request.POST.get('institute_id') and
request.POST.get('institute_name') and request.POST.get('officer') and
request.POST.get('address') and request.POST.get('contact'):

```

```

saverecord=InstModel()
saverecord.institute_id=request.POST.get('institute_id')
saverecord.institute_name=request.POST.get('institute_name')
saverecord.officer=request.POST.get('officer')
saverecord.address=request.POST.get('address')
saverecord.contact=request.POST.get('contact')
saverecord.save()
messages.success(request,'Institute
"' +saverecord.institute_name+ '" is saved successfully.!')
return render(request, 'insertinst.html')

else:
    return render(request, 'insertinst.html')

def editinst(request, institute_id):
    editempobj=InstModel.objects.get(institute_id=institute_id)
    return render(request, 'editinst.html', {"InstModel":editempobj})

def updateinst(request, institute_id):
    updateemp=InstModel.objects.get(institute_id=institute_id)
    form=InstForms(request.POST, instance=updateemp)
    if form.is_valid():
        form.save()
    messages.success(request, "Record Updated Successfully...!")
    return render(request, 'editinst.html', {"InstModel":updateemp})

def delinst(request, institute_id):
    Delemp=InstModel.objects.get(institute_id=institute_id)
    Delemp.delete()
    #showdata=InstModel.objects.all()
    return redirect('showinst')

def showsite(request):
    showall=SiteModel.objects.all()
    return render(request,'site.html', {"data":showall})

def insertsite(request):
    if request.method=='POST':
        if request.POST.get('s_id') and request.POST.get('site_name') or
request.POST.get('address') or request.POST.get('latitude') or
request.POST.get('longitude') or request.POST.get('area') or
request.POST.get('country_code') or request.POST.get('category') or
request.POST.get('buffer_zone') or request.POST.get('historical_detail') or
request.POST.get('ownership') or request.POST.get('institute_id'):
            saverecord=SiteModel()
            saverecord.s_id=request.POST.get('s_id')
            saverecord.site_name = request.POST.get('site_name')
            saverecord.address=request.POST.get('address')
            saverecord.latitude=request.POST.get('latitude')
            saverecord.longitude=request.POST.get('longitude')
            saverecord.area=request.POST.get('area')
            saverecord.country_code=request.POST.get('country_code')
            saverecord.category=request.POST.get('category')
            saverecord.buffer_zone=request.POST.get('buffer_zone')

saverecord.historical_detail=request.POST.get('historical_detail')
saverecord.ownership=request.POST.get('ownership')
saverecord.institute_id=request.POST.get('institute_id')
saverecord.save()
messages.success(request,'Site "' +saverecord.site_name+'" is

```

```

        saved successfully.!' )
    return render(request, 'insertsite.html')

def editsite(request, s_id):
    editempobj=SiteModel.objects.get(s_id=s_id)
    return render(request, 'editsite.html', {"SiteModel":editempobj})

def updatesite(request, s_id):
    updatest=SiteModel.objects.get(s_id=s_id)
    form=SiteForms(request.POST, instance=updatest)
    if form.is_valid():
        form.save()
        messages.success(request, "Record Updated Successfully...!")
        return render(request, 'editsite.html', {"SiteModel":updatest})

def delsite(request, s_id):
    Delemp=SiteModel.objects.get(s_id=s_id)
    Delemp.delete()
    #showdata=InstModel.objects.all()
    return redirect('showsight')

def showcountry(request):
    showall=CountryModel.objects.all()
    return render(request,'country.html', {"data":showall})

def insertcountry(request):
    if request.method=='POST':
        if request.POST.get('country_code') and
request.POST.get('country_name') and request.POST.get('donor_id') and
request.POST.get('region') and request.POST.get('veto_power') and
request.POST.get('representative'):
            saverecord=CountryModel()
            saverecord.country_code=request.POST.get('country_code')
            saverecord.country_name=request.POST.get('country_name')
            saverecord.donor_id=request.POST.get('donor_id')
            saverecord.region=request.POST.get('region')
            saverecord.veto_power=request.POST.get('veto_power')
            saverecord.representative=request.POST.get('representative')
            saverecord.save()
            messages.success(request,'Country "'+saverecord.country_name+'" is saved successfully.!')
            return render(request, 'insertcountry.html')
        else:
            return render(request, 'insertcountry.html')

def editcountry(request, country_code):
    editempobj=CountryModel.objects.get(country_code=country_code)
    return render(request, 'editcountry.html', {"CountryModel":editempobj})

def updatecountry(request, country_code):
    updateemp=CountryModel.objects.get(country_code=country_code)
    form=CountryForms(request.POST, instance=updateemp)
    if form.is_valid():
        form.save()
        messages.success(request, "Record Updated Successfully...!")
        return render(request, 'editcountry.html',
{"CountryModel":updateemp})

def delcountry(request, country_code):

```

```

Delemp=CountryModel.objects.get(country_code=country_code)
Delemp.delete()
#showdata=InstModel.objects.all()
return redirect('showcountry')

```

```

#urls.py
"""CRUD_UNESCO URL Configuration

The `urlpatterns` list routes URLs to views. For more information please
see:
    https://docs.djangoproject.com/en/3.2/topics/http/urls/
Examples:
Function views
    1. Add an import: from my_app import views
    2. Add a URL to urlpatterns: path('', views.home, name='home')
Class-based views
    1. Add an import: from other_app.views import Home
    2. Add a URL to urlpatterns: path('', Home.as_view(), name='home')
Including another URLconf
    1. Import the include() function: from django.urls import include, path
    2. Add a URL to urlpatterns: path('blog/', include('blog.urls'))
"""

from django.contrib import admin
from django.urls import path
from . import views
from django.views.generic import RedirectView
from django.conf.urls import url
from django.shortcuts import render

urlpatterns = [
    path('', views.homepage, name="homepage"),
    path('adminun', views.adminlogin, name="adminlogin"),
    path('login', views.login, name="login"),
    path('search_site', views.search_site, name="search-site"),

    path('institute',views.showinst, name="showinst"),
    path('insert', views.insertinst, name="insertinst"),
    path('edit/<int:institute_id>',views.editinst, name="editinst"),
    path('update/<int:institute_id>', views.updateinst, name="updateinst"),
    path('delete/<int:institute_id>', views.delinst, name="delinst"),

    path('site',views.showsite, name="showsight"),
    path('inserts', views.insertsite, name="insertsite"),
    path('edits/<int:s_id>',views.editsite, name="editsite"),
    path('updates/<int:s_id>', views.updatesite, name="updatesite"),
    path('deletes/<int:s_id>', views.delsite, name="delsite"),

    path('country',views.showcountry, name="showcountry"),
    path('insertcnt', views.insertcountry, name="insertcountry"),
    path('editcnt/<int:country_code>',views.editcountry, name="editcountry"),
    path('updatecnt/<int:country_code>', views.updatecountry,
name="updatecountry"),
    path('deletecnt/<int:country_code>', views.delcountry,
name="delcountry"),

    path('admin/', admin.site.urls),
]

```

```
#url(r'^favicon\.ico$',RedirectView.as_view(url='/static/images/favicon.ico')),]  
  
#settings.py  
"""  
Django settings for CRUD_UNESCO project.  
  
Generated by 'django-admin start project' using Django 3.2.9.  
  
For more information on this file, see  
https://docs.djangoproject.com/en/3.2/topics/settings/  
  
For the full list of settings and their values, see  
https://docs.djangoproject.com/en/3.2/ref/settings/  
"""  
import os # new  
from pathlib import Path  
  
# Build paths inside the project like this: BASE_DIR / 'subdir'.  
BASE_DIR = Path(__file__).resolve().parent.parent  
  
# Quick-start development settings - unsuitable for production  
# See https://docs.djangoproject.com/en/3.2/howto/deployment/checklist/  
  
# SECURITY WARNING: keep the secret key used in production secret!  
SECRET_KEY =  
'django-insecure-4b!4o_jm1vd574952&-$f4w3w(!+9s-rqgvatxhr4@_7kqlq5'  
  
# SECURITY WARNING: don't run with debug turned on in production!  
DEBUG = True  
  
ALLOWED_HOSTS = []  
  
# Application definition  
  
INSTALLED_APPS = [  
    'django.contrib.admin',  
    'django.contrib.auth',  
    'django.contrib.contenttypes',  
    'django.contrib.sessions',  
    'django.contrib.messages',  
    'django.contrib.staticfiles',  
    'CRUD_UNESCO'  
]  
  
MIDDLEWARE = [  
    'django.middleware.security.SecurityMiddleware',  
    'django.contrib.sessions.middleware.SessionMiddleware',  
    'django.middleware.common.CommonMiddleware',  
    'django.middleware.csrf.CsrfViewMiddleware',  
    'django.contrib.auth.middleware.AuthenticationMiddleware',  
    'django.contrib.messages.middleware.MessageMiddleware',  
    'django.middleware.clickjacking.XFrameOptionsMiddleware',  
]
```

```

ROOT_URLCONF = 'CRUD_UNESCO.urls'

TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [os.path.join(BASE_DIR, 'templates')],
        'APP_DIRS': True,
        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages',
            ],
        },
    },
]

WSGI_APPLICATION = 'CRUD_UNESCO.wsgi.application'

# Database
# https://docs.djangoproject.com/en/3.2/ref/settings/#databases

DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.postgresql',
        'OPTIONS': {
            'options': '-c search_path=unesco_s1_t6'
        },
        'NAME': 'unescotemp',
        'USER': 'postgres',
        'PASSWORD': 'admin',
        'HOST': 'localhost',
        'PORT': '5432',
    }
}

# Password validation
#
# https://docs.djangoproject.com/en/3.2/ref/settings/#auth-password-validators

AUTH_PASSWORD_VALIDATORS = [
    {
        'NAME':
    'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
    },
    {
        'NAME':
    'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
        'NAME':
    'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
        'NAME':
    'django.contrib.auth.password_validation.NumericPasswordValidator',
}

```

```

        },
]

# Internationalization
# https://docs.djangoproject.com/en/3.2/topics/i18n/

LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_L10N = True

USE_TZ = True

# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/3.2/howto/static-files/

STATIC_URL = '/static/'

# Default primary key field type
# https://docs.djangoproject.com/en/3.2/ref/settings/#default-auto-field

DEFAULT_AUTO_FIELD = 'django.db.models.BigAutoField'

```

```

#models.py
from django.db import models

class InstModel(models.Model):
    institute_id = models.IntegerField(primary_key=True)
    institute_name=models.CharField(max_length=500)
    officer=models.CharField(max_length=100)
    address=models.CharField(max_length=1000)
    contact=models.CharField(max_length=20)
    class Meta:
        db_table="local_institute_agency"

class SiteModel(models.Model):
    s_id=models.IntegerField(primary_key=True)
    site_name=models.CharField(max_length=1000)
    address=models.CharField(max_length=1000)
    latitude=models.FloatField()
    longitude=models.FloatField()
    area=models.FloatField()
    country_code=models.IntegerField()
    category=models.CharField(max_length=50)
    buffer_zone=models.FloatField()
    historical_detail=models.CharField(max_length=5000)
    ownership=models.CharField(max_length=1000)
    institute_id=models.IntegerField()
    class Meta:
        db_table="site_detail"

class CountryModel(models.Model):

```

```
country_code=models.IntegerField(primary_key=True)
country_name=models.CharField(max_length=100)
donor_id=models.IntegerField()
region=models.CharField(max_length=100)
veto_power=models.BooleanField()
representative=models.CharField(max_length=100)
class Meta:
    db_table="member_country"
```

```
#forms.py
from django import forms
from CRUD_UNESCO.models import InstModel
from CRUD_UNESCO.models import SiteModel
from CRUD_UNESCO.models import CountryModel

class InstForms(forms.ModelForm):
    class Meta:
        model=InstModel
        fields="__all__"

class SiteForms(forms.ModelForm):
    class Meta:
        model=SiteModel
        fields="__all__"

class CountryForms(forms.ModelForm):
    class Meta:
        model=CountryModel
        fields="__all__"
```

B. Screenshots:

UNESCO World Heritage Center Database Admin log-in

Category

- Cultural
- Natural
- Mixed
- Outstanding Universal Value

Search

Site ID	Site name	Address	Latitude	Longitude	Area	Country Code	Category	Buffer Zone	Historical Detail	Ownership	Institute ID
6	Opn reduc disloc-hand	3827 Bluejay Circle	18.6389698	-74.1181234	8243	106	Cultural	412	In congue Etiam justo. Etiam pretium iaculis justo.	Homenick-Wunsch	90
11	Open renal biopsy	06583 Clemmons Way	34.728584	112.132488	5096	47	Cultural	254	Integer tincidunt ante vel ipsum. Praesent blandit lacinia erat. Vestibulum sed magna at nunc commodo placerat.	Fisher, Lakin and Keeling	68
16	Triple arthrodesis	45254 Stuart Junction	6.8072494	29.6788877	7533	40	Cultural	376	Suspendisse potenti. In eleifend quam a odio. In hac habitasse platea dictumst.	Keebler, MacGyver and Maggio	45
24	Disarticulation of knee	62902 Sutteridge Center	33.1362221	-97.0821162	4235	108	Cultural	211	Morbi non lectus. Aliquam sit amet diam in magna bibendum imperdiet. Nullam orci pede, venenatis non, sodales sed, tincidunt eu, felis.	Rutherford, Erdman and Rau	57
26	Unilat lung transplant	27 Sherman Street	23.0664459	113.1964636	1598	139	Cultural	79	Maecenas tristique, est et tempus semper, est quam pharetra magna, ac consequat metus sapien ut nunc. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae. Mauris viverra diam vitae quam. Suspendisse potenti.	Treutel, Mraz and Runoifsdottir	36
37	Unilat adrenal explorat	6 Mifflin Road	-7.3897541	108.8640607	5541	20	Cultural	277	Aenean lectus. Pellentesque eget nunc. Donec quis erci eget orci vehicula condimentum. Curabitur in libero ut massa volutpat convallis. Morbi odio odio, elementum eu, interdum eu, tincidunt in, leo. Maecenas pulvinar lobortis est.	Bins-Murray	97
42	Achillototomy	2 Dottie Hill	6.5490578	-7.4976536	3099	147	Cultural	154	Integer ac leo. Pellentesque ultrices mattis odio. Donec vitae nisi.	Kessler Group	84
48	Thor abnl lung le/tiss	0 Delladonna Road	55.4203835	38.3673637	3626	15	Cultural	181	Fusce posuere felis sed lacus. Morbi sem mauris, laoreet ut, rhoncus aliquet, pulvinar sed, nisl. Nunc rhoncus du vel sem.	Wyman-Wunsch	36
96	Oth part orectomy NOS	1 Maywood Court	4.5557	95.71508	4927	105	Cultural	246	Praesent id massa id nisl venenatis lacinia. Aenean sit amet justo. Morbi ut odio.	Renner and Sons	62

UNESCO World Heritage Center Admin log-in

Institute Database

Add new Institute Back

Institute id	Institute name	Officer	Address	Contact
3	Emmerich-Stokes	Vincenz Sicily	47 Kennedy Drive	+55 616 918 9170
4	Doyle-Glover	Tiler Barrus	52997 Golf Point	+62 262 547 3773
5	Aufderhar-Gleason	Dusty Jacobowitz	7 Ludington Lane	+62 628 515 0509
6	Cole, Nader and Koch	Phaedra Sympson	55579 Bobwhite Parkway	+1 212 276 5393
7	Gottlieb, Kshlerin and Breitenberg	Hastie Baudassi	32 Lillian Center	+7 124 656 4458
8	Homenick, Batz and Pfeffer	Sly Sherlaw	6 Linden Park	+351 165 677 2011
9	Hills-Terry	Zebadiah Havard	2762 Graedel Center	+86 326 753 4219
10	Moen and Sons	Gabriela Peare	50 Arkansas Place	+505 628 534 9282
11	Bogisch, Treutel and Haag	Nonnah McAuley	98768 Hoepker Street	+88 535 808 6913
12	Cassin, Ruecker and Mayer	Brinley Ellison	928 Kipling Alley	+55 264 631 7584
13	Will Group	Tallie Le Marquand	30485 Forest Pass	+52 563 381 5723
14	Borer-Goldner	Talbert Gillum	90513 Graedel Pass	+7 219 204 1943
15	Runte Group	Johny Wern	684 Golf Course Plaza	+351 695 222 0271
16	McLaughlin-Kertmann	Violetta Hammerber	0 Graceland Hill	+1 314 906 9466
17	Larson-McKenzie	Geordie Kettlestring	63152 Delaware Center	+63 928 896 6845
18	Parisian, Bernhard and Durgan	Jenka Ferrier	4 Brentwood Hill	+58 543 438 2791
19	Rodriguez, Huels and Sporer	Farleigh McCurt	3 Riverside Junction	+591 656 936 3150
20	Effertz-Denesik	Melita Shervill	86784 Orrin Plaza	+7 947 382 9896
21	Spinka Group	Erv Snel	5552 Pawling Avenue	+86 106 386 6025
23	Hirth Inc	Cory Veneschi	9 Talsman Crossing	+62 208 772 2943
24	Wilkinson Inc	Rusty Blay	7 Mesta Point	+994 965 880 9316
25	Nicolas, Borer and Altenwerth	Berna Ladloe	10092 Vernon Plaza	+967 650 345 4385
26	Bednar and Sons	Fern Takkos	7 Stephen Hill	+54 281 913 4335
27	Miller, Jacobson and Yundt	Vivie Lenihan	8551 Kropf Circle	+55 475 541 6406
28	Ziemann-Crist	Marj Thacke	6 Meadow Valley Pass	+62 612 241 9038
29	Blick LLC	Godfrey Lumsdon	0 Cascade Avenue	+63 258 870 6019
30	O'Hara, Buckridge and Kuphal	Ernesta Docksey	4 Sachs Road	+33 101 307 1582

UNESCO 127.0.0.1:8000/insert

Insert in Institute Database

[Back](#)

Institute id	1000
Institute name	abc
Officer	me
Address	101, society
Institute contact	52425262
<input type="button" value="insert"/>	

Insert new institute with institute_id=1000, name=abc etc...

UNESCO World Heritage Center 127.0.0.1:8000/institute

74	Barrows, Heaney and Romaguera	Clementius Mc Carrick	6 Elgar Drive	+86 747 142 0676	Edit	Delete	
75	Veum Inc	Teddy Mingard	18666 Esch Point	+86 442 202 0322	Edit	Delete	
76	Cummerata, Barrows and Skiles	Cookie Kinkor	58 Annamark Terrace	+86 704 784 1806	Edit	Delete	
1	Goyette, Kutch and Mann	Chen McCarver	668 Cambridge Drive	+86 936 736 4976	Edit	Delete	
77	Raike Inc	Garik Whiscard	4 Lukken Parkway	+54 578 199 2092	Edit	Delete	
78	Nienow-Gerlach	Tana Skeemor	17376 North Junction	+84 516 608 0675	Edit	Delete	
79	Schaden, Kilback and O'Kon	Kylen Tunstall	431 Delaware Park	+55 873 489 6480	Edit	Delete	
80	Langworth, Ryan and Runolfsson	Cross MacAughtrie	6411 Rutledge Park	+86 901 362 1012	Edit	Delete	
81	Brown, Watsica and Jacobson	Hanson Garstan	081 Stang Center	+353 723 485 4007	Edit	Delete	
82	Ulrich-Schmitt	Rae Ghion	47221 5th Alley	+7 441 671 5852	Edit	Delete	
83	Murazik, Towne and Douglas	Martino Streton	9006 Stoughton Junction	+86 573 831 8944	Edit	Delete	
84	Emmerich, Murray and Kenneke	Gaye McKeigan	4 Ryan Road	+55 486 927 3386	Edit	Delete	
85	Wirthsieder and Sons	Cyrille Skepper	8 Veith Plaza	+46 428 845 5949	Edit	Delete	
86	Weber, Cartwright and Collins	Olia Yarn	65 Toban Crossing	+86 818 947 0098	Edit	Delete	
87	D'Amore and Sons	Mable Hurst	7465 3rd Alley	+86 769 809 8712	Edit	Delete	
88	Haley-Pouros	Catilana Ghelardi	13 Packers Park	+385 573 817 5129	Edit	Delete	
89	Funk and Sons	Brigida Chesson	5 Nevada Circle	+66 408 113 7297	Edit	Delete	
90	Wehner, Weimann and Torphy	Doro Britt	840 Nobel Crossing	+7 230 787 6705	Edit	Delete	
91	Beahan Inc	Scarlet Piell	99659 Hazelcrest Pass	+385 408 247 8731	Edit	Delete	
92	Kirkin and Sons	Katina Adamek	7 Sauthoff Parkway	+380 551 113 8169	Edit	Delete	
93	Nikolaus-Pfannerstill	Alair Canta	4231 Delladonna Trail	+98 550 389 3131	Edit	Delete	
94	Hane, Hilpert and Conroy	Meagan Buckthorp	74590 Rutledge Way	+86 862 936 0812	Edit	Delete	
95	Will, McDermott and Collins	Joyce Kneal	1293 Butterfield Parkway	+62 534 684 3027	Edit	Delete	
96	Heidenreich LLC	Anthe Spinelli	4047 Chinook Trail	+86 191 949 6647	Edit	Delete	
97	Williamson Inc	Averill Di Matteo	86 Superior Road	+62 639 881 7070	Edit	Delete	
98	Lubowitz and Sons	Forster Parcells	753 Badeau Pass	+507 299 531 3941	Edit	Delete	
99	Bradtko-Leuschke	Ainslee Revington	45 Waubesa Parkway	+351 768 692 6904	Edit	Delete	
100	Hegmann, D'Amore and Legros	Ciel Antowski	043 Schmedeman Avenue	+386 547 360 2241	Edit	Delete	
2	Sawaya, Wyman and D'Amore	Nananne Thorndycraft	158 3rd Park	+33 632 312 301	Edit	Delete	
101	my institute	mahe	131, gali galim sim	42	Edit	Delete	
300	my institute	mahe	131, gali galim sim	425352	Edit	Delete	
220	my institute	mahe	131, gali galim	42	Edit	Delete	
1000	abc	me	101, society	52425262	Edit	Delete	

Edit in institute which has institute id=300, update it's officer name to 'abcname'.

UNESCO

127.0.0.1:8000/update/300

Edit in Institute Database

Back

Institute id	300
Institute name	my institute
Officer	abcname
Address	131, gali galim sim
Contact	425352

Update Record Record Updated Successfully...

Institute whose ID=300 has officer name=abcname.

UNESCO World Heritage Center

127.0.0.1:8000/institute

ID	Name	Officer	Address	Contact	Edit	Delete
73	Kunze, Crist and Cormier	Mercy Tabour	1 Gerald Center	+1 719 120 6188	Edit	Delete
74	Barrows, Heaney and Romaguera	Clementius Mc Carrick	6 Elgar Drive	+86 747 142 0676	Edit	Delete
75	Veum Inc	Teddy Mingard	18666 Esch Point	+86 442 202 0322	Edit	Delete
76	Cummerata, Barrows and Skiles	Cookie Kinkor	58 Annamark Terrace	+86 704 784 1806	Edit	Delete
1	Goyette, Kutch and Mann	Chen McCarver	668 Cambridge Driv	+86 936 736 4976	Edit	Delete
77	Ratke Inc	Garnk Whiscard	4 Lukken Parkway	+54 578 199 2092	Edit	Delete
78	Nienow-Gerlach	Tana Skeemor	17376 North Junction	+84 516 608 0675	Edit	Delete
79	Schaden, Kilback and O'Kon	Kylen Tunstall	431 Delaware Park	+55 873 489 6480	Edit	Delete
80	Langworth, Ryan and Runolfsson	Cross MacAughtrie	6411 Rutledge Park	+86 901 362 1012	Edit	Delete
81	Brown, Watsica and Jacobson	Hanson Garstan	081 Stang Center	+353 723 485 4007	Edit	Delete
82	Ulrich-Schmitt	Rae Ghion	47221 5th Alley	+7 441 671 5852	Edit	Delete
83	Murazik, Towne and Douglas	Martino Streeton	9006 Stoughton Junction	+86 573 831 8944	Edit	Delete
84	Emmerich, Murray and Kenner	Gaye McKeigan	4 Ryan Road	+55 486 927 3386	Edit	Delete
85	Wirthsieder and Sons	Cyrille Skepper	8 Veith Plaza	+46 428 845 5949	Edit	Delete
86	Weber, Cartwright and Collins	Olia Yarn	65 Toban Crossing	+86 818 947 0098	Edit	Delete
87	D'Amore and Sons	Mable Hurst	7465 3rd Alley	+86 769 809 8712	Edit	Delete
88	Haley-Pouros	Catilina Ghelard	13 Packers Park	+385 573 817 5129	Edit	Delete
89	Funk and Sons	Brigida Chesson	5 Nevada Circle	+66 408 113 7297	Edit	Delete
90	Wehner, Weimann and Torphy	Dore Britt	840 Nobel Crossing	+7 230 787 6705	Edit	Delete
91	Beathan Inc	Scarlet Piell	99559 Hazelcrest Pass	+385 408 247 8731	Edit	Delete
92	Kirlin and Sons	Katina Adamek	7 Sauthoff Parkway	+380 551 113 8169	Edit	Delete
93	Nikolaus-Pfannerstill	Alair Cantu	4231 Delladonna Trail	+98 550 389 3131	Edit	Delete
94	Hane, Hilpert and Conroy	Meagan Buckthorp	74590 Rutledge Way	+86 862 936 0812	Edit	Delete
95	Will, McDermott and Collins	Joyce Kneal	1293 Butterfield Parkway	+62 534 684 3027	Edit	Delete
96	Heidenreich LLC	Antho Spinelli	4047 Chinook Trail	+86 191 949 6647	Edit	Delete
97	Williamson Inc	Averill Di Matteo	86 Superior Road	+62 639 881 7070	Edit	Delete
98	Lubowitz and Sons	Forster Parcells	753 Badeau Pass	+507 299 531 3941	Edit	Delete
99	Bradtko-Leuschke	Ainslee Revington	45 Waubesa Parkway	+351 768 692 6904	Edit	Delete
100	Hegmann, D'Amore and Legros	Ciel Antowski	043 Schmedeman Avenue	+386 547 360 2241	Edit	Delete
2	Sawaya, Wyman and D'Amore	Nananne Thordycraft	158 3rd Park	+33 632 312 301	Edit	Delete
101	my institute	mahe	131, gali galim sim	42	Edit	Delete
220	my institute	mahe	131, gali galim	42	Edit	Delete
300	my institute	abcname	131, gali galim sim	425352	Edit	Delete

Deleting the institute whose institute ID=300

72	Stehr, Glechner and Friesen	Cloris Gane	46 Chive Way	+34 186 295 2462	Edit	Delete
73	Kunze, Crist and Cormier	Mercy Tabour	1 Gerald Center	+1 719 120 6188	Edit	Delete
74	Barrows, Heaney and Romaguera	Clementius Mc Carrick	6 Elgar Drive	+86 747 142 0676	Edit	Delete
75	Veum Inc	Teddy Mingard	18666 Esch Point	+86 442 202 0322	Edit	Delete
76	Commerata, Barrows and Skiles	Cookie Kinkor	58 Annamark Terrace	+86 704 784 1806	Edit	Delete
1	Goyette, Kutch and Mann	Chen McCarver	668 Cambridge Drive	+86 936 736 4976	Edit	Delete
77	Ratke Inc	Garik Whiscard	4 Lukken Parkway	+54 578 199 2092	Edit	Delete
78	Nienow-Gerlach	Tana Skeemor	17376 North Junction	+84 516 608 0675	Edit	Delete
79	Schaden, Kilback and O'Kon	Kylen Tunstall	431 Delaware Park	+55 873 489 6480	Edit	Delete
80	Langworth, Ryan and Rundfjord	Cross MacAughtrie	6411 Rutledge Park	+86 901 362 1012	Edit	Delete
81	Brown, Watsica and Jacobson	Hanson Garstani	081 Stang Center	+353 723 485 4007	Edit	Delete
82	Ulrich-Schmitt	Rae Ghion	47221 5th Alley	+7 441 671 5852	Edit	Delete
83	Murazik, Towne and Douglas	Martino Streetton	9006 Stoughton Junction	+86 573 831 8944	Edit	Delete
84	Emmerich, Murray and Kemmer	Gaye McKeighan	4 Ryan Road	+55 486 927 3386	Edit	Delete
85	Wirthseher and Sons	Cyrille Skepper	8 Veith Plaza	+46 428 845 5949	Edit	Delete
86	Weber, Cartwright and Collins	Olia Yari	65 Toban Crossing	+86 818 947 0098	Edit	Delete
87	D'Amore and Sons	Mable Hurst	7465 3rd Alley	+86 769 809 8712	Edit	Delete
88	Hailey-Pouros	Cattalana Ghelardi	13 Packers Park	+385 573 817 5129	Edit	Delete
89	Funk and Sons	Brigida Chesson	5 Nevada Circle	+66 408 113 7297	Edit	Delete
90	Wehner, Weimann and Torphy	Dore Britt	840 Nobel Crossing	+7 230 787 6705	Edit	Delete
91	Beahan Inc	Scarlet Piell	99559 Hazelcrest Pass	+385 408 247 8731	Edit	Delete
92	Kirin and Sons	Katina Adamek	7 Sauthoff Parkway	+380 551 113 8169	Edit	Delete
93	Nikolaus-Pfannerstill	Alair Cante	4231 Delladonna Trail	+98 550 389 3131	Edit	Delete
94	Hane, Hilpert and Conroy	Meagan Buckthorp	74590 Rutledge Way	+86 862 939 0812	Edit	Delete
95	Will, McDermott and Collins	Joyce Kneal	1293 Butterfield Parkway	+62 534 684 3027	Edit	Delete
96	Heidenreich LLC	Anthe Spinelli	4047 Chinook Trail	+86 191 949 6647	Edit	Delete
97	Williamson Inc	Averill Di Matteo	86 Superior Road	+62 639 881 7070	Edit	Delete
98	Lubowitz and Sons	Forster Parcells	753 Badeau Pass	+507 299 531 3941	Edit	Delete
99	Bradtko-Leuschke	Ainslee Revington	45 Waubesa Parkway	+351 768 692 6904	Edit	Delete
100	Hegmann, D'Amore and Legros	Ciel Antowski	043 Schmedeman Avenue	+386 547 360 2241	Edit	Delete
2	Sawaya, Wyman and D'Amore	Nananne Thordycraft	158 3rd Park	+33 632 312 301	Edit	Delete
101	my institute	mahe	131, gal galim sim	42	Edit	Delete
220	my institute	mahe	131, gal galim	42	Edit	Delete