# PROJECT REPORT

# DOCUMENTATION

# PROJECT - GLOBETREK INSIGHTS: NAVIGATING GLOBAL COUNTRY DATA WITH IBM COGNO

**TEAM ID**

**310F84D66EA2045BFC54577BEBB1811C**

# DATA ANALYTICS WITH TABLEAU

**TEAM LEADER(1): KIRUPASHREE V**
**TEAM MEMBER 2: MRINALNI RAMESH**
**TEAM MEMBER 3: AADHILA BEGUM A**
**TEAM MEMBER 4: PREETHI K**

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# INTRODUCTION

In our increasingly interconnected world, understanding global country data is essential for businesses, organizations, and individuals. Whether you're looking to make informed investment decisions, track geopolitical developments, or simply explore the world's diverse cultures and economies, access to accurate and up-to-date information is crucial. That's where GlobeTrek Insights comes into play.

GlobeTrek Insights is a powerful and innovative platform designed to provide you with a comprehensive understanding of global country data. Leveraging the robust capabilities of IBM Cognos, GlobeTrek Insights offers a user-friendly and data-driven approach to navigating the complexities of the international landscape.

In a world marked by rapid change, understanding global country data is essential. Whether you're exploring untapped markets, assessing risks, or making informed decisions, GlobeTrek Insights empowers you with the knowledge you need to navigate the global landscape effectively.

**Project Overview:**

The GlobeTrek Insights project is a data analytics initiative that aims to navigate and make sense of global country data using IBM Cognos, a powerful business intelligence and data analytics platform. This project's objective is to provide in-depth insights into various aspects of countries worldwide, such as economic indicators, social metrics, demographic information, and more. By harnessing the capabilities of IBM Cognos, we intend to create a comprehensive and user-friendly tool for data-driven decision-making and analysis.

**Key Project Components:**

1. **Data Collection:** The project will begin by gathering data from diverse sources, such as public repositories, government databases, international organizations, and proprietary datasets. This data will encompass a wide range of categories, including but not limited to GDP, population, healthcare, education, infrastructure, and political stability.

2. **Data Integration:** The collected data will be processed and integrated into a centralized database. This integration process will involve data cleansing, transformation, and standardization to ensure consistency and accuracy.

3. **IBM Cognos Implementation**: IBM Cognos will serve as the primary platform for data visualization and analysis. We will design and develop custom dashboards, reports, and data models within the Cognos environment to provide a user-friendly interface for exploring and interacting with the data.

4. **User Access and Security**: Access controls and data security measures will be implemented to ensure that only authorized users can access and manipulate the data. This will protect sensitive information and maintain data integrity.

5. **Data Analysis and Reporting:** Users will have the ability to generate reports and conduct various types of analysis using the GlobeTrek Insights tool. This could include trend analysis, comparative studies, predictive modeling, and more.

6. **User Training:** To maximize the utility of GlobeTrek Insights, we will provide training and support to users. This will include training on how to navigate the system, create custom reports, and interpret the data.

7. **Continuous Updates:** The project will include a mechanism for periodic data updates to keep the information current and relevant. This ensures that users are working with the latest data available.

8. **Feedback and Improvement**: User feedback will be actively encouraged, and improvements to the tool will be implemented based on user needs and changing data requirements.

**Expected Outcomes:**

The GlobeTrek Insights project is expected to yield the following outcomes:

**Comprehensive Data Access:** Users will have a comprehensive and centralized source for global country data, making it easier to access and analyze information for decision-making.

**Data-Driven Decision-Making**: The project will empower organizations and individuals to make data-driven decisions by providing insights and trends at their fingertips.

**Time and Cost Efficiency:** Users can save time and resources by having an all-in-one platform for data analysis, eliminating the need for extensive data collection and analysis.

**Data Accuracy:** By standardizing and cleansing the data, the project will improve data accuracy, ensuring reliable insights and decision support.

**User Empowerment:** Through training and user support, the project will empower users to harness the full potential of the GlobeTrek Insights tool.

**PURPOSE OF GLOBETREK INSIGHTS**

**Data Aggregation:** We bring together a wealth of data from various sources, including economic indicators, demographic information, political landscapes, and cultural insights, all in one place.

**Interactive Dashboards:** Our intuitive dashboards make it easy to visualize and analyze data, helping you uncover trends and make data-driven decisions.

**Real-time Updates:** Stay on top of current events and developments with our real-time data feeds, ensuring you always have access to the latest information.

**Customization:** Tailor the platform to your specific needs, whether you're a business professional, researcher, student, or global enthusiast.

**Collaboration:** Share insights and collaborate with colleagues or peers, fostering a deeper understanding of the world's many facets.

**LITERATURE SURVEY:**

**EXISTING PROBLEM AND REFERENCES**

| ITEM | AUTHOR | OBJECTIVE | FINDINGS |
|---|---|---|---|
| Building Qualities | SALEEH | Measure residential satisfaction on building variables and environment | Overall satisfaction is high through the listed variables particularly on dwelling units, services by developers and neighbourhood facilities and environment |
| | FUJIWARA | Measure residential satisfaction on building variables and environment | Relationship of people's preferences and housing quality are measured and tested, thus outlining detailed building qualities variables |
| | UKOHA AND BEAMISH | Examines resident satisfaction with housing provision pertaining to specific housing features Measuring perceived quality of urban environments and location on the city of Istanbul | Decent living condition and increase of housing quality are achieved through the testing of variables outlined on housing features |
| Locational Qualities | Tiirkoglu | Measure urban sprawl of urban housing with factor of locations | Important physical and locational characteristics are outlined such as dwelling plans and average distance towards amenities e.g shopping centres, entertainment centres |
| | McDonald | Outlining important neighbourhood aspects that affects satisfaction of housing residents | Indicators and variables on location outlined and their relationship with housing demand and supply were analyzed |
| Neighbourhood Qualities | Vrbka & Combs | Outlining important neighbourhood aspects that affects satisfaction of housing residents | The living space and living units adequacies are outlined and analyzed as major factor in determining neighbourhood condition towards housing resident's satisfaction |
| | Burby &Rohe | Measurement of enforcement conditions and actions towards complaints filed in neighbourhood | Relationship of enforcement towards complaints high is seen to affect and increase quality of living in structured neighbourhood areas. |

## REFERENCES

Review of Building, Locational, Neighbourhood Qualities Affecting House Prices in Malaysia

- October 2016
- Procedia - Social and Behavioral Sciences 234:452-46
- DOI:10.1016/j.sbspro.2016.10.263

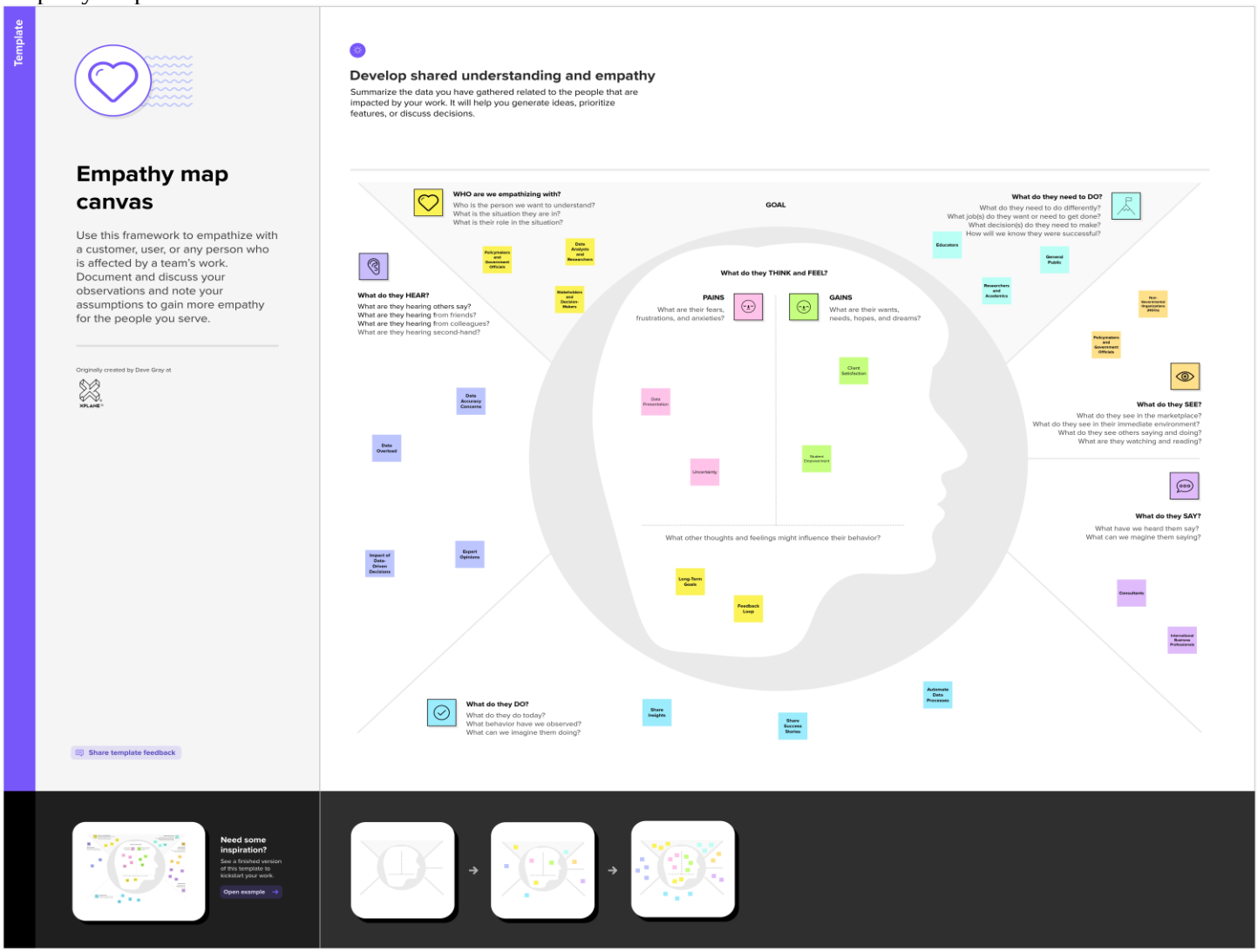
## PROBLEM STATEMENT:

GlobeTrek Insights, a travel and tourism company, is seeking to enhance its data analytics capabilities by leveraging IBM Cognos to navigate and analyze global country data. The company currently faces several challenges related to managing and gaining insights from this data. The problem statement includes

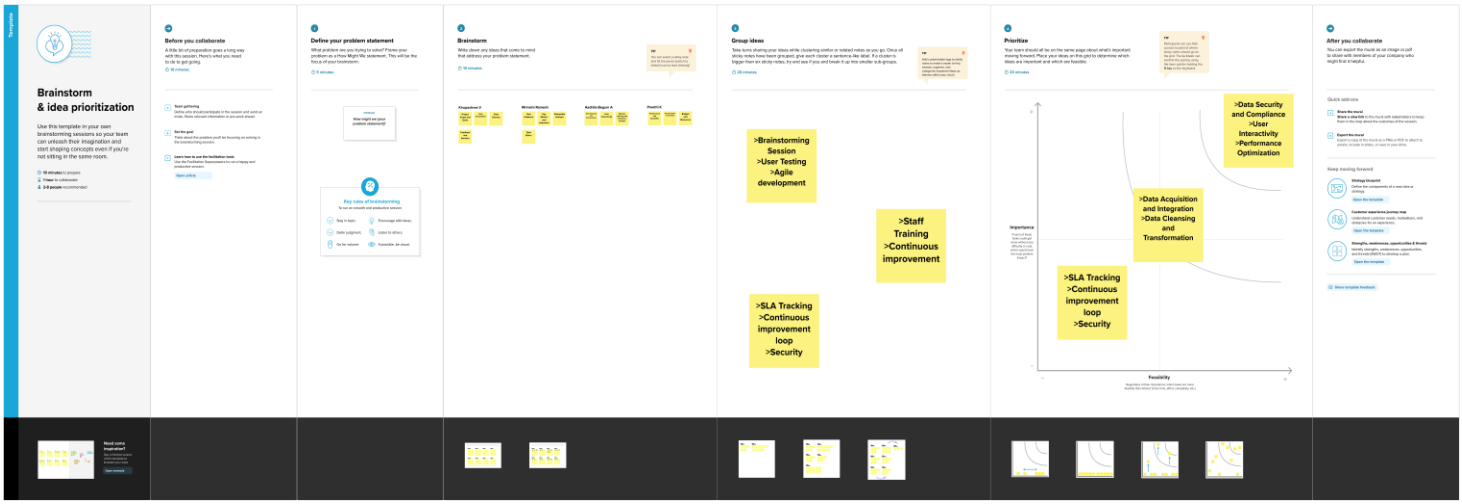
Data complexity, Data Quality, Data Accessibility ,Performance Issue and Real-time Insights

## IDEATION AND PROPOSED SOLUTION:

Empathy Map Canvas



## Ideation & Brainstorming




**REQUIREMENT ANALYSIS**:

**Define Project Objectives**: Start by clearly defining the objectives of your project. What do you intend to achieve by navigating global country data with IBM Cognos? This might include generating insights, making data-driven decisions, or improving data accessibility.

**FUNCTIONAL REQUIREMENTS:**

**User Authentication and Authorization**:Users should be able to create accounts and log in securely.Different user roles should be defined with varying levels of access and permissions.

**Data Integration and Storage:**The system should be able to integrate and store global country data from various sources, such as databases and APIs. Data should be regularly updated to ensure accuracy and relevance.

**Data Visualization and Reporting** :Users should have the ability to create custom reports and visualizations using IBM Cognos tools.

**Export and Sharing**: Users should be able to export reports and visualizations in various formats (e.g., PDF, Excel). Shareable links or embedded code for reports should be provided.

**Data Analysis Tools:** Advanced data analysis tools should be integrated, allowing users to perform calculations, comparisons, and trend analysis.

**User Personalization:** Users should have the option to save and customize their dashboards and reports. Personalized notifications and alerts based on user-defined criteria.

**Data Security:** Implement data encryption and access controls to ensure the security and privacy of sensitive data.

**NON FUNCTIONAL REQUIREMENTS:**

**Third-Party Services:** If the system relies on third-party services or APIs, ensure that it can gracefully handle interruptions or changes in those services.

**Data Privacy and Ethics :**Adhere to ethical guidelines regarding the use and storage of country data, respecting privacy and sensitive information.

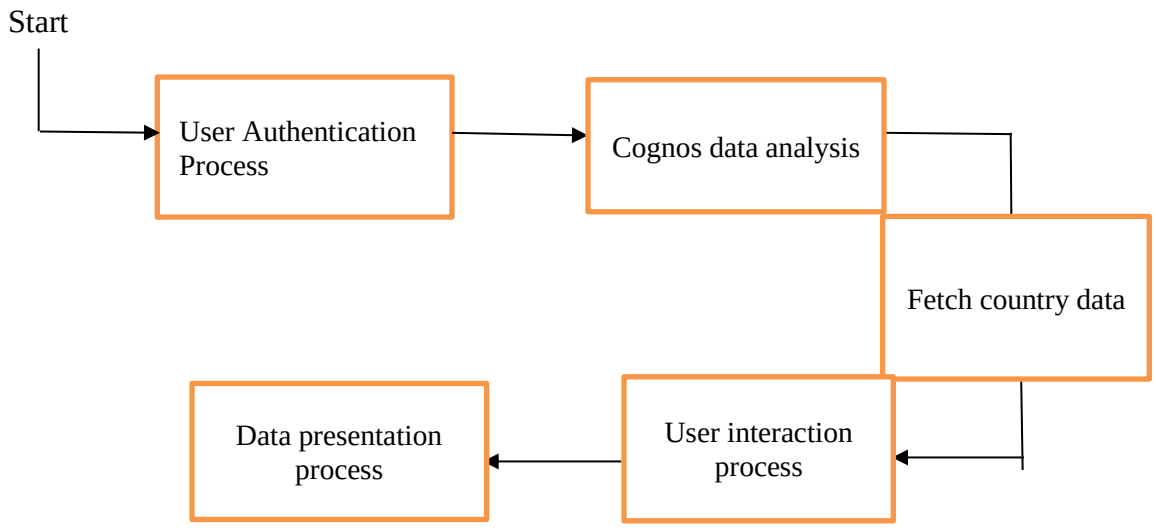
**Documentation and Training:**

- Provide comprehensive documentation for system administrators and end-users.
- Offer training and support resources to help users navigate the system effectively.

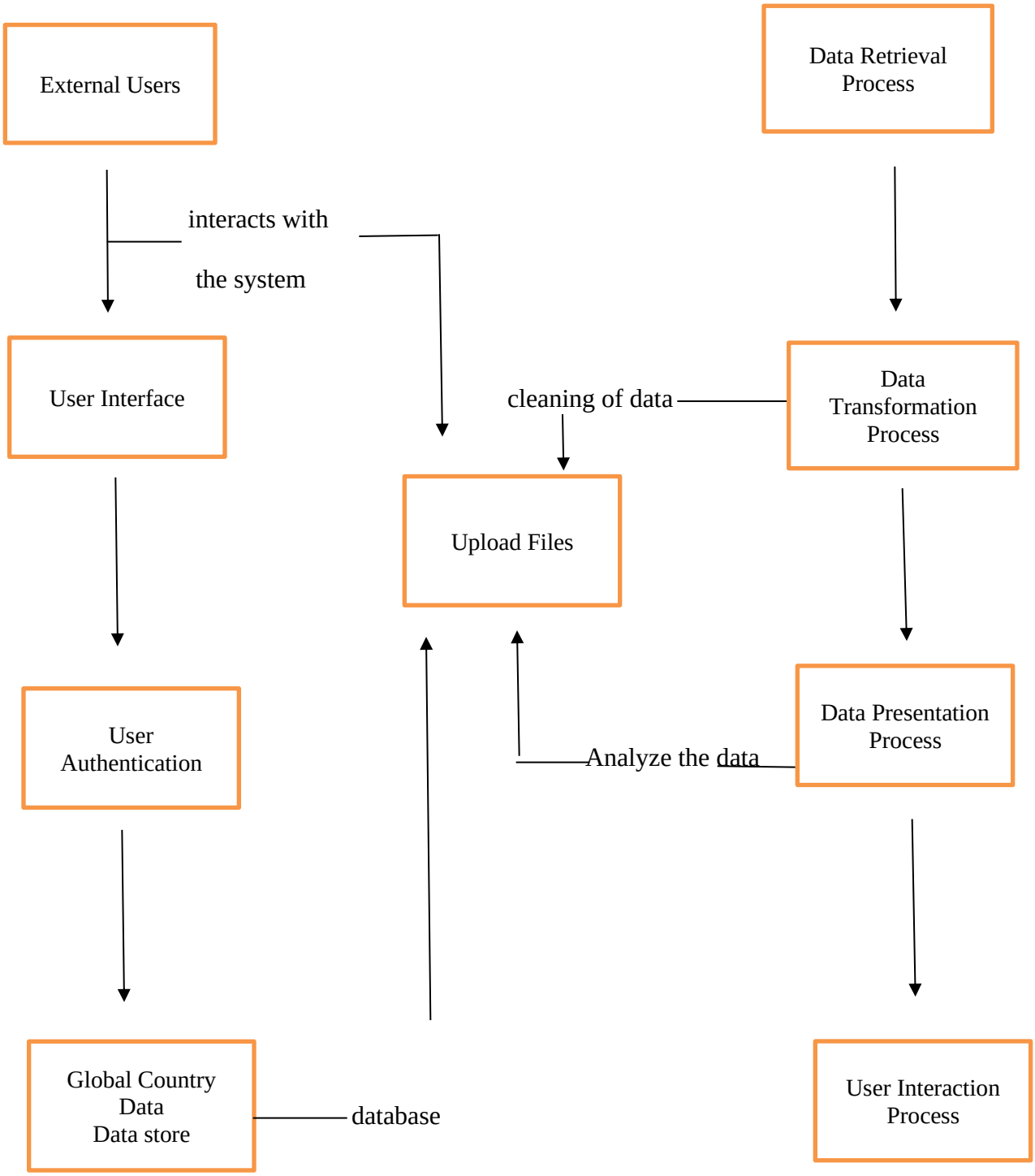
**Reliability:**Error Handling: Implement proper error handling mechanisms to ensure the system gracefully handles errors and exceptions.

**Cost Control:** Implement mechanisms to monitor and control operational costs, especially in cloud-based environments.

**PROJECT DESIGN:**



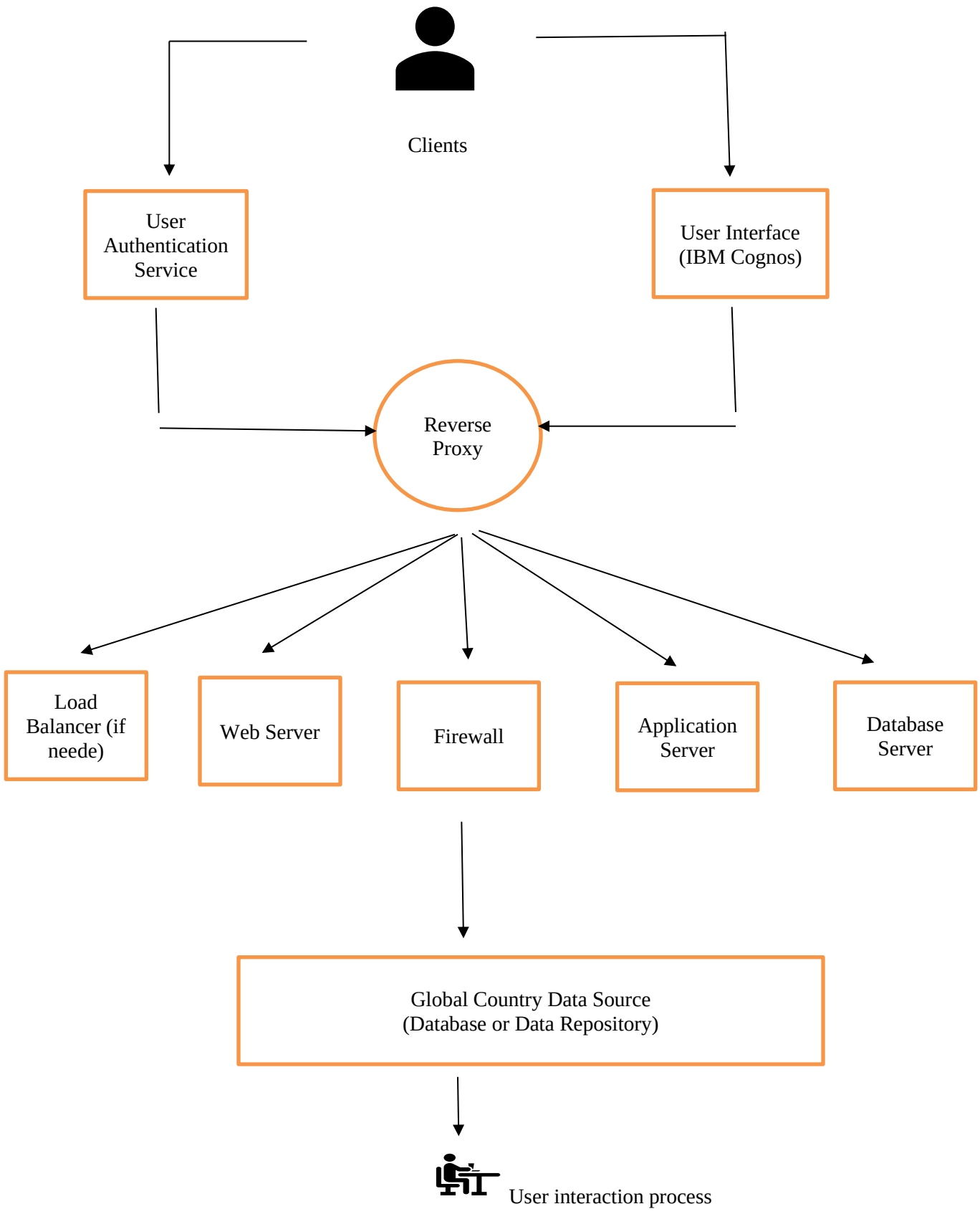
## DFD Level 0:


External Users
interacts with
the system
User Interface
User
Authentication
Global Country
Data
Data store
database
Upload Files
cleaning of data
Analyze the data
Data Retrieval
Process
Data
Transformation
Process
Data Presentation
Process
User Interaction
Process

**user stories:**

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Release |
|---|---|---|---|---|---|---|
| Customer (Mobile user) | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming my password. | I can access my account / dashboard | High | Sprint-1 |
| | | USN-2 | As a user, I will receive confirmation email once I have registered for the application | I can receive confirmation email & click confirm | High | Sprint-1 |
| | | USN-3 | As a user, I can register for the application through Facebook | I can register & access the dashboard with Facebook Login | Low | Sprint-2 |
| | | USN-4 | As a user, I can register for the application through Gmail | | Medium | Sprint-1 |
| | Login | USN-5 | As a user, I can log into the application by entering email & password | | High | Sprint-1 |
| | Dashboard | | | | | |
| Customer (Web user) | | | | | | |
| Customer Care Executive | | | | | | |
| Administrator | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**SOLUTION ARCHITECTURE:**



**PROJECT PLANNING AND SCHEDULING:**

**TECHNICAL ARCHITECTURE:**

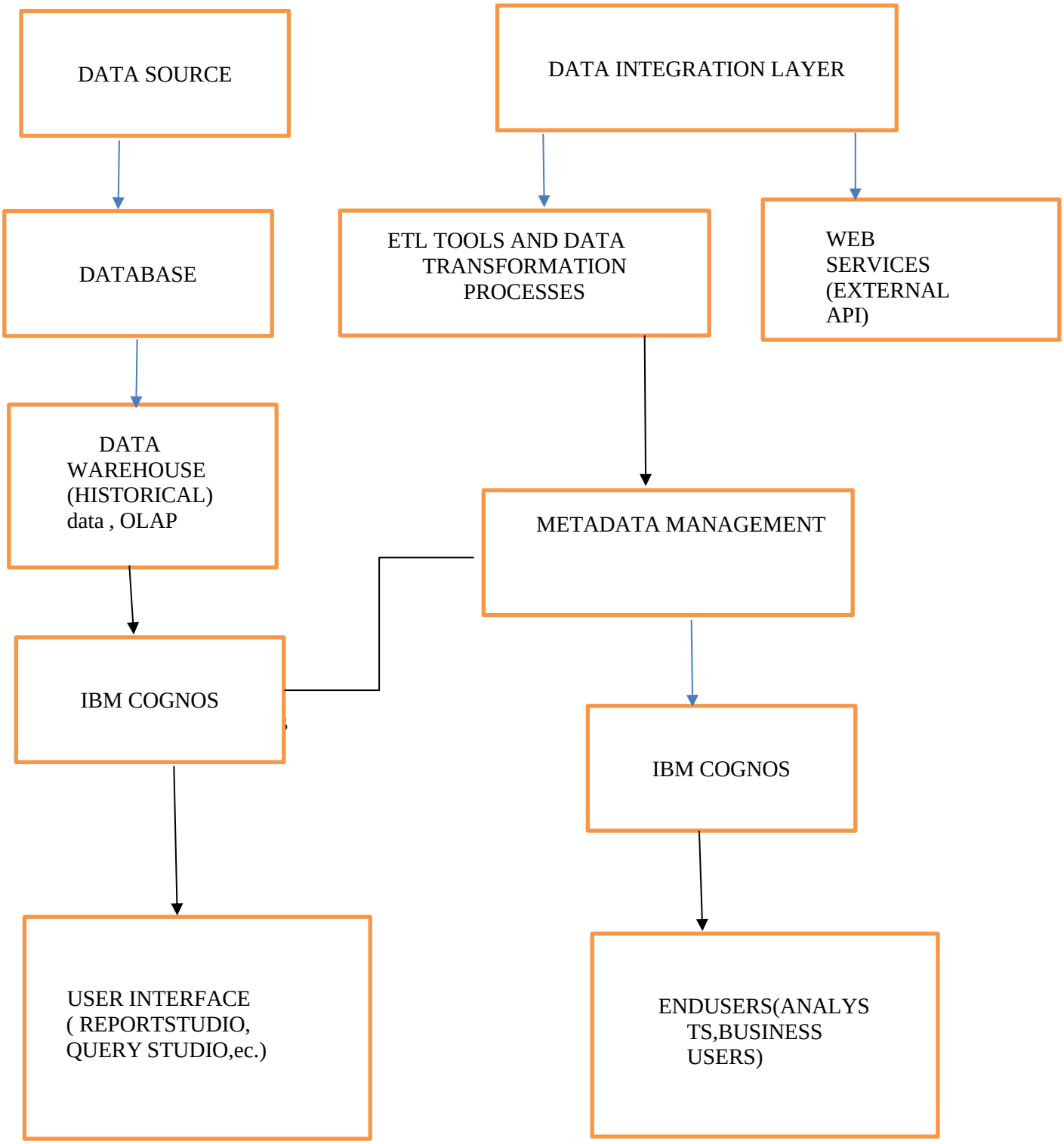


**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | Graphical access for interaction | DBMS, CSS, Java / Angular Js / React Js etc. |
| 2. | Application Logic-1 | Report generation and data transformation | Javascipt, , Business Rules Engine |
| 3. | Application Logic-2 | Customer business rules and logic | Data validation rules, Business RulesEngine |
| 4. | Application Logic-3 | Data validation and integrity | SQL, Relational Databases |
| 5. | Database | Data Storage and retreival | AWS RDS, Azure SQL, etc. |
| 6. | Cloud Database | Cloud based data storage | Amazon S3, Azure Blob Storage etc. |
| 7. | File Storage | Storing Unstructured data | REST, SOAP API, etc. |
| 8. | External API-1 | Data retrieval from external sources | REST, SOAP API, etc. |
| 9. | External API-2 | Data integration with external sources | Aadhar API, etc. |
| 10. | Machine Learning Model | Advanced data analysis and predictions | Python, Tensor flowetc. |
| 11. | Infrastructure (Server / Cloud) | Computing resources for Cognos | Vitualization ,cloud services etc. |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | Utilizes community-developed software components. | Apache Hadoop, Python. |
| 2. | Security Implementations | Measures to protect data and resources. | SSL/TLS, OAuth. |
| 3. | Scalable Architecture | Easily expands to handle growth. | Kubernetes, Load Balancers |

**SPRINT PLANNING AND ESTIMATION:**

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---|---|---|---|---|---|---|
| Sprint-1 | Data Access | USN-1 | Develop a web portal for data access | 5 | High | Team member 1,2 |
| Sprint-1 | Data Access | USN-2 | Implement data categorization by country | 3 | Medium | Team member 3 |
| Sprint-1 | Data Security | USN-3 | Implement user authentication and authorization | 5 | High | Team member 3,4 |
| Sprint-2 | Reporting | USN-4 | Develop a report authoring tool | 8 | High | Team member 3 |
| Sprint-2 | Reporting | USN-5 | Enable users to define filters and aggregations | 5 | Medium | Team member 3,4 |
| Sprint-3 | Data Integration | USN-6 | Develop connectors to external APIs | 8 | High | Team member 1 |
| Sprint-3 | Performance Optimization | USN-7 | Implement query optimization techniques | 5 | High | Team member 1,2 |
| Sprint-4 | Performance Optimization | USN-8 | Evaluate and enhance report rendering speed | 3 | Medium | Team member 2 |

**SPRINT DELIEVERY AND SCHEDULING:**

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|---|---|---|---|---|---|---|
| Sprint-1 | 20 | 2 Days | 20 Oct 2023 | 22 Oct 2023 | 20 | 23Oct 2023 |
| Sprint-2 | 20 | 2 Days | 20 Oct 2023 | 22 Oct 2023 | 20 | 23 Oct 2023 |
| Sprint-3 | 20 | 2 Days | 20 Oct 2023 | 22 Oct 2023 | 20 | 23 Oct 2023 |
| Sprint-4 | 20 | 2 Days | 20 Oct 2023 | 22 Oct 2023 | 20 | 23 Oct 2023 |

**Velocity:**

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

**CODING:**

**FEATURE 1:**

**Data Sources:** Clearly cite the sources of the data used, promoting transparency and trustworthiness.

You can maintain a local database or data file with global country data and use a programming language to query and navigate this data. Here's an example using Python and a JSON file:

```
import json

def get_country_data_from_file(country_name):
    with open('countries.json', 'r') as file:
        data = json.load(file)
        for country in data:
            if country['name']['common'] == country_name:
                return country
    return None

# Example usage
country_name = "United States"
country_data = get_country_data_from_file(country_name)
if country_data:
    print(country_data)
```

**FEATURE 2:**

1.**Data Visualizations:** Utilize interactive charts and graphs to visualize key data points, such as GDP, population growth, and more, to facilitate better understanding.

2.**Comparative Analysis:** Compare multiple countries side by side to identify similarities and differences across various metrics like education, healthcare, or economic indicators.

**Using an API (Application Programming Interface):** You can utilize a public API that provides global country data. One such popular API is the REST Countries API, which offers extensive information about countries worldwide. You can access it using HTTP requests. Here's an example in Python using the requests library:\

```
import requests

def get_country_data(country_name):
    url = f"https://restcountries.com/v3.1/name/{country_name}"
    response = requests.get(url)

    if response.status_code == 200:
        data = response.json()
        # Process the data as needed
        return data
    else:
        print(f"Failed to retrieve data for {country_name}")
        return None

# Example usage
country_name = "United States"
country_data = get_country_data(country_name)
if country_data:
    print(country_data)
```

**DATABASE SCHEMA:**

```
-- Create the database
CREATE DATABASE GlobeTrekInsights;

-- Use the database
USE GlobeTrekInsights;

-- Table to store information about countries
CREATE TABLE Countries (
    CountryID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(255) NOT NULL,
```

```
    Code CHAR(3) NOT NULL,
    Continent VARCHAR(50),
    Population INT,
    Area FLOAT,
    Capital VARCHAR(100),
    Currency VARCHAR(50)
);

-- Table to store information about cities
CREATE TABLE Cities (
    CityID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(255) NOT NULL,
    CountryID INT,
    Population INT,
    Latitude FLOAT,
    Longitude FLOAT,
    FOREIGN KEY (CountryID) REFERENCES Countries(CountryID)
);

-- Table to store information about languages
CREATE TABLE Languages (
    LanguageID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(100) NOT NULL
);

-- Table to store the relationships between countries and languages
CREATE TABLE CountryLanguages (
    CountryID INT,
    LanguageID INT,
    PRIMARY KEY (CountryID, LanguageID),
    FOREIGN KEY (CountryID) REFERENCES Countries(CountryID),
    FOREIGN KEY (LanguageID) REFERENCES Languages(LanguageID)
);

-- Table to store information about tourist attractions
CREATE TABLE TouristAttractions (
    AttractionID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(255) NOT NULL,
```

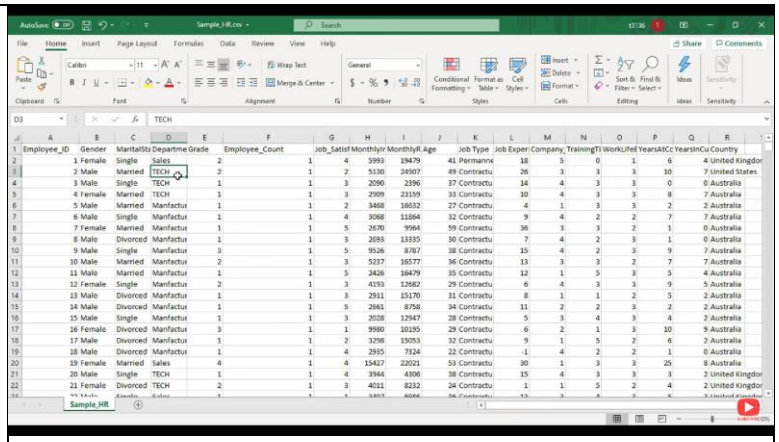
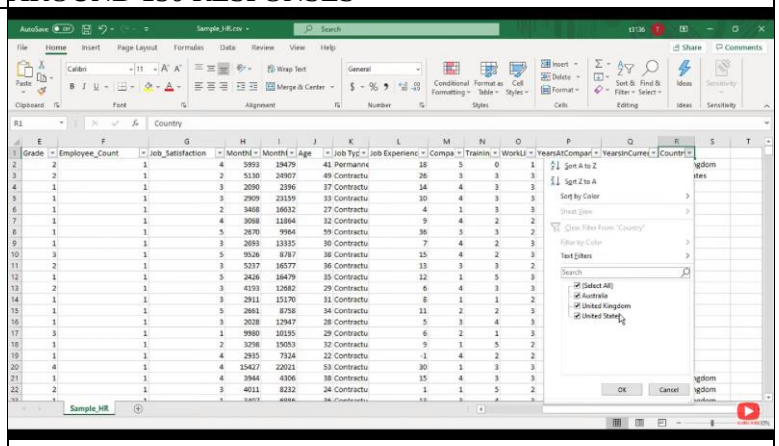
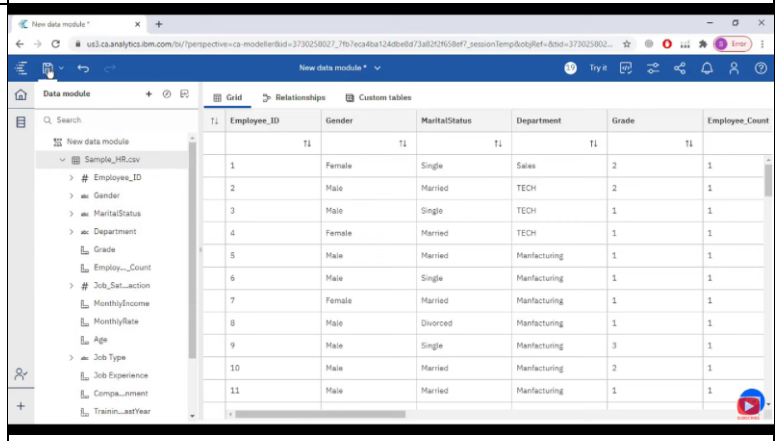
```
    CountryID INT,
    CityID INT,
    Description TEXT,
    FOREIGN KEY (CountryID) REFERENCES Countries(CountryID),
    FOREIGN KEY (CityID) REFERENCES Cities(CityID)
);

-- Table to store user reviews for tourist attractions
CREATE TABLE Reviews (
    ReviewID INT PRIMARY KEY AUTO_INCREMENT,
    AttractionID INT,
    UserID INT,
    Rating INT,
    Comment TEXT,
    FOREIGN KEY (AttractionID) REFERENCES TouristAttractions(AttractionID)
);

-- Table to store user information
CREATE TABLE Users (
    UserID INT PRIMARY KEY AUTO_INCREMENT,
    Username VARCHAR(100) NOT NULL,
    Email VARCHAR(255) NOT NULL,
    Password VARCHAR(255) NOT NULL
);

-- Table to store user favorite attractions
CREATE TABLE UserFavorites (
    UserID INT,
    AttractionID INT,
    PRIMARY KEY (UserID, AttractionID),
    FOREIGN KEY (UserID) REFERENCES Users(UserID),
    FOREIGN KEY (AttractionID) REFERENCES TouristAttractions(AttractionID)
);

-- Table to store user comments on attractions
CREATE TABLE UserComments (
    CommentID INT PRIMARY KEY AUTO_INCREMENT,
    UserID INT,
```

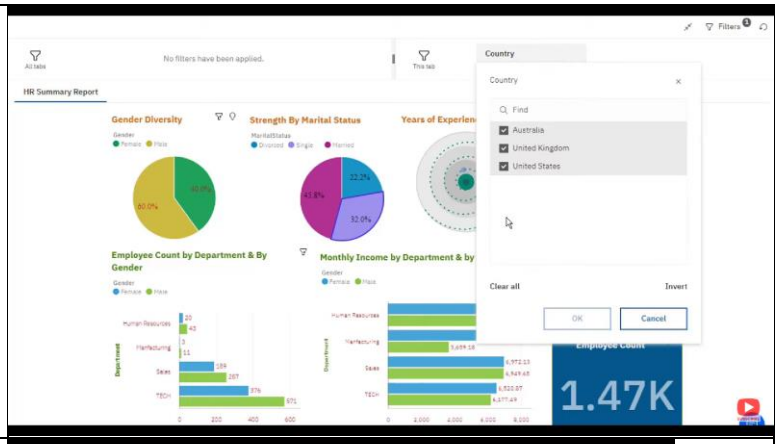
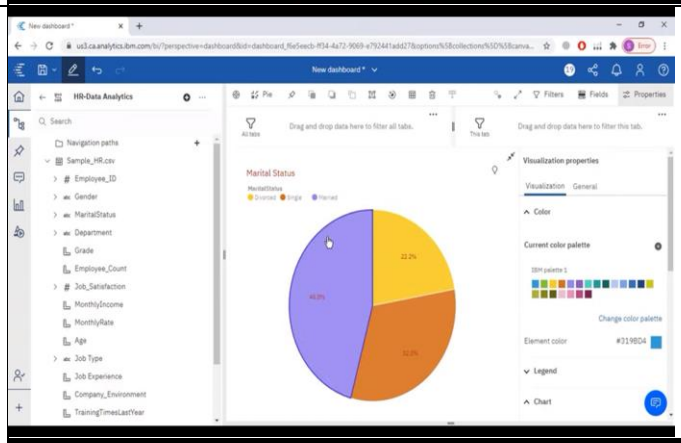
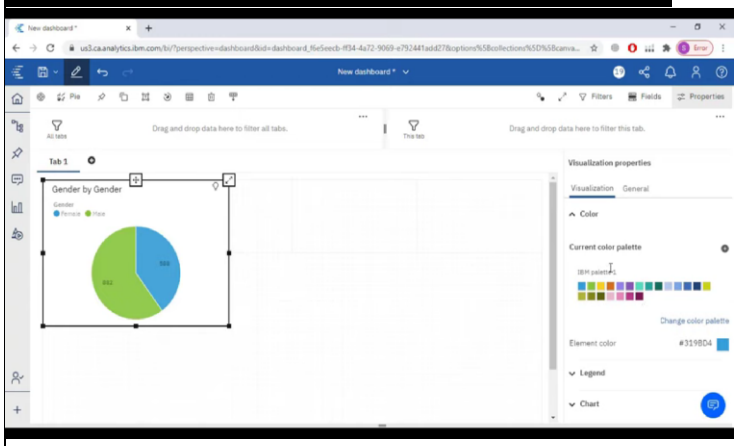
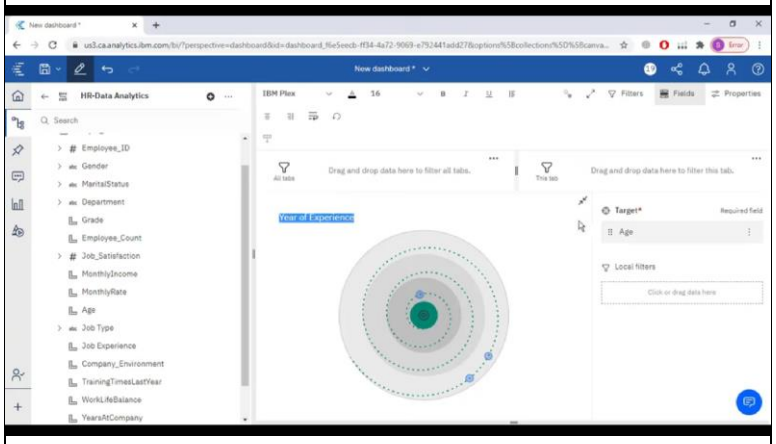
```
    AttractionID INT,
    Comment TEXT,
    FOREIGN KEY (UserID) REFERENCES Users(UserID),
    FOREIGN KEY (AttractionID) REFERENCES TouristAttractions(AttractionID)
);

-- Table to store user ratings on attractions
CREATE TABLE UserRatings (
    RatingID INT PRIMARY KEY AUTO_INCREMENT,
    UserID INT,
    AttractionID INT,
    Rating INT,
    FOREIGN KEY (UserID) REFERENCES Users(UserID),
    FOREIGN KEY (AttractionID) REFERENCES TouristAttractions(AttractionID)
);
```

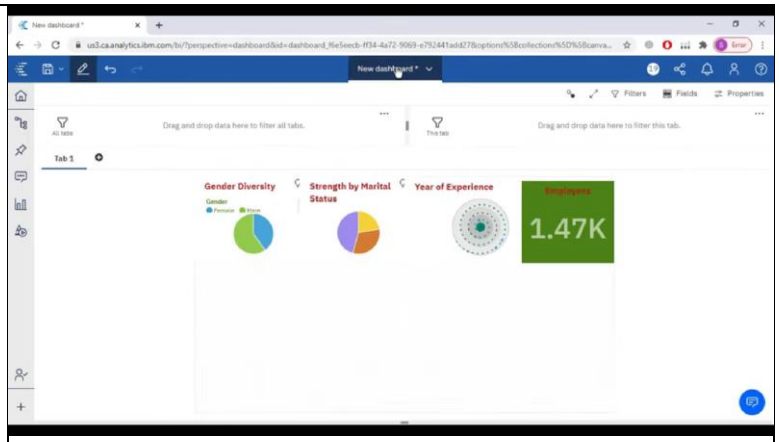
PERFORMANCE TESTING

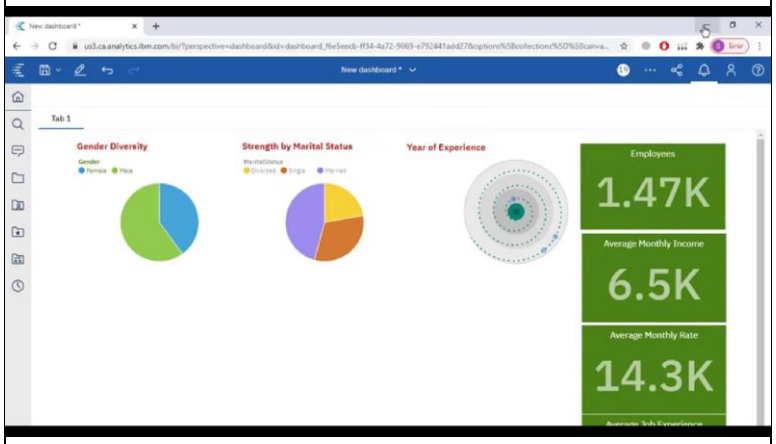
PERFORMANCE METRICES:

| S.No. | Parameter | Screenshot / Values |
|---|---|---|
| 1. | Dashboard design |  |

| | | |
|---|---|---|
| 2. | Data Responsiveness |  <br>AROUND 150 RESPONSES |
| 3. | Amount Data to Rendered (DB2 Metrics) |  <br>AROUND 150 RESPONSES |
| 4. | Utilization of Data Filters |  |

| | | |
|---|---|---|
| | |  |
| 5. | Effective User Story |  <br>  <br>  |
| 6. | Descriptive Reports | |


New dashboard *
Tab 1
Gender Diversity
Strength by Marital Status
Year of Experience
Employees
1.47K

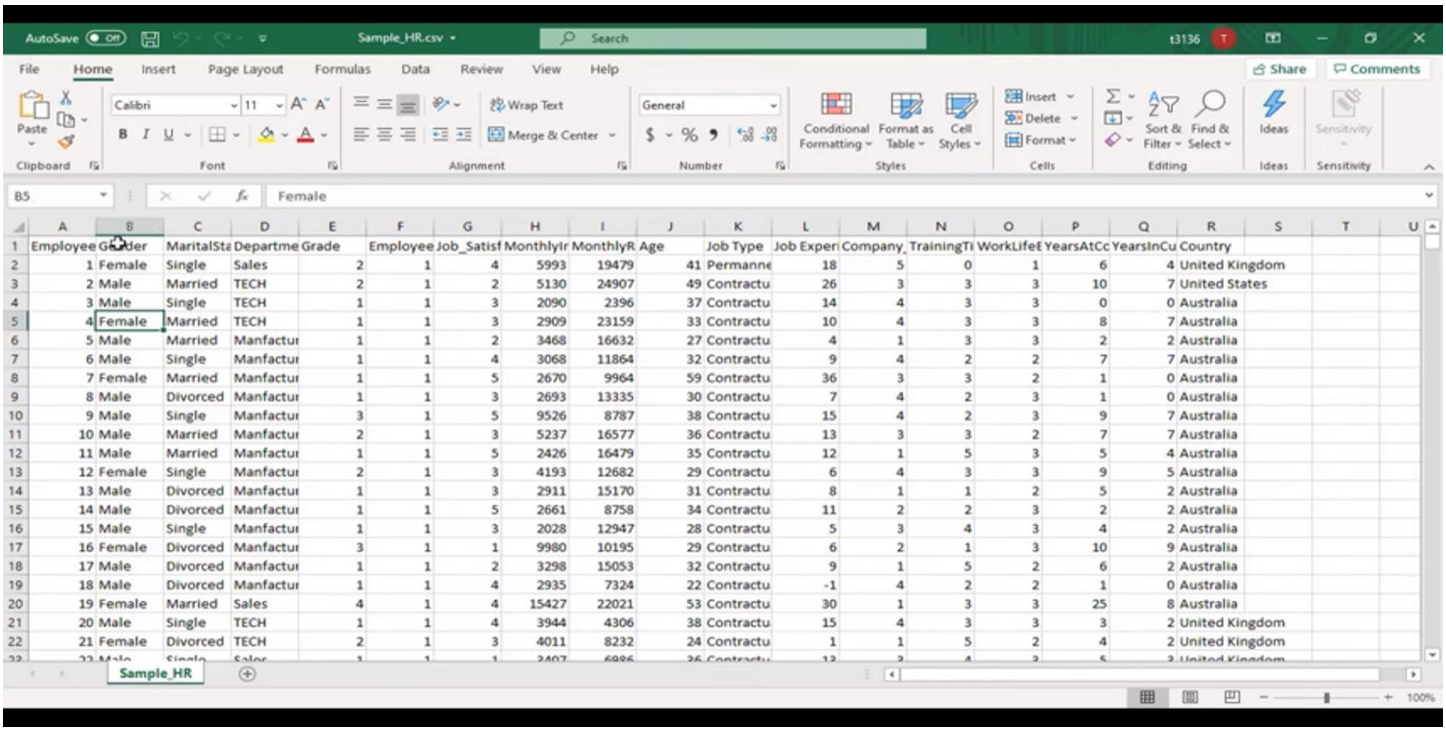

New dashboard *
Tab 1
Gender Diversity
Strength by Marital Status
Year of Experience
Employees
1.47K
Average Monthly Income
6.5K
Average Monthly Rate
14.3K


No filters have been applied.
Country
HR Summary Report
Gender Diversity
Strength By Marital Status
Years of Experience
Average Monthly Income
6.5K
Average Monthly Rate
14.3K
Average Job Experience
13.924
Employee Count
1.47K
Employee Count by Department & By Gender
Monthly Income by Department & by Gender

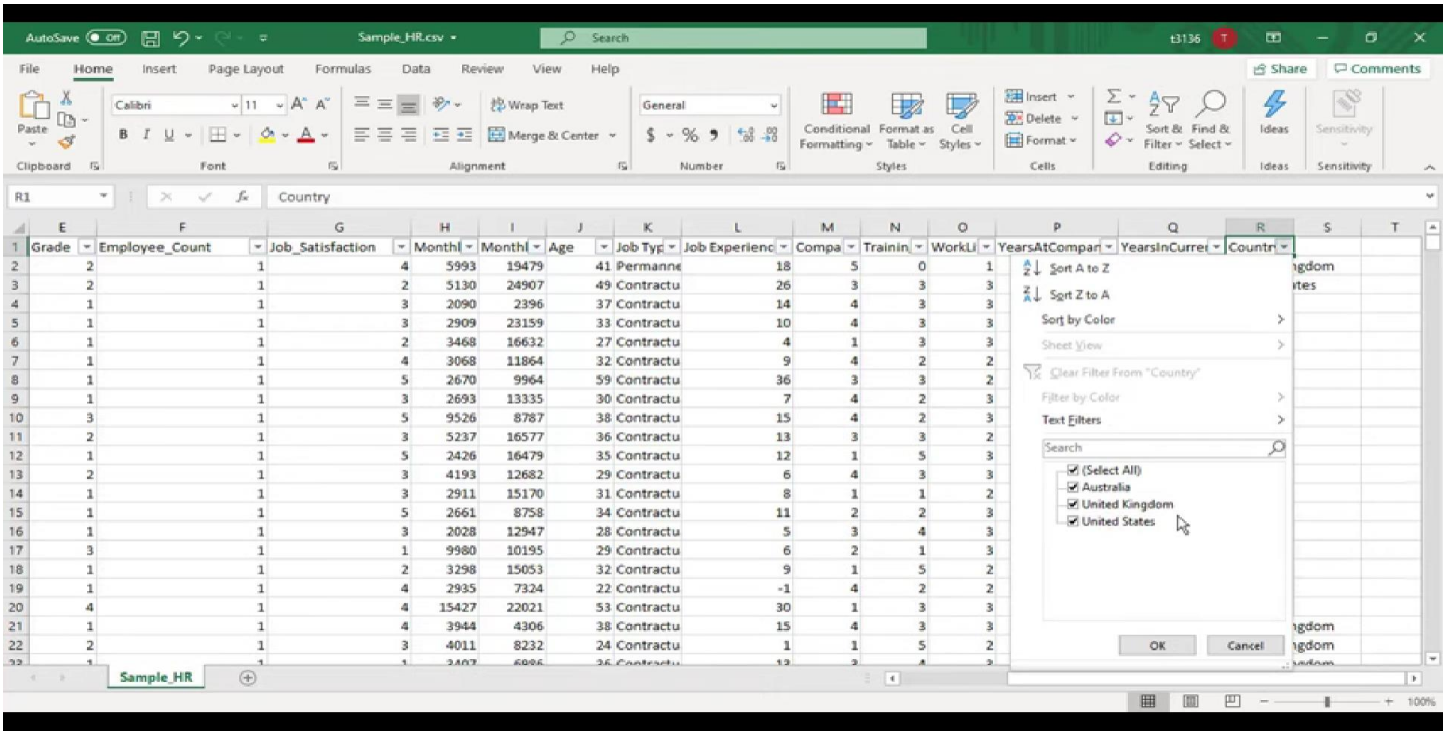
**RESULT:**

**OUTPUT SCREENSHOT:**

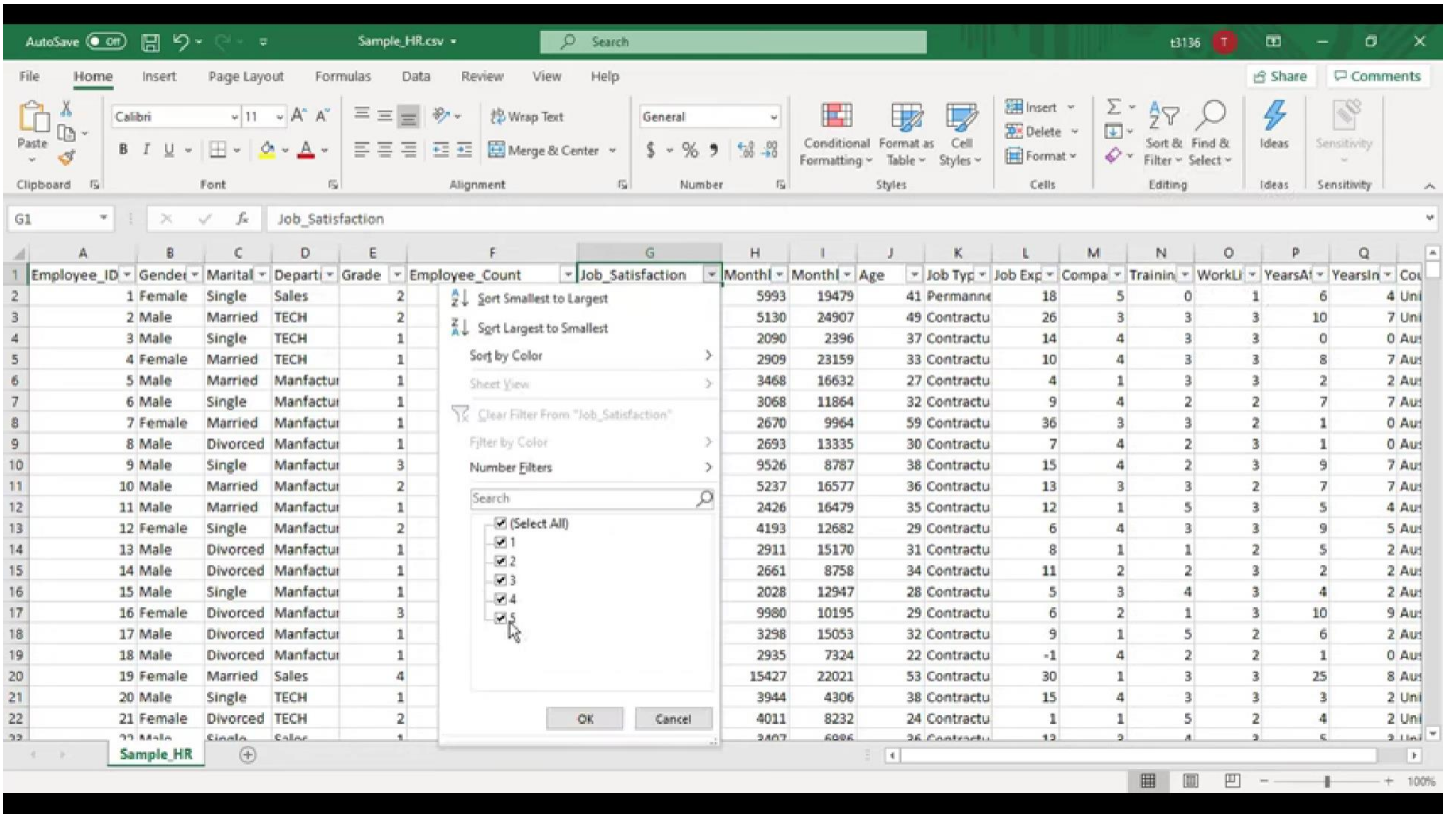
DATASET: AROUND 150 RECORDS

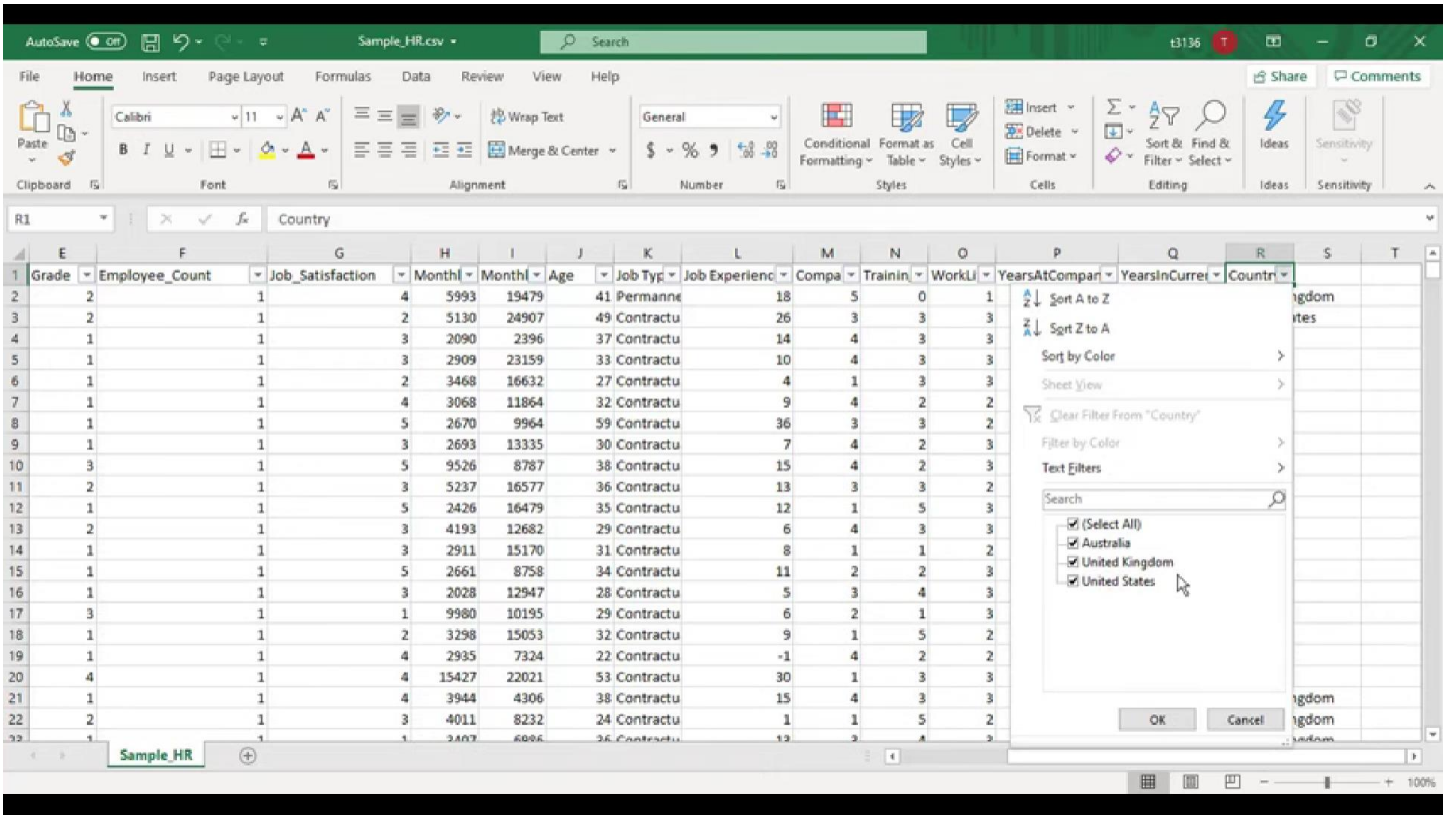


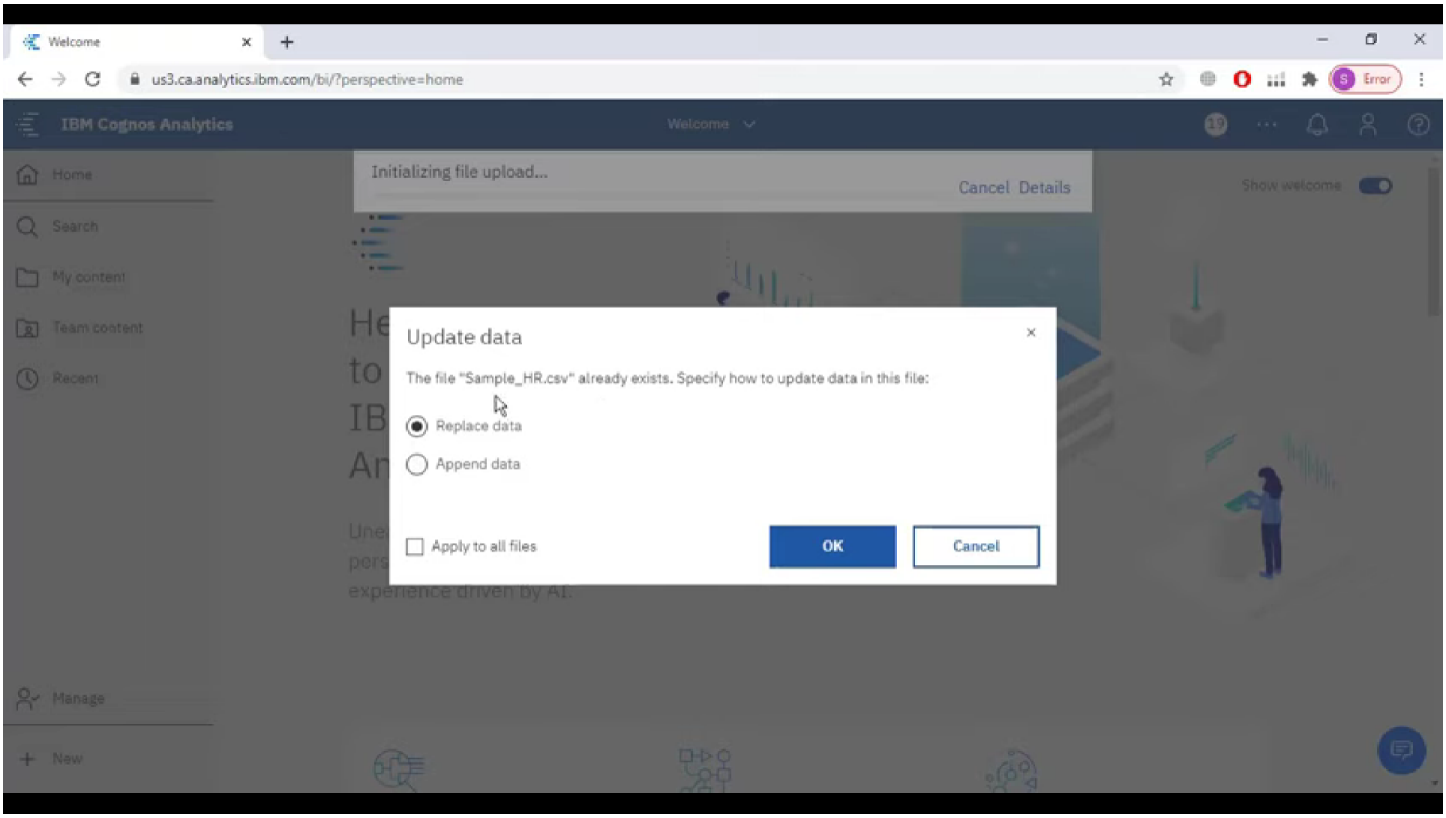
| Employee | Gender | MaritalSta | Departme | Grade | Employee | Job_Satisf | MonthlyIr | MonthlyR | Age | Job Type | Job Experi | Company_ | TrainingTi | WorkLifeE | YearsAtCc | YearsInCu | Country |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Female | Single | Sales | 2 | 1 | 4 | 5993 | 19479 | 41 | Permanne | 18 | 5 | 0 | 1 | 6 | 4 | United Kingdom |
| 2 | Male | Married | TECH | 2 | 1 | 2 | 5130 | 24907 | 49 | Contractu | 26 | 3 | 3 | 3 | 10 | 7 | United States |
| 3 | Male | Single | TECH | 1 | 1 | 3 | 2090 | 2396 | 37 | Contractu | 14 | 4 | 3 | 3 | 0 | 0 | Australia |
| 4 | Female | Married | TECH | 1 | 1 | 3 | 2909 | 23159 | 33 | Contractu | 10 | 4 | 3 | 3 | 8 | 7 | Australia |
| 5 | Male | Married | Manfactur | 1 | 1 | 2 | 3468 | 16632 | 27 | Contractu | 4 | 1 | 3 | 3 | 2 | 2 | Australia |
| 6 | Male | Single | Manfactur | 1 | 1 | 4 | 3068 | 11864 | 32 | Contractu | 9 | 4 | 2 | 2 | 7 | 7 | Australia |
| 7 | Female | Married | Manfactur | 1 | 1 | 5 | 2670 | 9964 | 59 | Contractu | 36 | 3 | 3 | 2 | 1 | 0 | Australia |
| 8 | Male | Divorced | Manfactur | 1 | 1 | 3 | 2693 | 13335 | 30 | Contractu | 7 | 4 | 2 | 3 | 1 | 0 | Australia |
| 9 | Male | Single | Manfactur | 3 | 1 | 5 | 9526 | 8787 | 38 | Contractu | 15 | 4 | 2 | 3 | 9 | 7 | Australia |
| 10 | Male | Married | Manfactur | 2 | 1 | 3 | 5237 | 16577 | 36 | Contractu | 13 | 3 | 3 | 2 | 7 | 7 | Australia |
| 11 | Male | Married | Manfactur | 1 | 1 | 5 | 2426 | 16479 | 35 | Contractu | 12 | 1 | 5 | 3 | 5 | 4 | Australia |
| 12 | Female | Single | Manfactur | 2 | 1 | 3 | 4193 | 12682 | 29 | Contractu | 6 | 4 | 3 | 3 | 9 | 5 | Australia |
| 13 | Male | Divorced | Manfactur | 1 | 1 | 3 | 2911 | 15170 | 31 | Contractu | 8 | 1 | 1 | 2 | 5 | 2 | Australia |
| 14 | Male | Divorced | Manfactur | 1 | 1 | 5 | 2661 | 8758 | 34 | Contractu | 11 | 2 | 2 | 3 | 2 | 2 | Australia |
| 15 | Male | Single | Manfactur | 1 | 1 | 3 | 2028 | 12947 | 28 | Contractu | 5 | 3 | 4 | 3 | 4 | 2 | Australia |
| 16 | Female | Divorced | Manfactur | 3 | 1 | 1 | 9980 | 10195 | 29 | Contractu | 6 | 2 | 1 | 3 | 10 | 9 | Australia |
| 17 | Male | Divorced | Manfactur | 1 | 1 | 2 | 3298 | 15053 | 32 | Contractu | 9 | 1 | 5 | 2 | 6 | 2 | Australia |
| 18 | Male | Divorced | Manfactur | 1 | 1 | 4 | 2935 | 7324 | 22 | Contractu | -1 | 4 | 2 | 2 | 1 | 0 | Australia |
| 19 | Female | Married | Sales | 4 | 1 | 4 | 15427 | 22021 | 53 | Contractu | 30 | 1 | 3 | 3 | 25 | 8 | Australia |
| 20 | Male | Single | TECH | 1 | 1 | 4 | 3944 | 4306 | 38 | Contractu | 15 | 4 | 3 | 3 | 3 | 2 | United Kingdom |
| 21 | Female | Divorced | TECH | 2 | 1 | 3 | 4011 | 8232 | 24 | Contractu | 1 | 1 | 5 | 2 | 4 | 2 | United Kingdom |



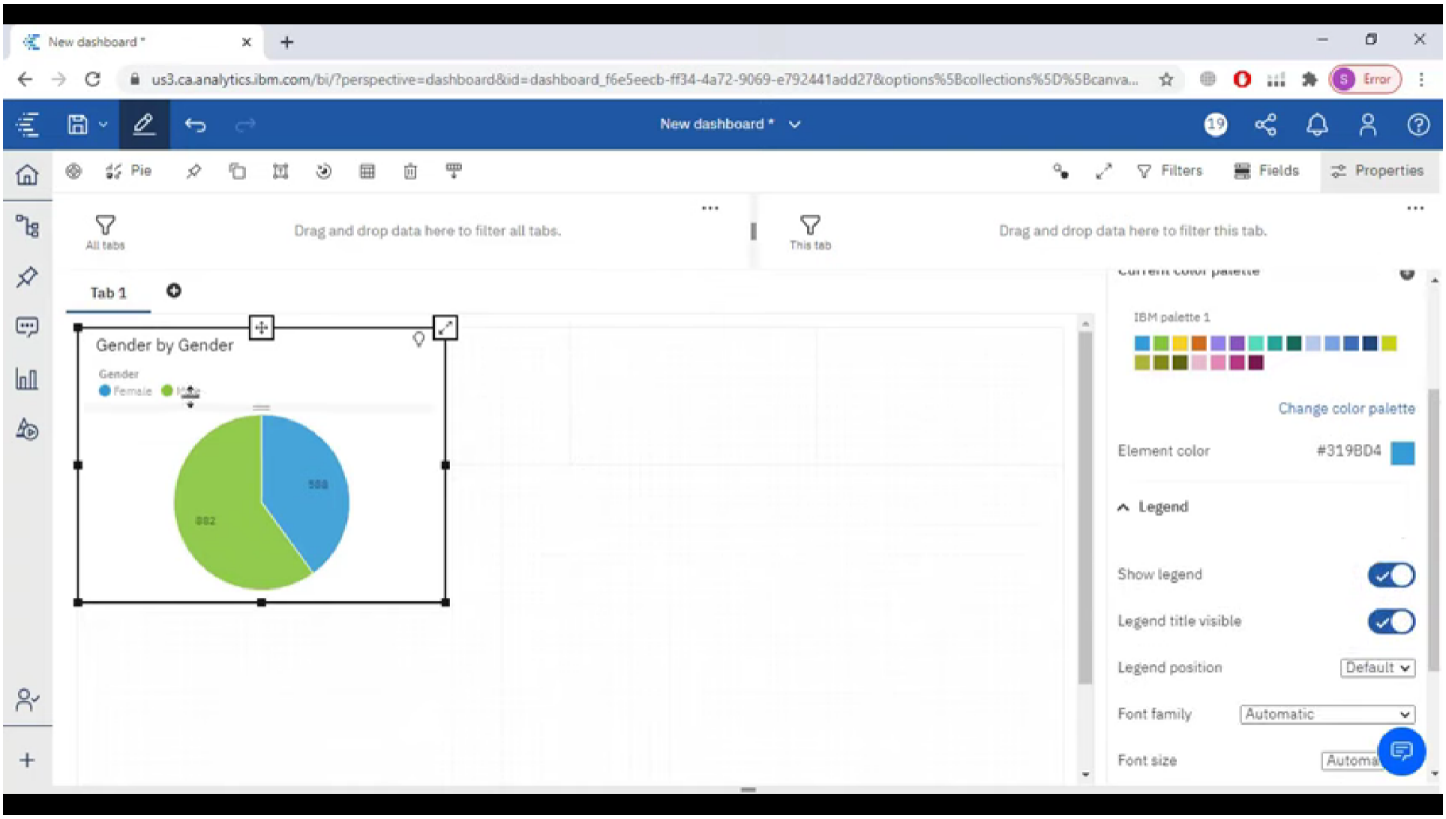
| Grade | Employee_Count | Job_Satisfaction | Monthl | Monthl | Age | Job Typ | Job Experienc | Compa | Trainin | WorkLi | YearsAtCompar | YearsInCurre | Countr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 1 | 4 | 5993 | 19479 | 41 | Permanne | 18 | 5 | 0 | 1 | | | |
| 2 | 1 | 2 | 5130 | 24907 | 49 | Contractu | 26 | 3 | 3 | 3 | | | |
| 1 | 1 | 3 | 2090 | 2396 | 37 | Contractu | 14 | 4 | 3 | 3 | | | |
| 1 | 1 | 3 | 2909 | 23159 | 33 | Contractu | 10 | 4 | 3 | 3 | | | |
| 1 | 1 | 2 | 3468 | 16632 | 27 | Contractu | 4 | 1 | 3 | 3 | | | |
| 1 | 1 | 4 | 3068 | 11864 | 32 | Contractu | 9 | 4 | 2 | 2 | | | |
| 1 | 1 | 5 | 2670 | 9964 | 59 | Contractu | 36 | 3 | 3 | 2 | | | |
| 1 | 1 | 3 | 2693 | 13335 | 30 | Contractu | 7 | 4 | 2 | 3 | | | |
| 3 | 1 | 5 | 9526 | 8787 | 38 | Contractu | 15 | 4 | 2 | 3 | | | |
| 2 | 1 | 3 | 5237 | 16577 | 36 | Contractu | 13 | 3 | 3 | 2 | | | |
| 1 | 1 | 5 | 2426 | 16479 | 35 | Contractu | 12 | 1 | 5 | 3 | | | |
| 2 | 1 | 3 | 4193 | 12682 | 29 | Contractu | 6 | 4 | 3 | 3 | | | |
| 1 | 1 | 3 | 2911 | 15170 | 31 | Contractu | 8 | 1 | 1 | 2 | | | |
| 1 | 1 | 5 | 2661 | 8758 | 34 | Contractu | 11 | 2 | 2 | 3 | | | |
| 1 | 1 | 3 | 2028 | 12947 | 28 | Contractu | 5 | 3 | 4 | 3 | | | |
| 3 | 1 | 1 | 9980 | 10195 | 29 | Contractu | 6 | 2 | 1 | 3 | | | |
| 1 | 1 | 2 | 3298 | 15053 | 32 | Contractu | 9 | 1 | 5 | 2 | | | |
| 1 | 1 | 4 | 2935 | 7324 | 22 | Contractu | -1 | 4 | 2 | 2 | | | |
| 4 | 1 | 4 | 15427 | 22021 | 53 | Contractu | 30 | 1 | 3 | 3 | | | |
| 1 | 1 | 4 | 3944 | 4306 | 38 | Contractu | 15 | 4 | 3 | 3 | | | |
| 2 | 1 | 3 | 4011 | 8232 | 24 | Contractu | 1 | 1 | 5 | 2 | | | |

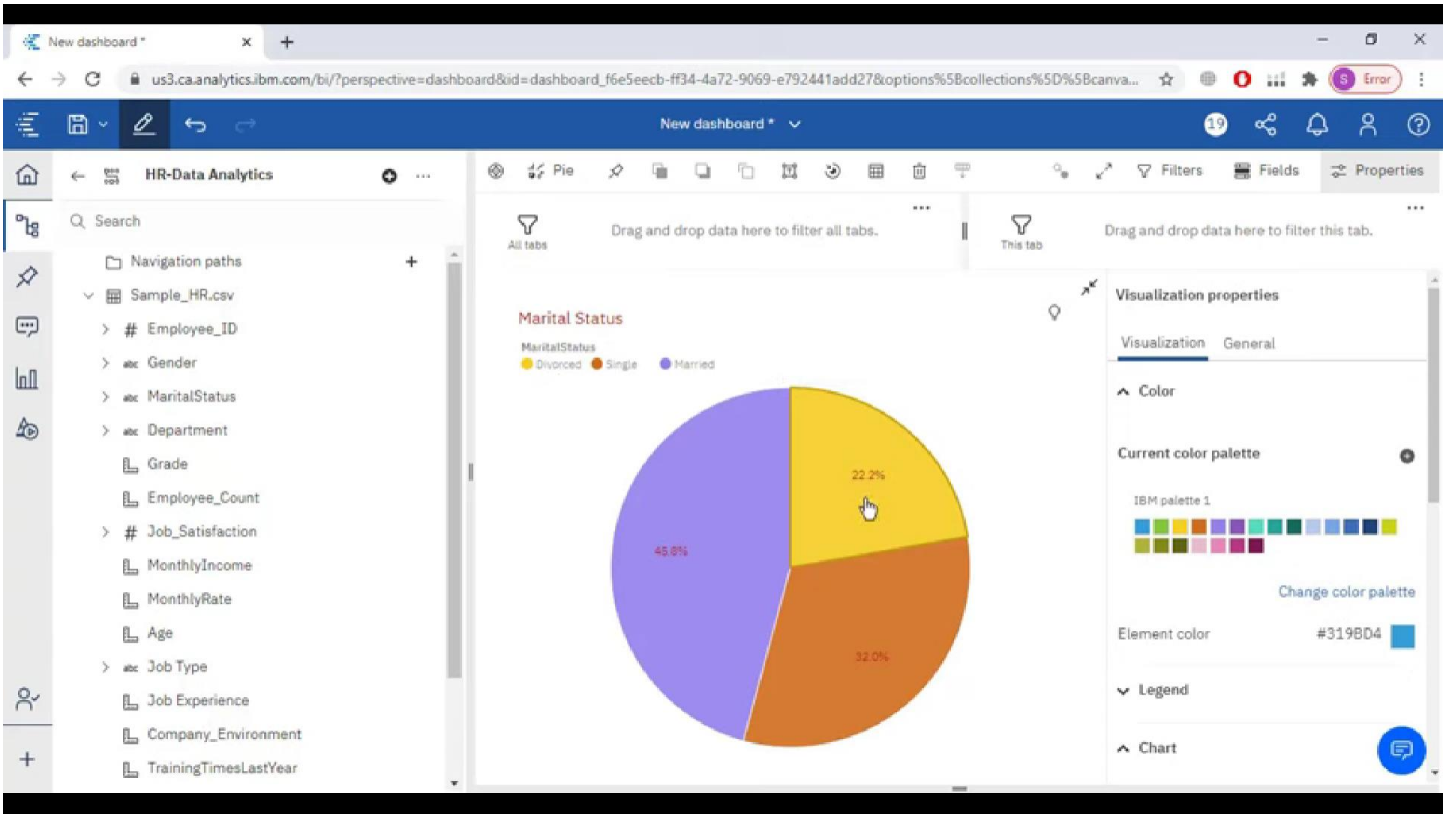

Sample_HR.csv
Search
Job_Satisfaction
Sort Smallest to Largest
Sort Largest to Smallest
Sort by Color
Sheet View
Clear Filter From "Job_Satisfaction"
Filter by Color
Number Filters
Search
(Select All)
1
2
3
4
5
OK
Cancel
Sample_HR


Sample_HR.csv
Search
Country
Sort A to Z
Sort Z to A
Sort by Color
Sheet View
Clear Filter From "Country"
Filter by Color
Text Filters
Search
(Select All)
Australia
United Kingdom
United States
OK
Cancel
Sample_HR




**DESIGNING PHASE**

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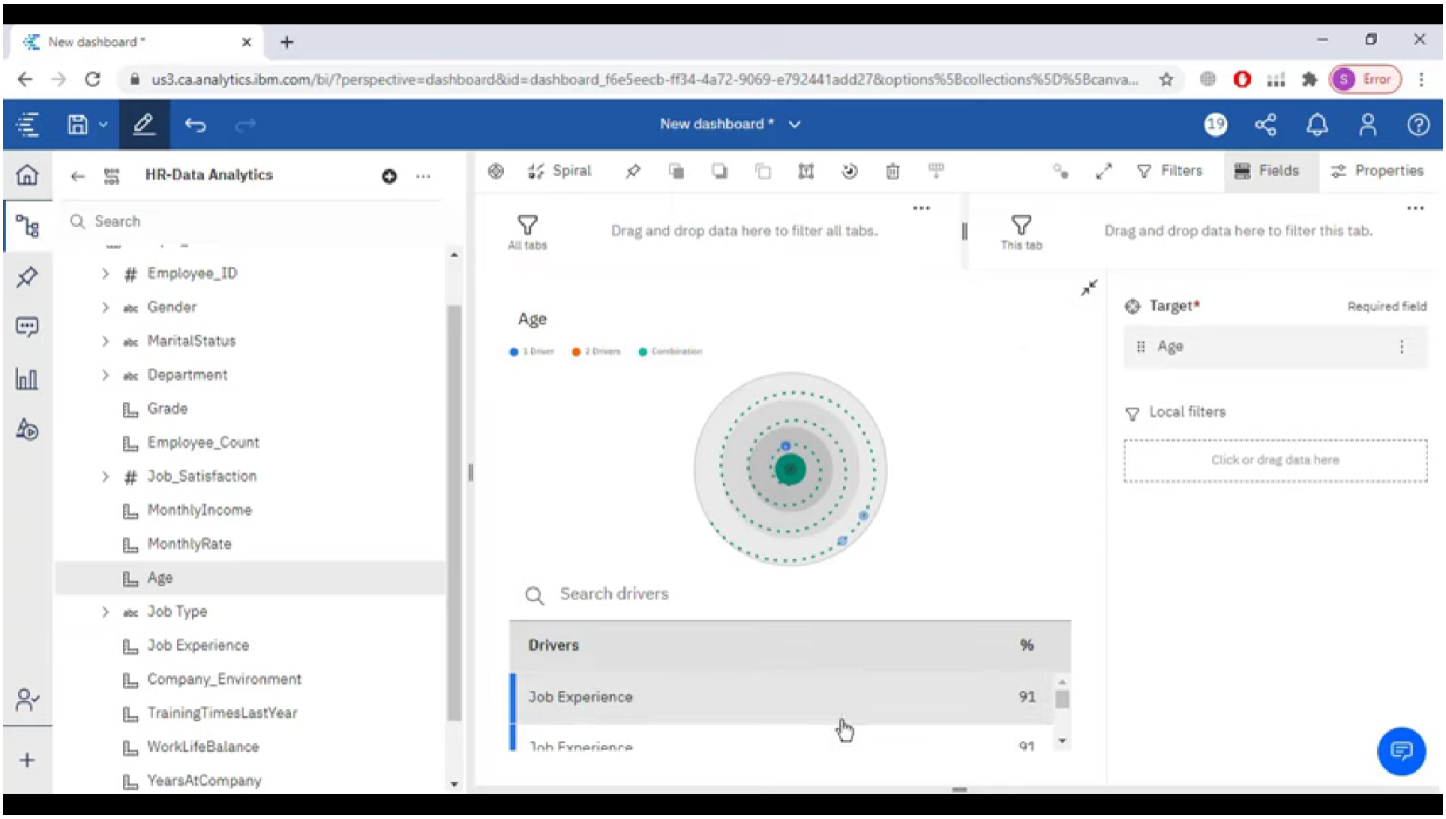
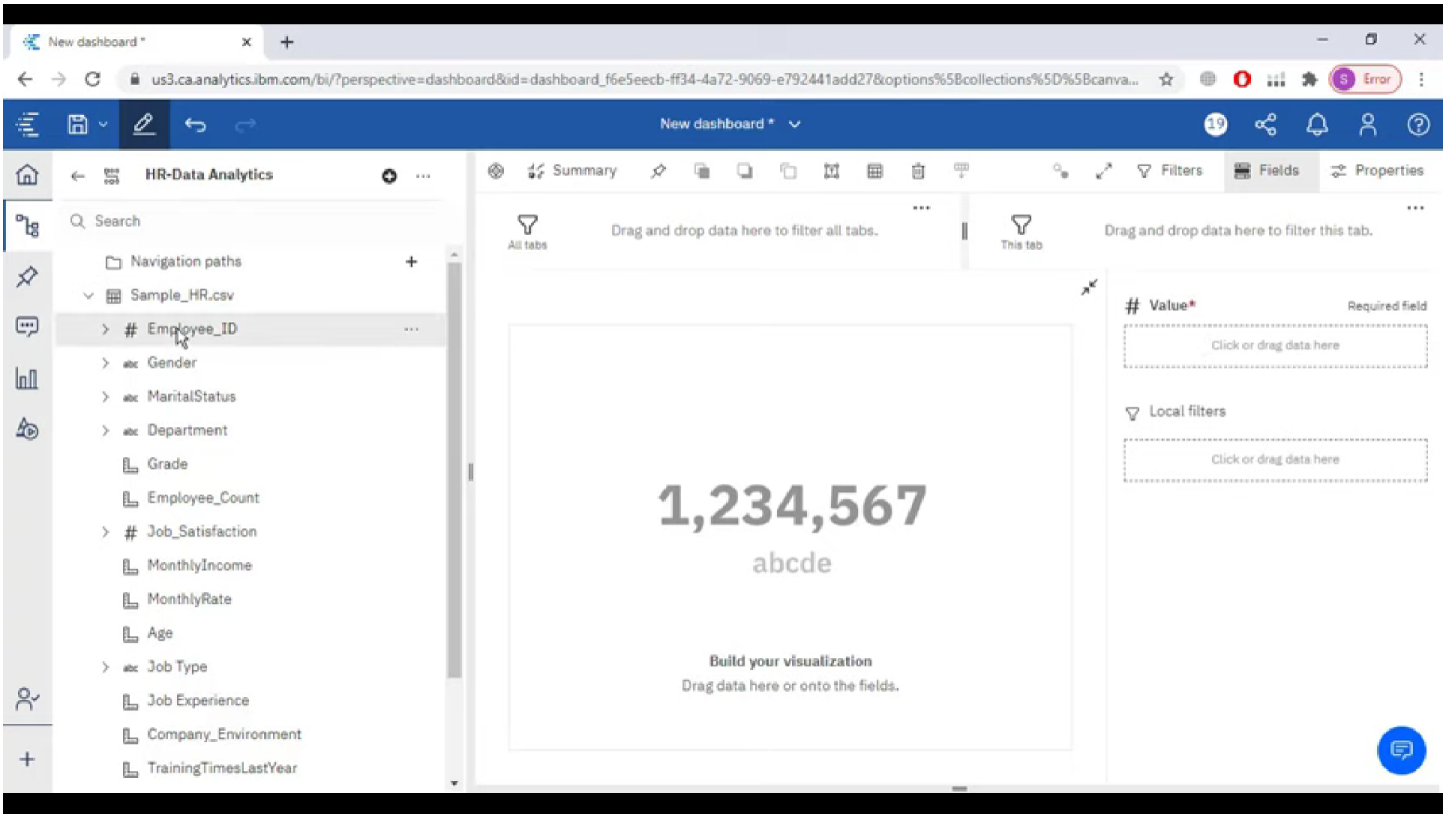
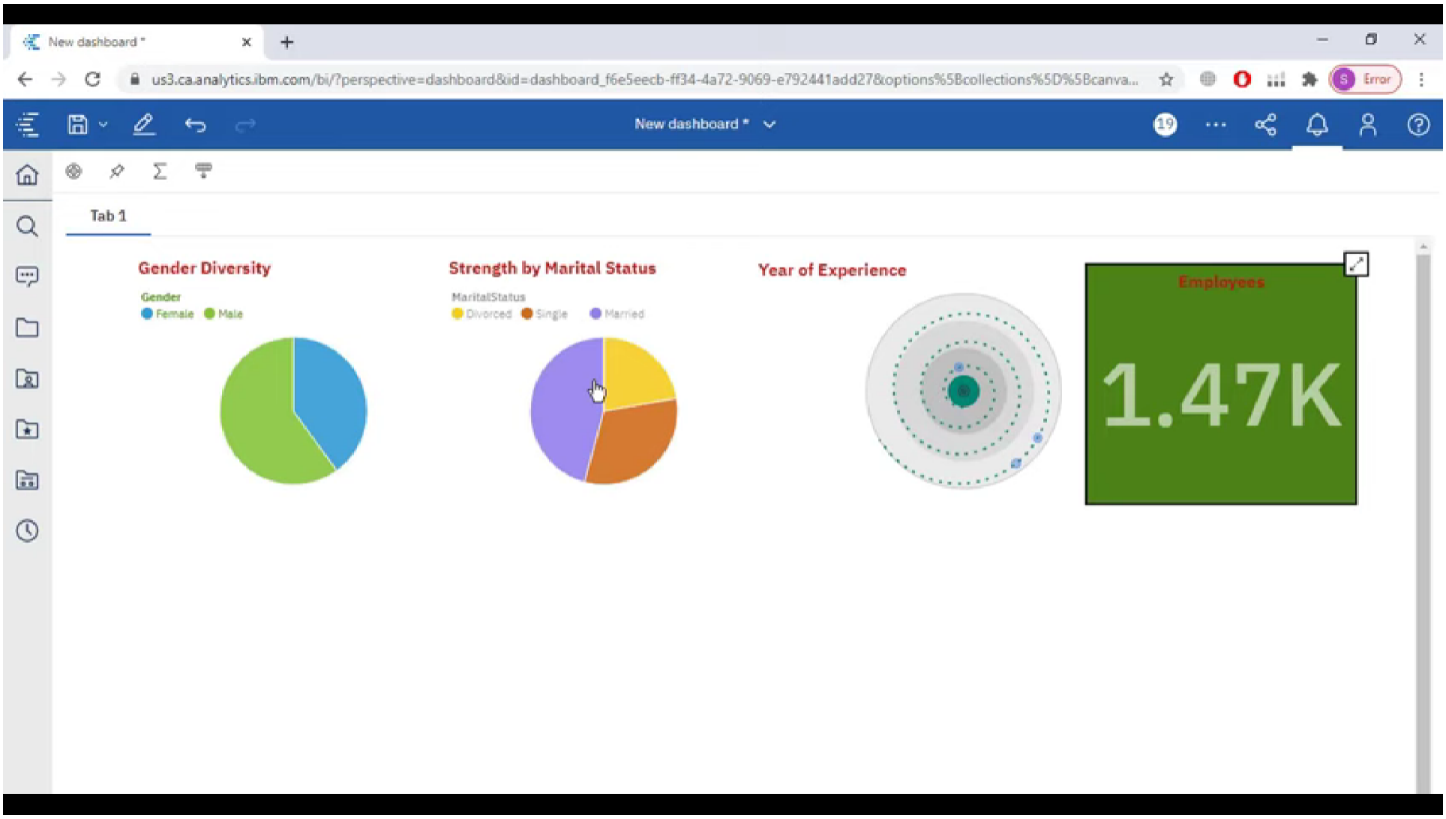
New dashboard *
HR-Data Analytics
Search
Navigation paths
Sample_HR.csv
Employee_ID
Gender
MaritalStatus
Department
Grade
Employee_Count
Job_Satisfaction
MonthlyIncome
MonthlyRate
Age
Job Type
Job Experience
Company_Environment
TrainingTimesLastYear
Pie
Filters
Fields
Properties
All tabs
Drag and drop data here to filter all tabs.
This tab
Drag and drop data here to filter this tab.
Marital Status
MaritalStatus
Divorced
Single
Married
22.2%
45.8%
32.0%
Visualization properties
Visualization
General
Color
Current color palette
IBM palette 1
Change color palette
Element color
#319BD4
Legend
Chart


New dashboard *
us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=dashboard_f6e5eecb-ff34-4a72-9069-e792441add27&options%5Bcollections%5D%5Bcanva...
New dashboard *
HR-Data Analytics
Search
Employee_ID
Gender
MaritalStatus
Department
Grade
Employee_Count
Job_Satisfaction
MonthlyIncome
MonthlyRate
Age
Job Type
Job Experience
Company_Environment
TrainingTimesLastYear
WorkLifeBalance
YearsAtCompany
Spiral
Filters
Fields
Properties
All tabs
Drag and drop data here to filter all tabs.
This tab
Drag and drop data here to filter this tab.
Age
Search drivers
Drivers
%
Job Experience
91
Target*
Required field
Age
Local filters
Click or drag data here


New dashboard *
us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=dashboard_f6e5eecb-ff34-4a72-9069-e792441add27&options%5Bcollections%5D%5Bcanva...
Error
New dashboard *
19
HR-Data Analytics
Search
Navigation paths
Sample_HR.csv
Employee_ID
Gender
MaritalStatus
Department
Grade
Employee_Count
Job_Satisfaction
MonthlyIncome
MonthlyRate
Age
Job Type
Job Experience
Company_Environment
TrainingTimesLastYear
Summary
Filters
Fields
Properties
All tabs
Drag and drop data here to filter all tabs.
This tab
Drag and drop data here to filter this tab.
1,234,567
abcde
Build your visualization
Drag data here or onto the fields.
Value*
Required field
Click or drag data here
Local filters
Click or drag data here


New dashboard *
us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=dashboard_f6e5eecb-ff34-4a72-9069-e792441add27&options%5Bcollections%5D%5Bcanva...
Error
New dashboard *
19
Tab 1
Gender Diversity
Gender
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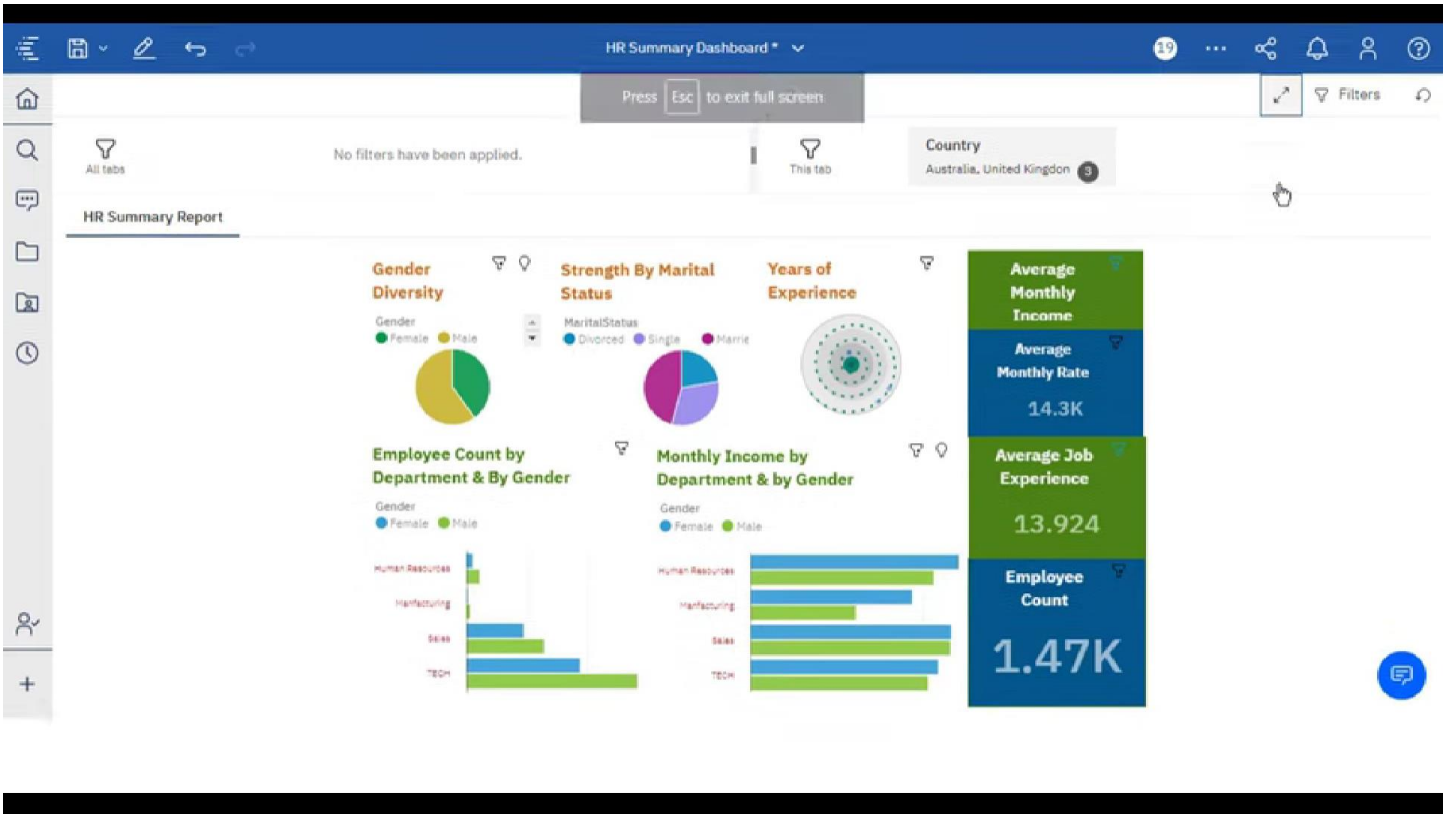
Male
Strength by Marital Status
MaritalStatus
Divorced
Single
Married
Year of Experience
Employees
1.47K

**FINAL OUTPUT:**




**ADVANTAGES AND DISADVANTAGES**

**ADVANTAGES:**

1. **Comprehensive Data Source:**

- GlobeTrek Insights provides a wide range of data about different countries, including economic, social, political, and environmental information. This comprehensive data can be invaluable for businesses, policymakers, researchers, and travelers looking to make informed decisions.

2. **Data Accuracy and Reliability:**

- When properly maintained, GlobeTrek Insights can offer reliable and up-to-date data. It can help users gain a better understanding of global trends and conditions, making it easier to plan and make strategic decisions.

3. **Data Visualization and Analysis Tools:**

- GlobeTrek Insights often includes data visualization and analysis tools that make it easier to interpret and present data in a meaningful way. These tools can help users identify patterns and trends more effectively.

4. **Geospatial Information:**

- For users who require geographical data, GlobeTrek Insights can provide maps and geographic information systems (GIS) data that can be useful for various purposes, including logistics, urban planning, and natural resource management.

5. **Time-Saving:**

- GlobeTrek Insights can save users a significant amount of time and effort when conducting research on multiple countries. Instead of scouring the internet for data from various sources, users can find most of what they need in one place.

**DISADVANTAGES:**

1. **Cost:**

- Access to GlobeTrek Insights can be expensive, particularly for businesses and organizations that require frequent access to the data. Subscription fees or licensing costs can be a significant barrier for smaller entities.

2. **Data Accuracy Concerns**:

- While GlobeTrek Insights aims to provide accurate data, errors can still occur. Users should exercise caution and verify critical data points independently, especially when making important decisions based on the information.

3**. Limited Customization:**

- GlobeTrek Insights may not always allow users to customize the data to their specific needs. Users may find themselves restricted by predefined categories or variables, which can limit the usefulness of the data for their unique requirements.

4. **Overwhelming Amount of Data:**

- The vast amount of data available in GlobeTrek Insights can be overwhelming for users who are not familiar with data analysis. Interpreting and making sense of the data may require expertise in data science or statistics.

5. **Data Lag:**

- In rapidly changing global conditions, there may be a lag in data updates. Some information might not be as current as users need, potentially affecting the accuracy of their decisions.

6**. Privacy and Security:**

- Users should be cautious about sharing sensitive information when using GlobeTrek Insights, as it may involve sharing data with the platform, which could raise privacy and security concerns.

**CONCLUSION:**

1. **Data-Driven Decision Making:**GlobeTrek Insights provides an extensive repository of data on countries around the world. From economic indicators and cultural insights to political landscapes and climate data, this platform equips users with the tools needed to make data-driven decisions, whether it's for personal travel, business expansion, or policy formulation.

2. **Geopolitical Understanding:** In an era where global events can have far-reaching consequences, GlobeTrek Insights has played a crucial role in promoting geopolitical literacy. By offering historical context and real-time updates on international affairs, it fosters a deeper understanding of the world's hotspots and the forces at play.

3. **Risk Assessment and Preparedness:** Travelers, businesses, and governments alike have benefited from GlobeTrek Insights' risk assessment features. With data on safety, health, and political stability, users can proactively plan for potential challenges and emergencies, ensuring a safer and more secure journey.

4. **Cultural Sensitivity:** An often overlooked but critical aspect of international engagement is cultural sensitivity. GlobeTrek Insights provides valuable insights into the customs, traditions, and social norms of different countries, enabling users to approach foreign interactions with respect and understanding.

5. **Sustainable Travel and Business:**The platform promotes sustainable practices by highlighting environmental data and eco-friendly initiatives in different countries. This encourages travelers and businesses to make choices that contribute to a more sustainable and responsible global community.

In conclusion, GlobeTrek Insights serves as a valuable compass in an increasingly interconnected and complex world. Its wealth of information, analytical tools, and real-time updates make it an indispensable resource for those seeking to navigate the global landscape with confidence and wisdom. Whether it's for individual travelers, international corporations, or governments, this platform has proven itself as an invaluable asset for informed decision-making, risk management, and global engagement.

**FUTURE SCOPE:**

GlobeTrek Insights, a platform focused on navigating global country data, has significant potential for future growth and development. As the world becomes increasingly interconnected, data-driven insights about countries and regions are in high demand for a variety of purposes, including business expansion, international relations, and travel planning. Here are some potential future scopes and directions for GlobeTrek Insights:

1.**Enhanced Data Sources:** Continuously expanding and improving the sources of data can be a significant area of focus. This could include real-time data streams, additional economic indicators, social data, and political developments.

2.**Advanced Analytics:** Employing advanced data analytics, including machine learning and artificial intelligence, to provide more accurate and insightful predictions and recommendations based on the available data.

3.**Personalized User Experiences:** Tailoring the platform to individual users' needs and preferences, such as business analysts, policymakers, or tourists. This might involve custom dashboards, alerts, and reports

**APPENDIX:**

**SOURCE CODE:**

**Record. Json :**

```
import json

def get_country_data_from_file(country_name):
    with open('countries.json', 'r') as file:
        data = json.load(file)
        for country in data:
            if country['name']['common'] == country_name:
                return country
    return None

# Example usage
country_name = "United States"
country_data = get_country_data_from_file(country_name)
if country_data:
    print(country_data)
```

**request.py**

```
def get_country_data(country_name):
    url = f"https://restcountries.com/v3.1/name/{country_name}"
    response = requests.get(url)
```

```
    if response.status_code == 200:
        data = response.json()
        # Process the data as needed
        return data
    else:
        print(f"Failed to retrieve data for {country_name}")
        return None

# Example usage
country_name = "United States"
country_data = get_country_data(country_name)
if country_data:
    print(country_data)
```

**DATABASE SCHEMA:**

```
-- Create the database
CREATE DATABASE GlobeTrekInsights;

-- Use the database
USE GlobeTrekInsights;

-- Table to store information about countries
CREATE TABLE Countries (
    CountryID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(255) NOT NULL,
    Code CHAR(3) NOT NULL,
    Continent VARCHAR(50),
    Population INT,
    Area FLOAT,
    Capital VARCHAR(100),
    Currency VARCHAR(50)
);

-- Table to store information about cities
CREATE TABLE Cities (
```

```
    CityID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(255) NOT NULL,
    CountryID INT,
    Population INT,
    Latitude FLOAT,
    Longitude FLOAT,
    FOREIGN KEY (CountryID) REFERENCES Countries(CountryID)
);

-- Table to store information about languages
CREATE TABLE Languages (
    LanguageID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(100) NOT NULL
);

-- Table to store the relationships between countries and languages
CREATE TABLE CountryLanguages (
    CountryID INT,
    LanguageID INT,
    PRIMARY KEY (CountryID, LanguageID),
    FOREIGN KEY (CountryID) REFERENCES Countries(CountryID),
    FOREIGN KEY (LanguageID) REFERENCES Languages(LanguageID)
);

-- Table to store information about tourist attractions
CREATE TABLE TouristAttractions (
    AttractionID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(255) NOT NULL,
    CountryID INT,
    CityID INT,
    Description TEXT,
    FOREIGN KEY (CountryID) REFERENCES Countries(CountryID),
    FOREIGN KEY (CityID) REFERENCES Cities(CityID)
);

-- Table to store user reviews for tourist attractions
CREATE TABLE Reviews (
    ReviewID INT PRIMARY KEY AUTO_INCREMENT,
```

```
    AttractionID INT,
    UserID INT,
    Rating INT,
    Comment TEXT,
    FOREIGN KEY (AttractionID) REFERENCES TouristAttractions(AttractionID)
);

-- Table to store user information
CREATE TABLE Users (
    UserID INT PRIMARY KEY AUTO_INCREMENT,
    Username VARCHAR(100) NOT NULL,
    Email VARCHAR(255) NOT NULL,
    Password VARCHAR(255) NOT NULL
);

-- Table to store user favorite attractions
CREATE TABLE UserFavorites (
    UserID INT,
    AttractionID INT,
    PRIMARY KEY (UserID, AttractionID),
    FOREIGN KEY (UserID) REFERENCES Users(UserID),
    FOREIGN KEY (AttractionID) REFERENCES TouristAttractions(AttractionID)
);

-- Table to store user comments on attractions
CREATE TABLE UserComments (
    CommentID INT PRIMARY KEY AUTO_INCREMENT,
    UserID INT,
    AttractionID INT,
    Comment TEXT,
    FOREIGN KEY (UserID) REFERENCES Users(UserID),
    FOREIGN KEY (AttractionID) REFERENCES TouristAttractions(AttractionID)
);

-- Table to store user ratings on attractions
CREATE TABLE UserRatings (
    RatingID INT PRIMARY KEY AUTO_INCREMENT,
    UserID INT,
```

```
    AttractionID INT,
    Rating INT,
    FOREIGN KEY (UserID) REFERENCES Users(UserID),
    FOREIGN KEY (AttractionID) REFERENCES TouristAttractions(AttractionID)
);
```

**GITHUB LINK:**

https://github.com/Kirupashre/Naan-Mudhalvan

**DEMO LINK**:

https://drive.google.com/file/d/10sEzTUjDFtKrCF52f7ZCfCBT35b08Nof/view?usp=sharing