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Kodambakkam, Chennai-600024.

DATA ANALYTICS

DEPARTMENT OF INFORMATION TECHNOLOGY

TOPIC: GLOBETREK INSIGHTS: NAVIGATING GLOBAL COUNTRY DATA WITH IBM COGNO

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ABSTRACT:

In our increasingly interconnected world, businesses and organizations rely on data-driven insights to make informed decisions on a global scale. This abstract introduces the concept of "Globetrek Insights," a sophisticated data analytics solution powered by IBM Cognos, designed to help users effectively navigate and extract valuable information from vast global country data

Globetrek Insights leverages the power of IBM Cognos, a leading business intelligence and data analytics platform, to provide a comprehensive view of country-specific information. Users can explore a wide range of data sets, including economic indicators, social demographics, political landscapes, cultural statistics, and more, to gain a deep understanding of the countries they are interested in

Key features and benefits of Globetrek Insights include:

Data Accessibility: The platform offers easy access to a wealth of global data, ensuring that users can effortlessly find the information they need to support their business strategies, research, or decision-making processes.

Interactive Visualizations: Globetrek Insights utilizes IBM Cognos' powerful visualization tools to present data in a user-friendly manner. This enables users to interpret data through interactive charts, maps, and dashboards, facilitating clear and insightful data exploration.

Customized Reporting: Users can create customized reports and dashboards tailored to their specific needs, allowing for a highly personalized and efficient data analysis experience.

Real-Time Updates: The platform continuously updates data to reflect the ever-changing global landscape, ensuring that users have access to the latest and most relevant information.

Collaboration and Sharing: Globetrek Insights promotes collaboration among teams by allowing users to share reports and insights with colleagues, making it an invaluable tool for collaborative decision-making.

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	Important physical and locational characteristics are

		locations	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

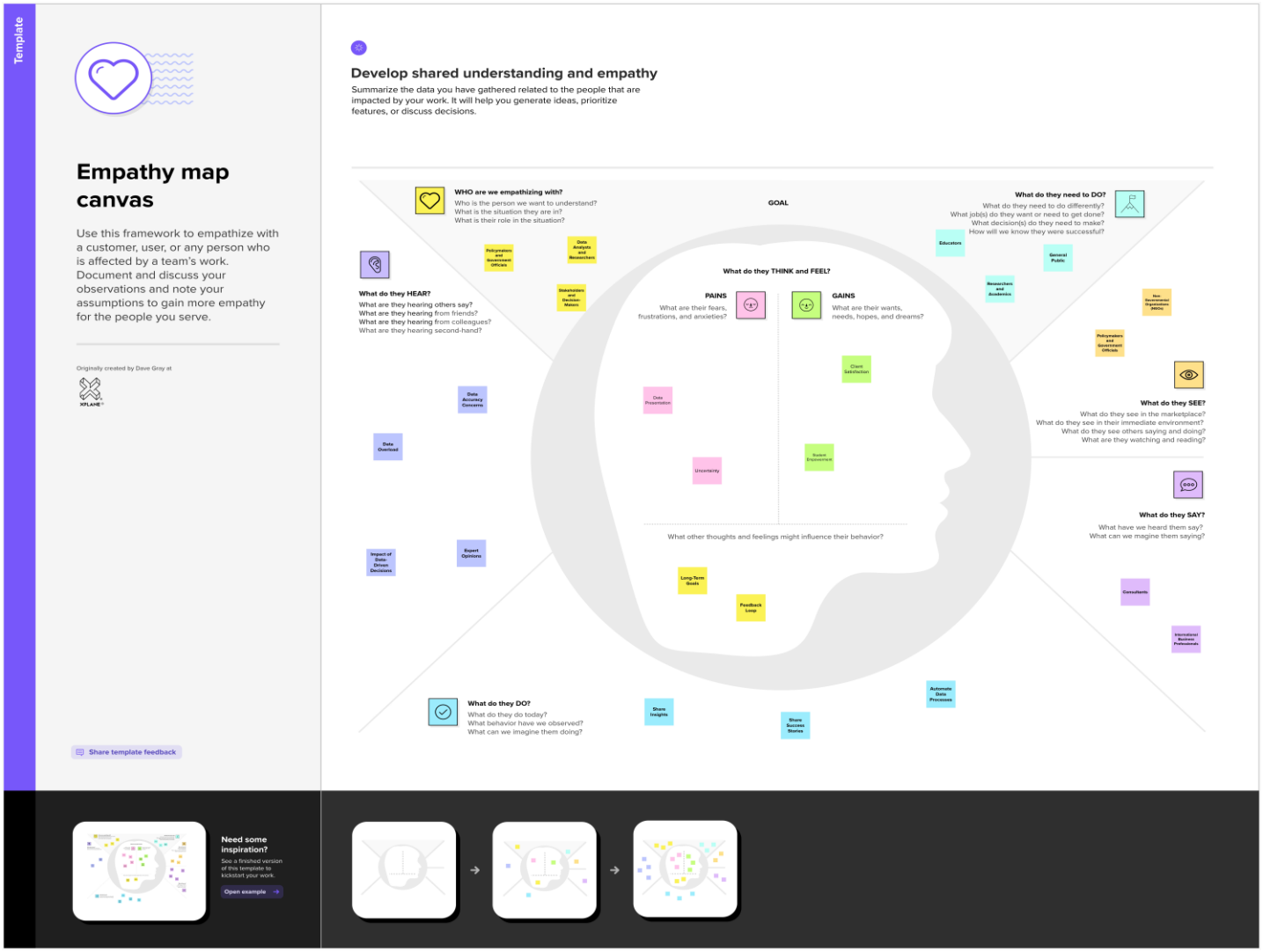
DOI:10.1016/j.sbspro.2016.10.263

PROBLEM STATEMENT:

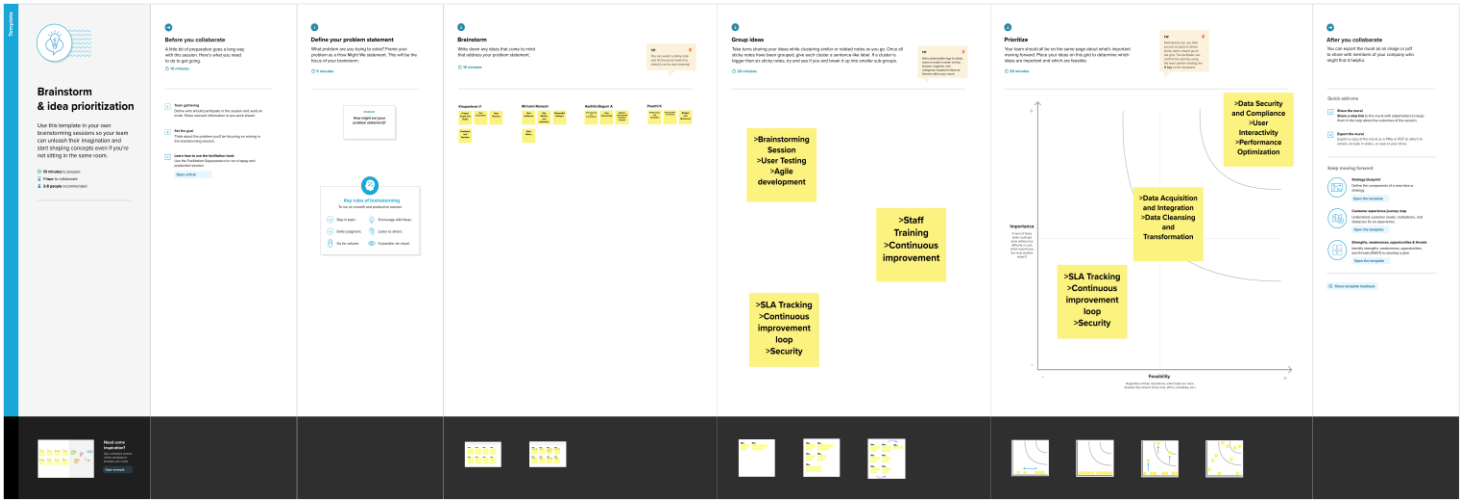
GlobeTrek Insights, a travel and tourism company, is seeking to enhance its data analytics capabilities by leveraging IBM Cognos to navigate and analyze global country data. The company currently faces several challenges related to managing and gaining insights from this data. The problem statement includes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

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.

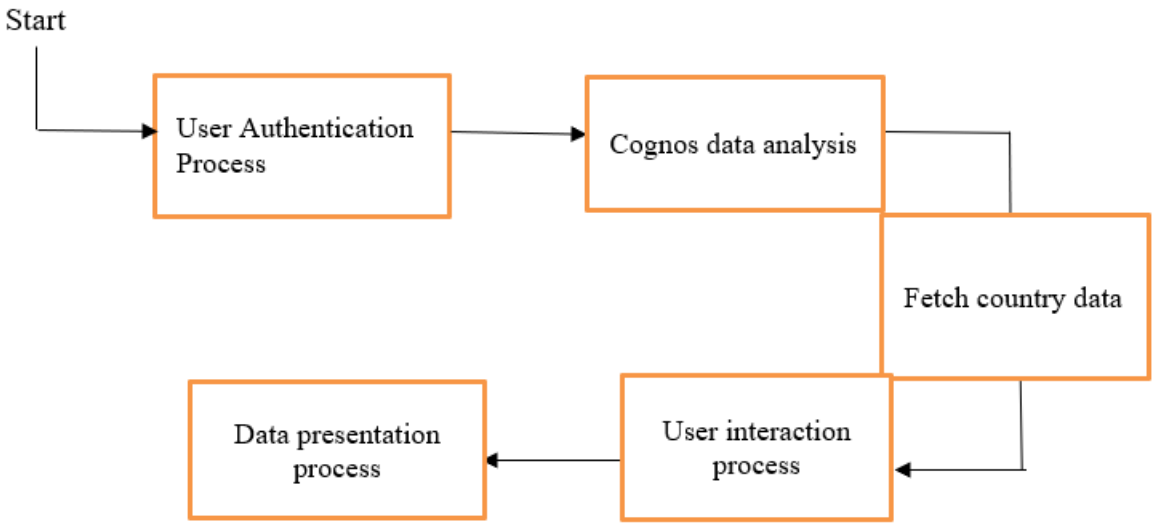
Documentation and Training:

- 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:



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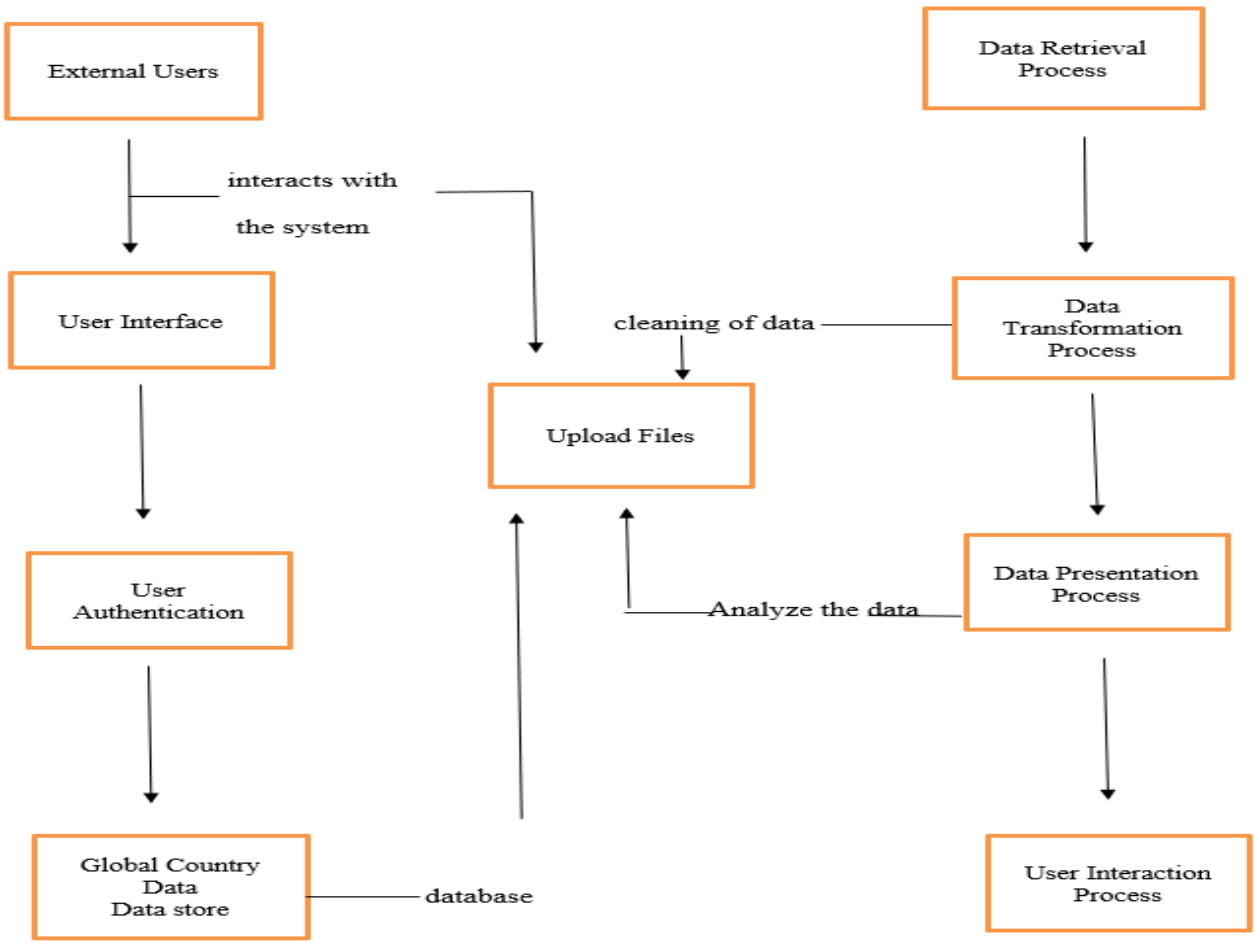
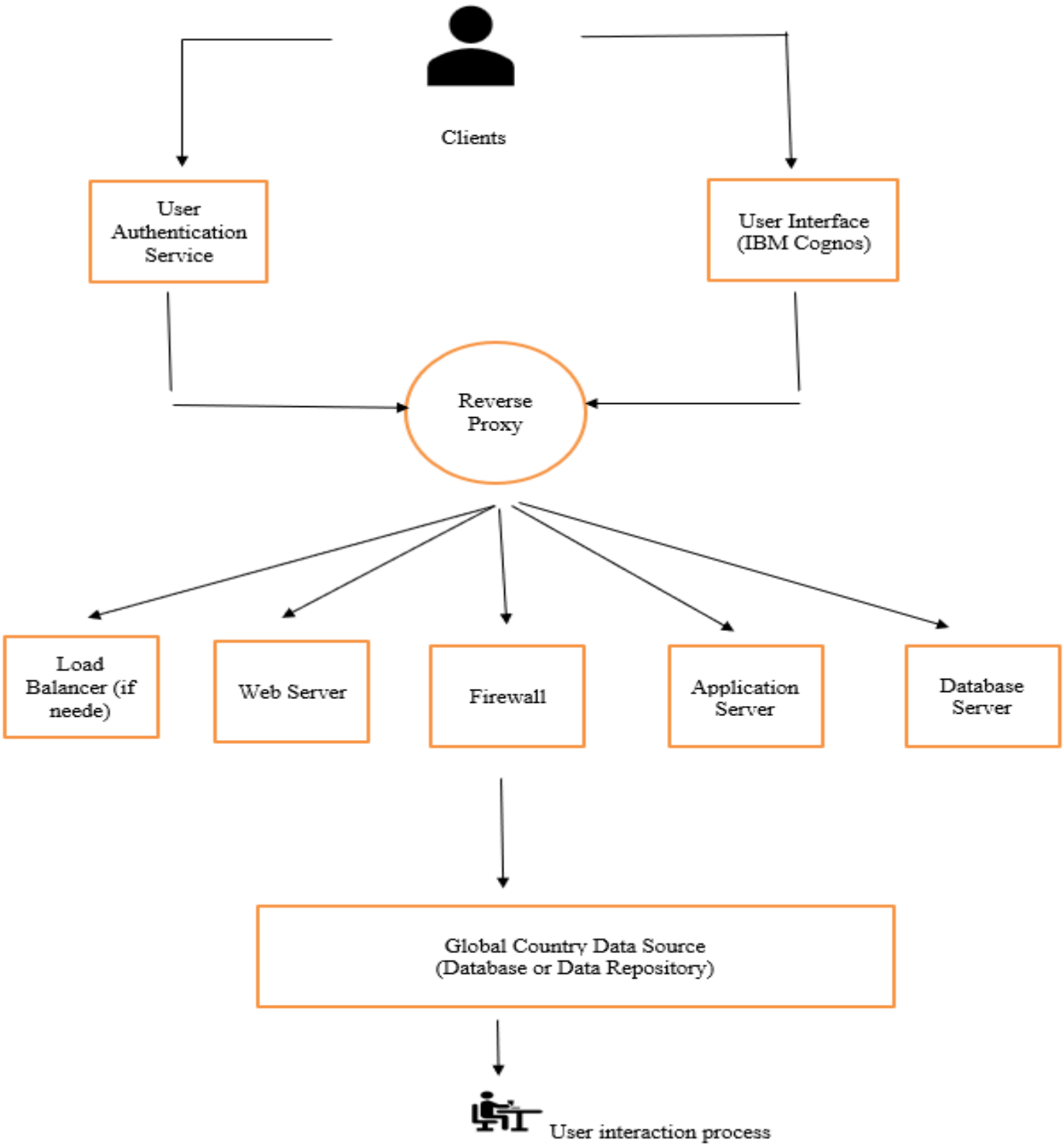


User stories:

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:

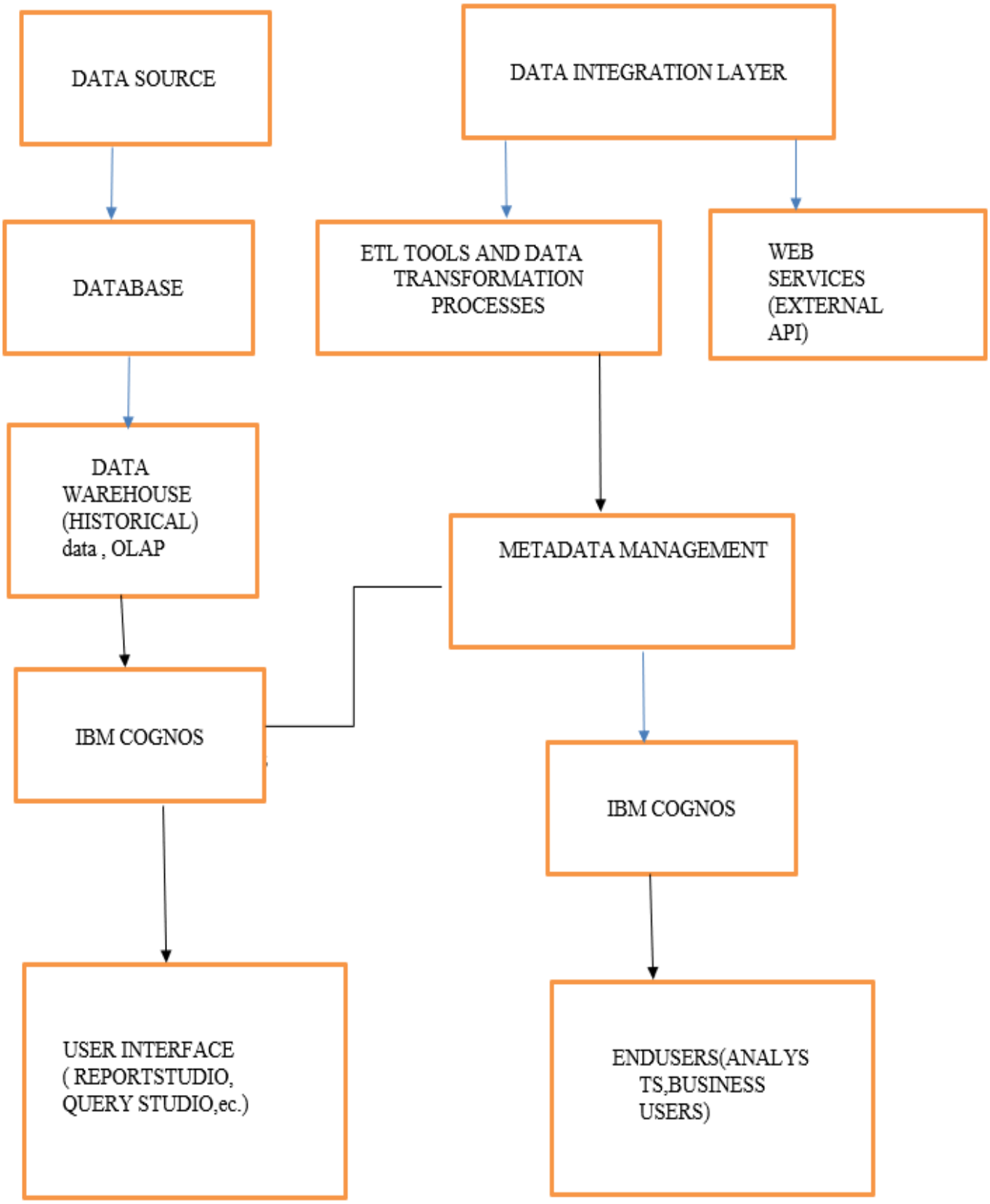


Table-1 : Components & Technologies:

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 Rules Engine
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 (
```

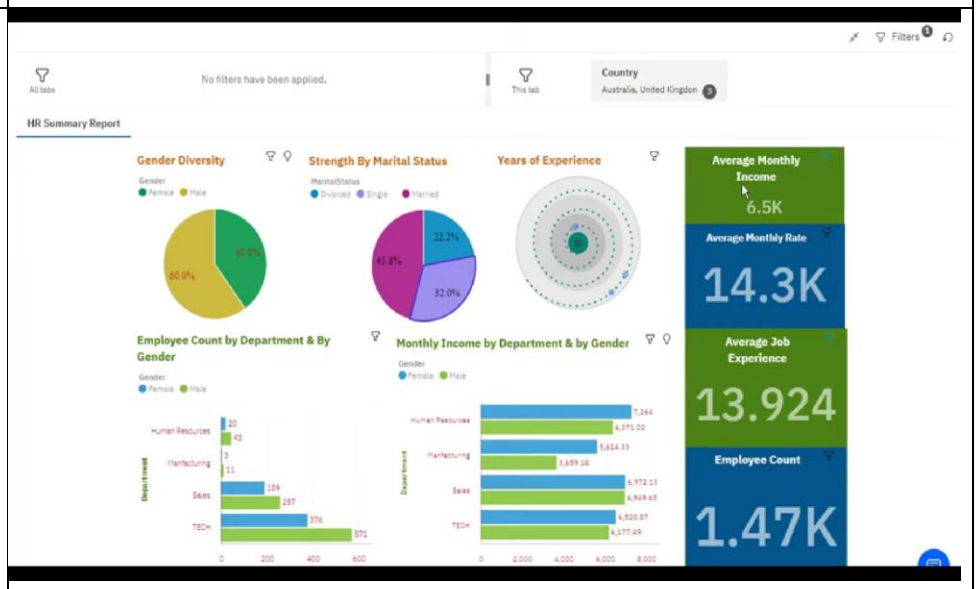
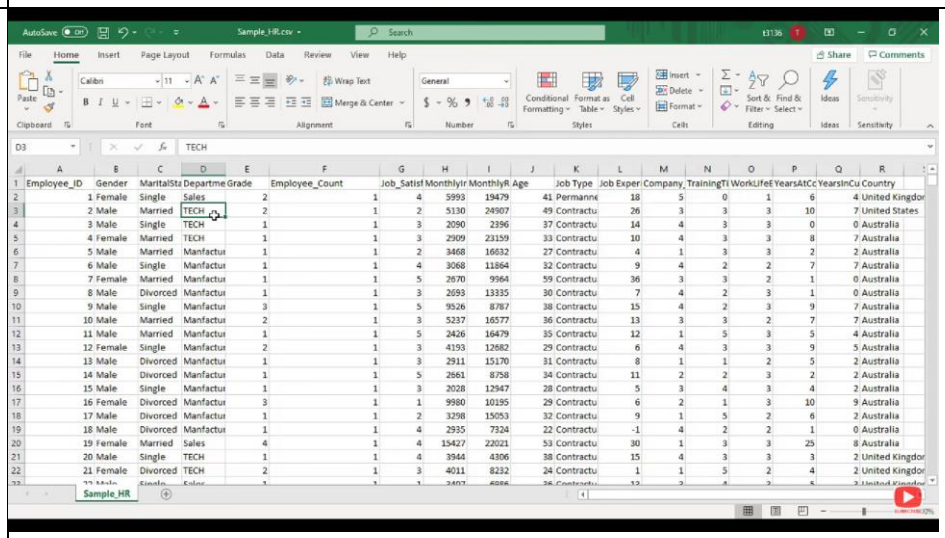
```
    CountryID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(255) NOT NULL,
    Code CHAR(3) NOT NULL,
    Continent VARCHAR(50),
    Population INT,
    Area FLOAT,
    Capital VARCHAR(100),
    Currency VARCHAR(50)
);

-- 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),
```

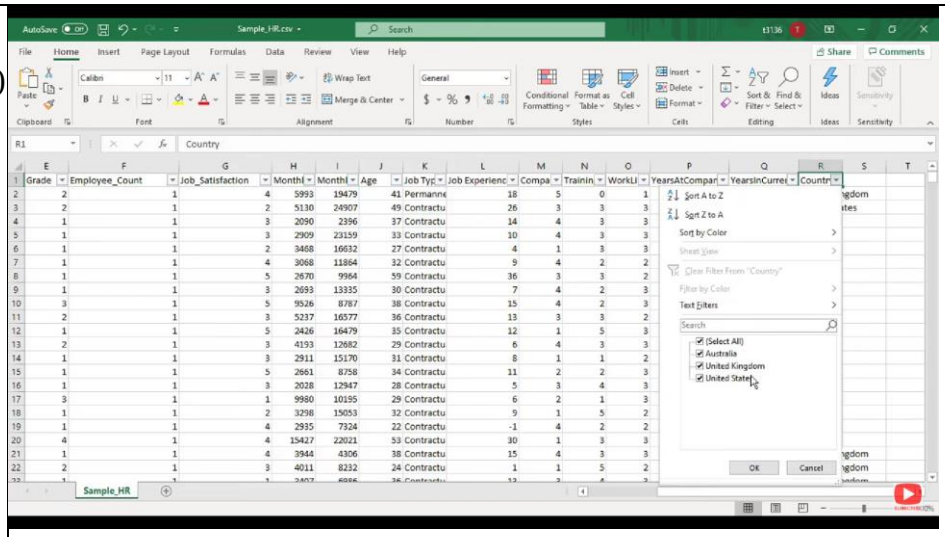
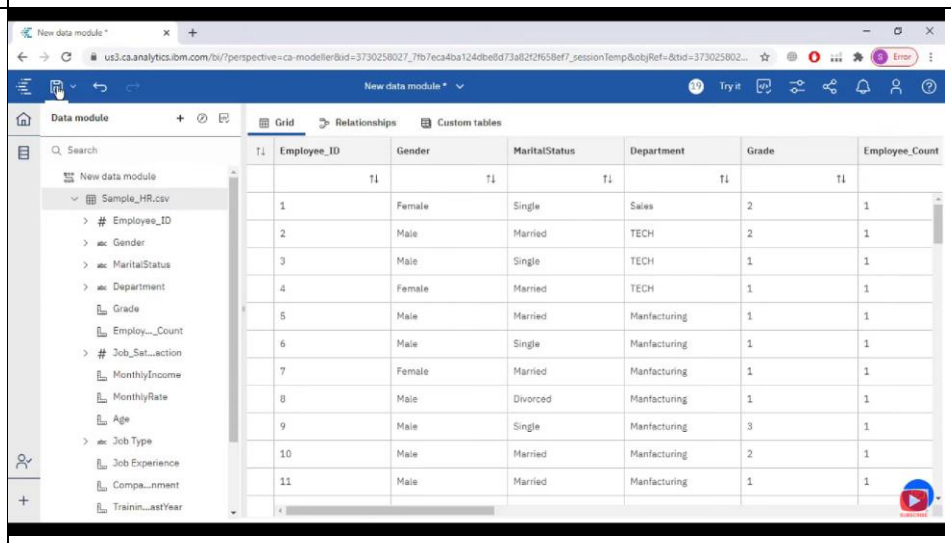
```
    FOREIGN KEY (LanguageID) REFERENCES Languages(LanguageID)
);

-- 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
```

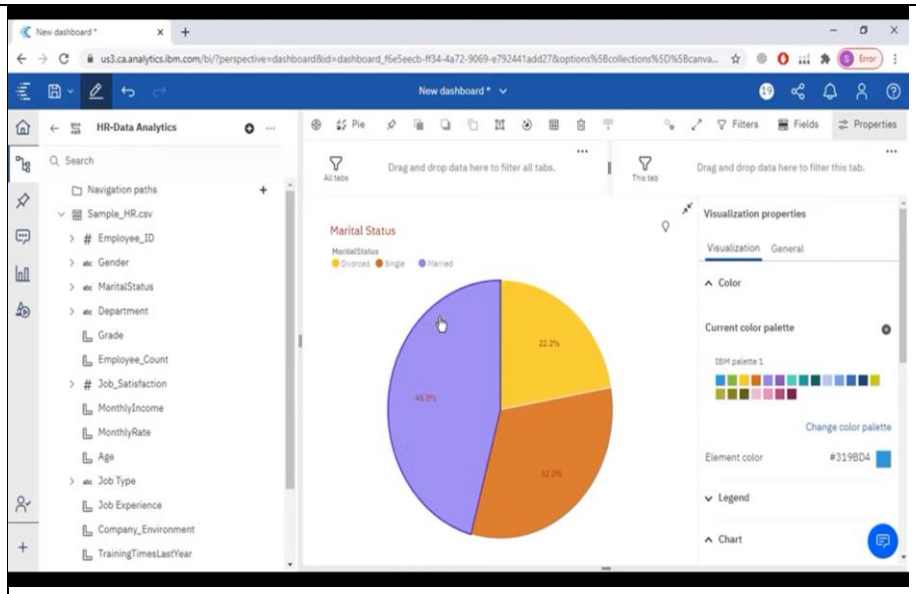
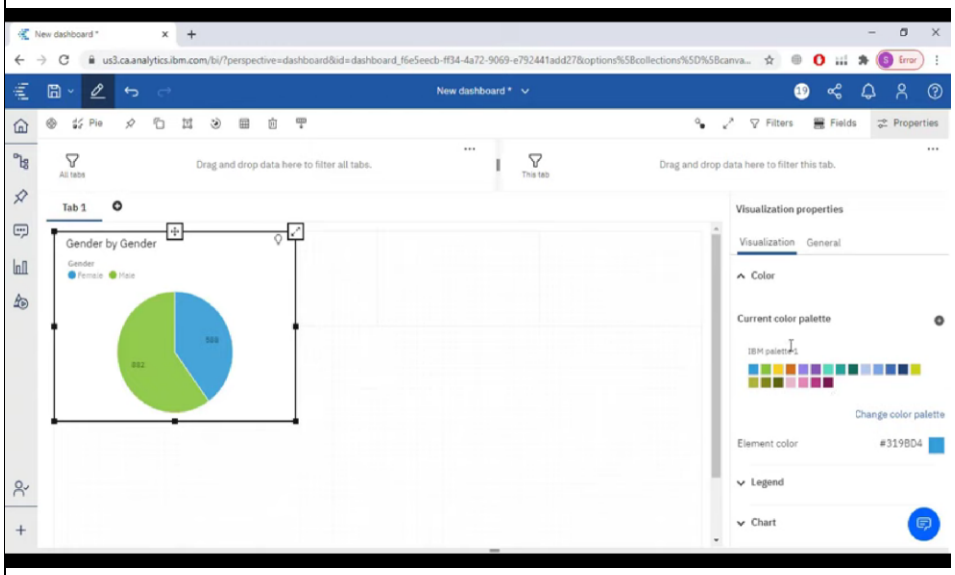
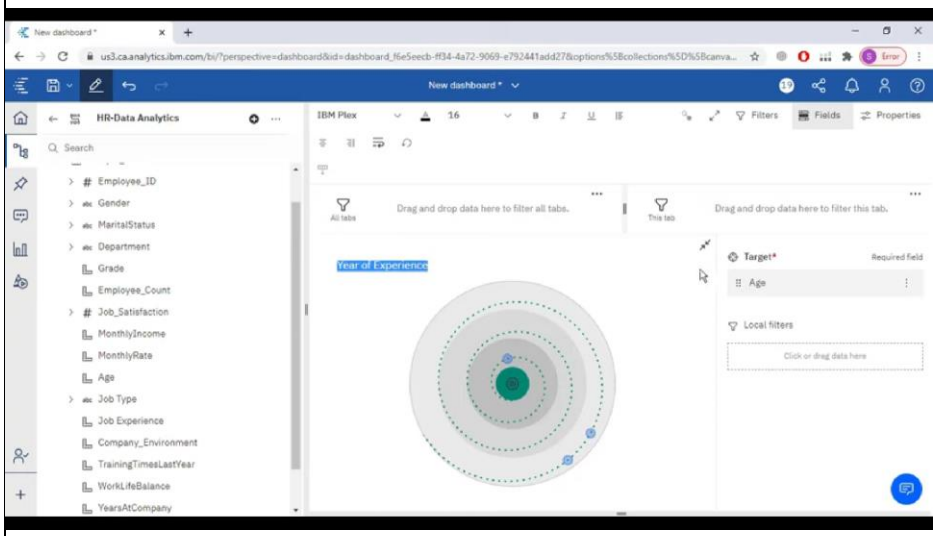
```
CREATE TABLE UserFavorites (
    UserID INT,
    AttractionID INT,
    PRIMARY KEY (UserID, AttractionID),
    FOREIGN KEY (UserID) REFERENCES Users(UserID),
    FOREIGN KEY (AttractionID) REFERENCES TouristAttractions(AttractionID)
);

-- 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)
);
```

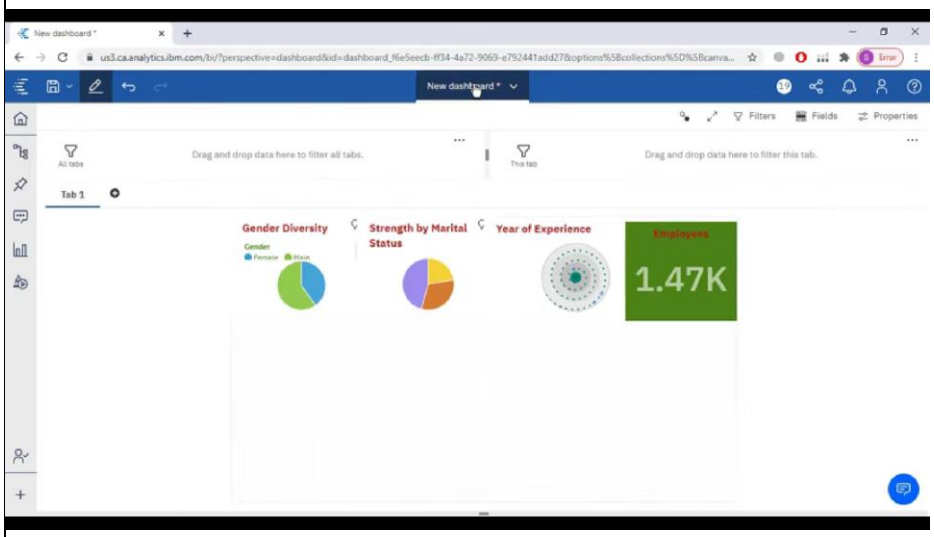
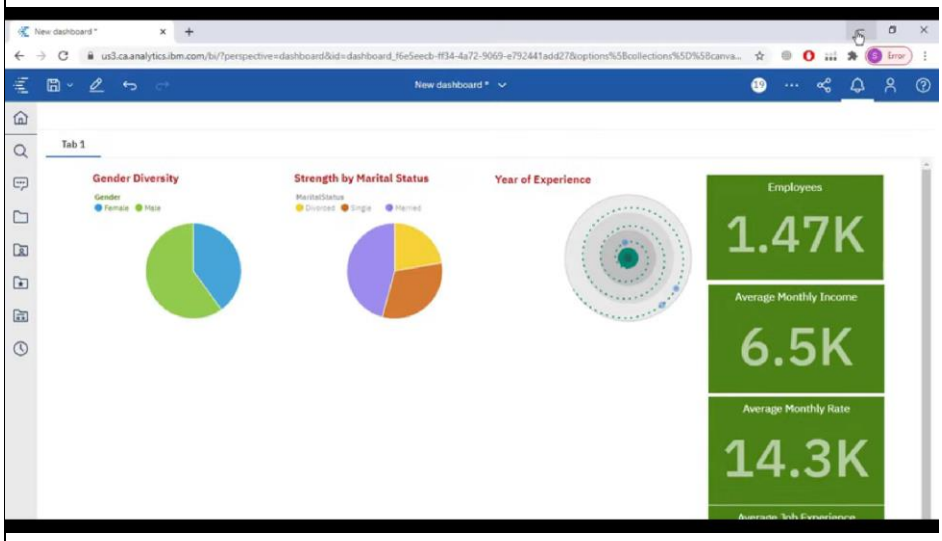
PERFORMANCE TESTING:

PERFORMANCE METRICES:

S.NO.	PARAMETER	SCREENSHOT / VALUES
1.	Dashboard design	
2.	Data Responsiveness	 AROUND 150 RESPONSES

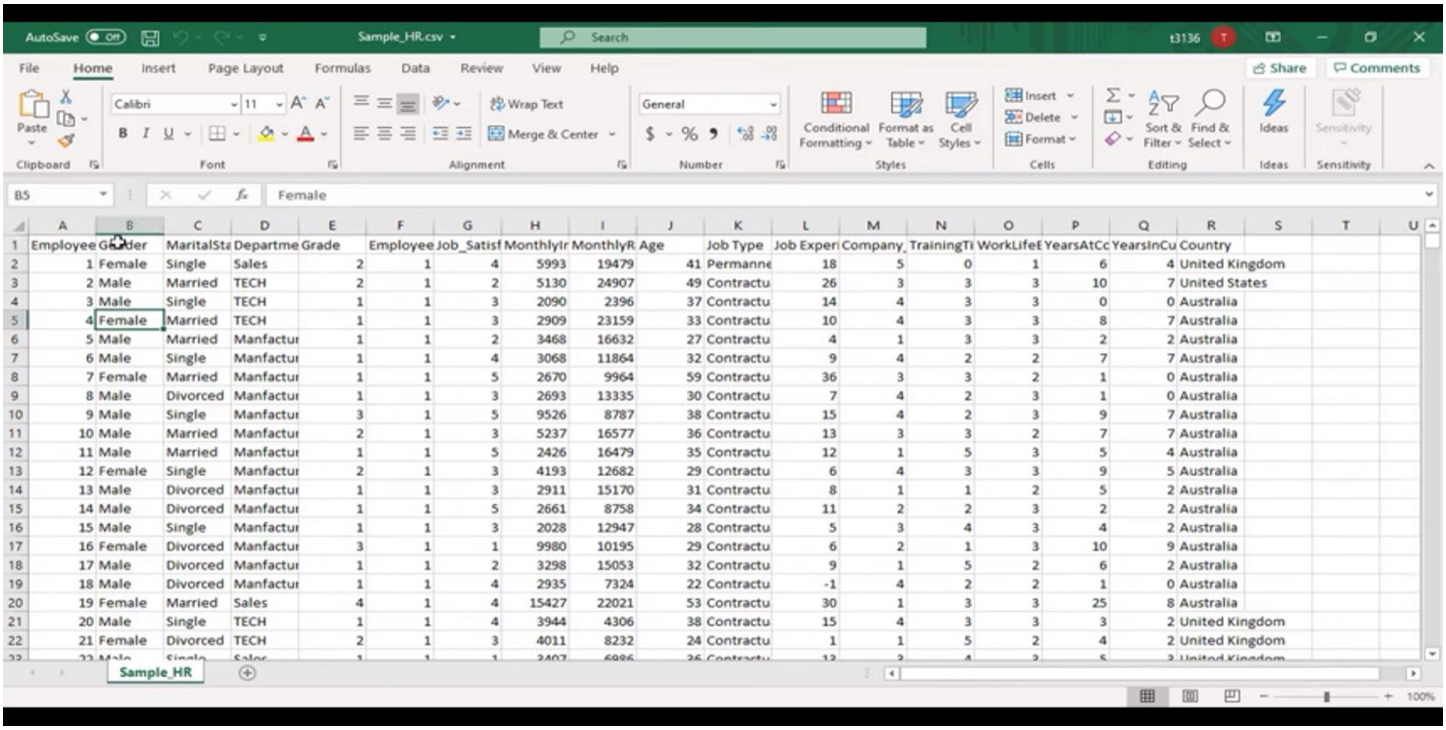
3.	Amount Data to Rendered (DB2 Metrics)	 AROUND 150 RESPONSES
4.	Utilization of Data Filters	 

5.	Effective User Story	  

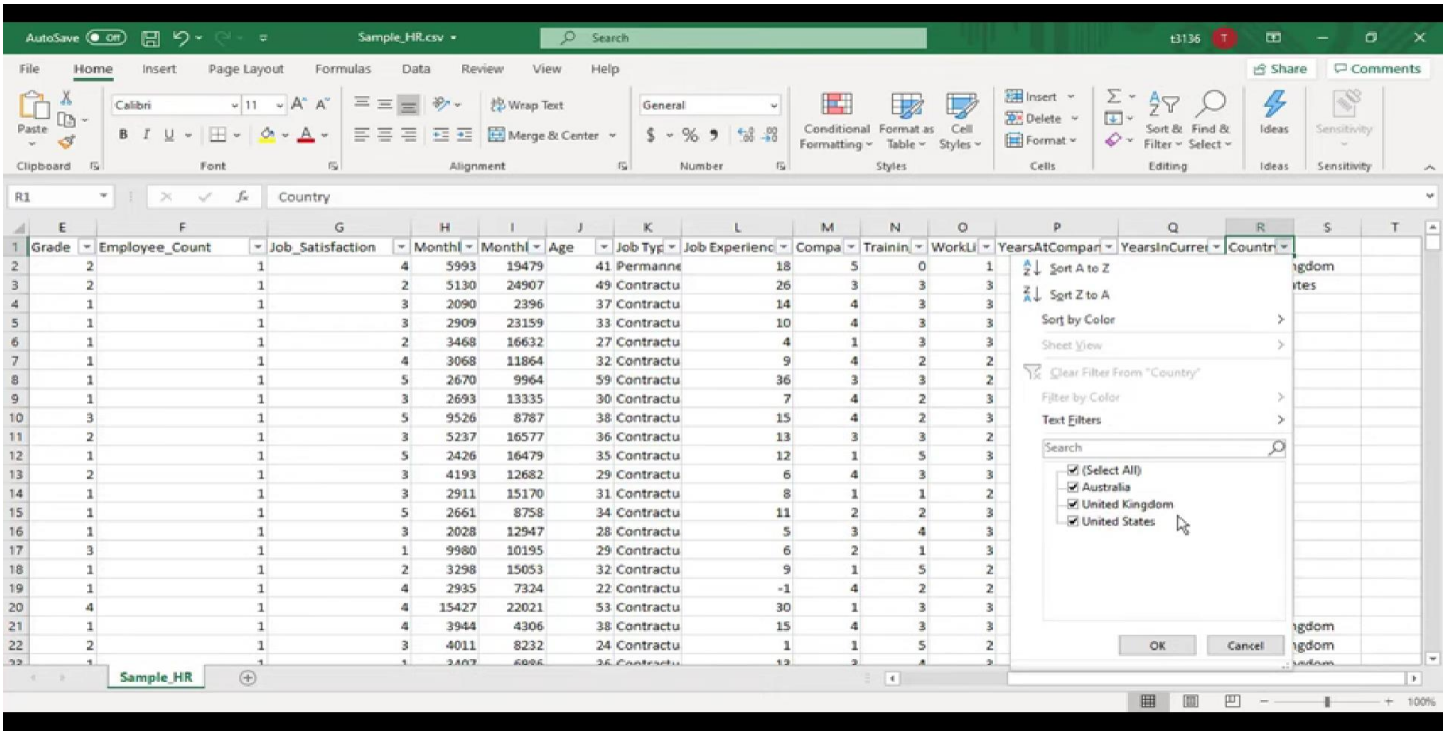
6.	Descriptive Reports	  

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
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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			
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1	1	4	3068	11864	32	Contractu	9	4	2	2			
1	1	5	2670	9964	59	Contractu	36	3	3	2			
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1	1	4	2935	7324	22	Contractu	-1	4	2	2			
4	1	4	15427	22021	53	Contractu	30	1	3	3			
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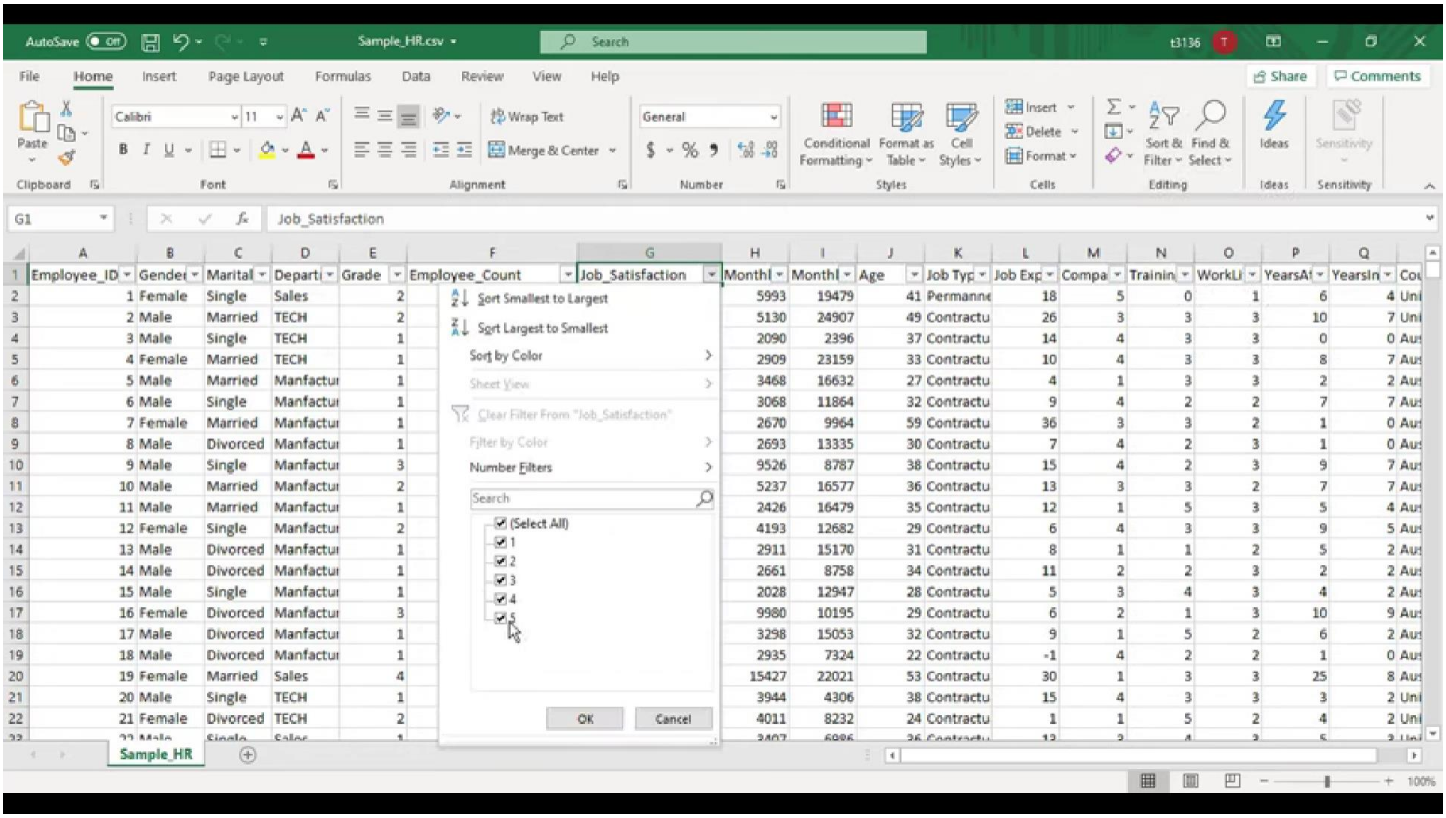
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Cell Styles
Insert
Delete
Format
Sort & Filter
Find & Select
Ideas
Sensitivity
G1
Job_Satisfaction
Sort Smallest to Largest
Sort Largest to Smallest
Sort by Color
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2
3
4
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Cancel
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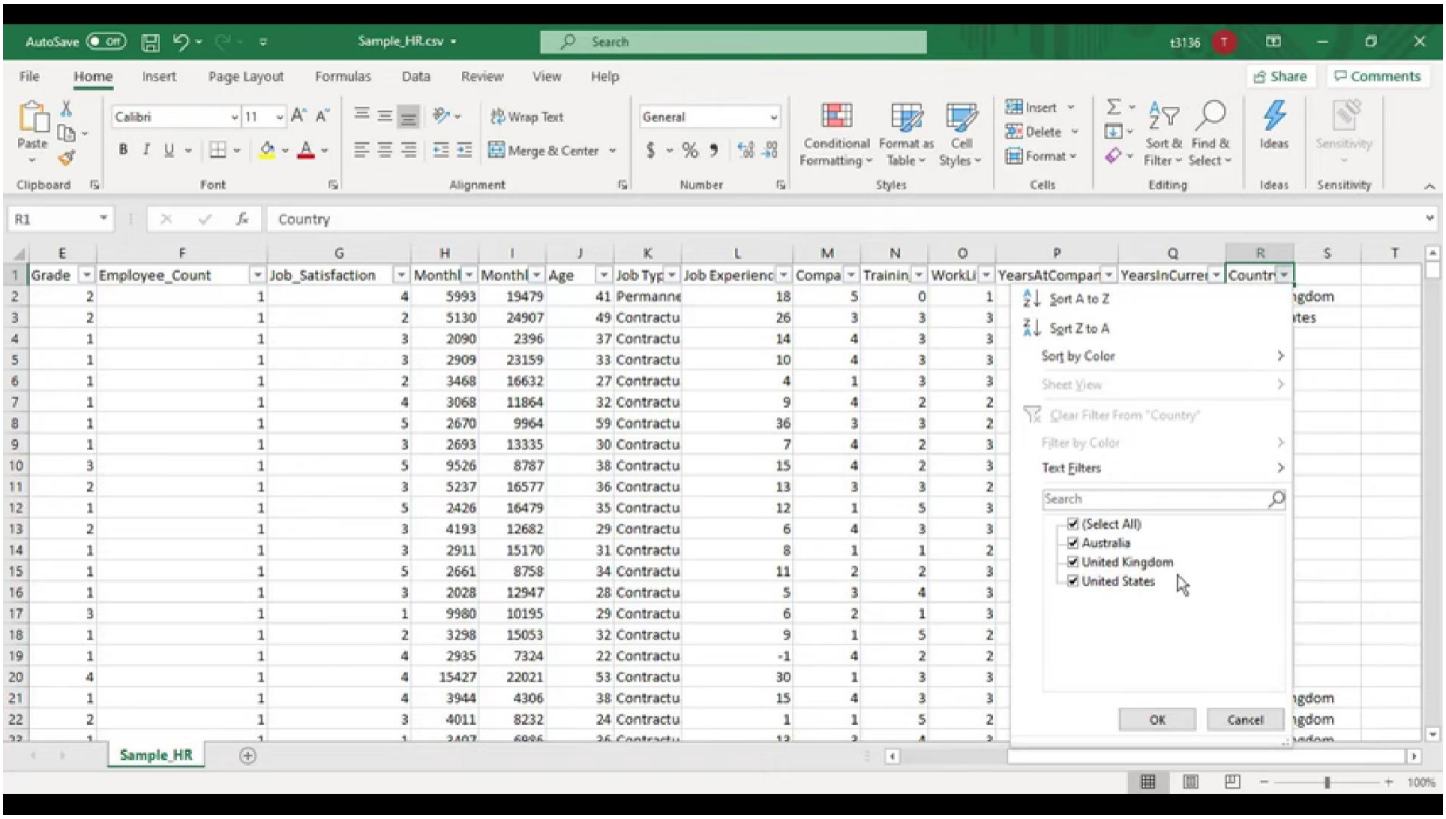
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Sort Z to A
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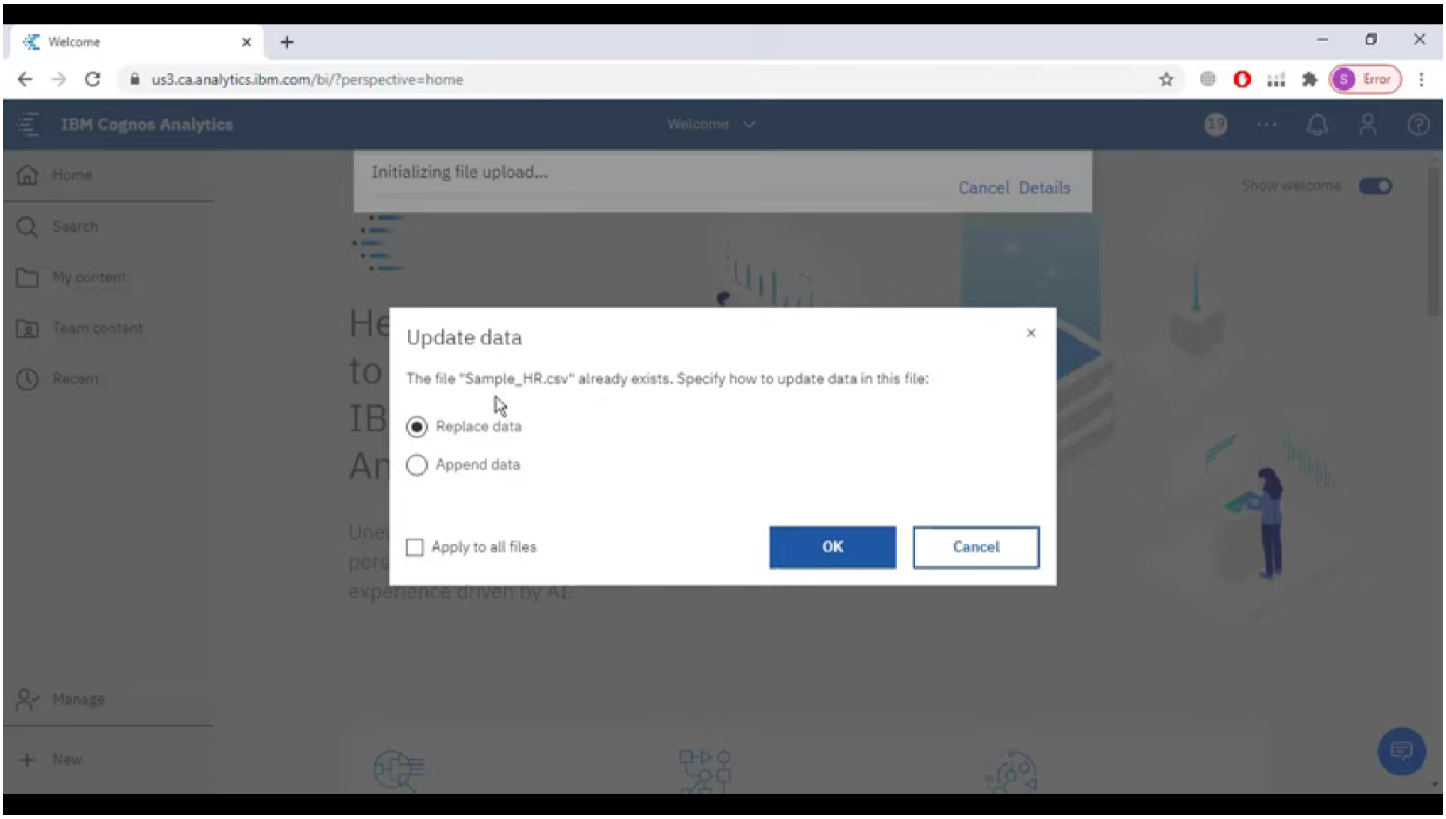
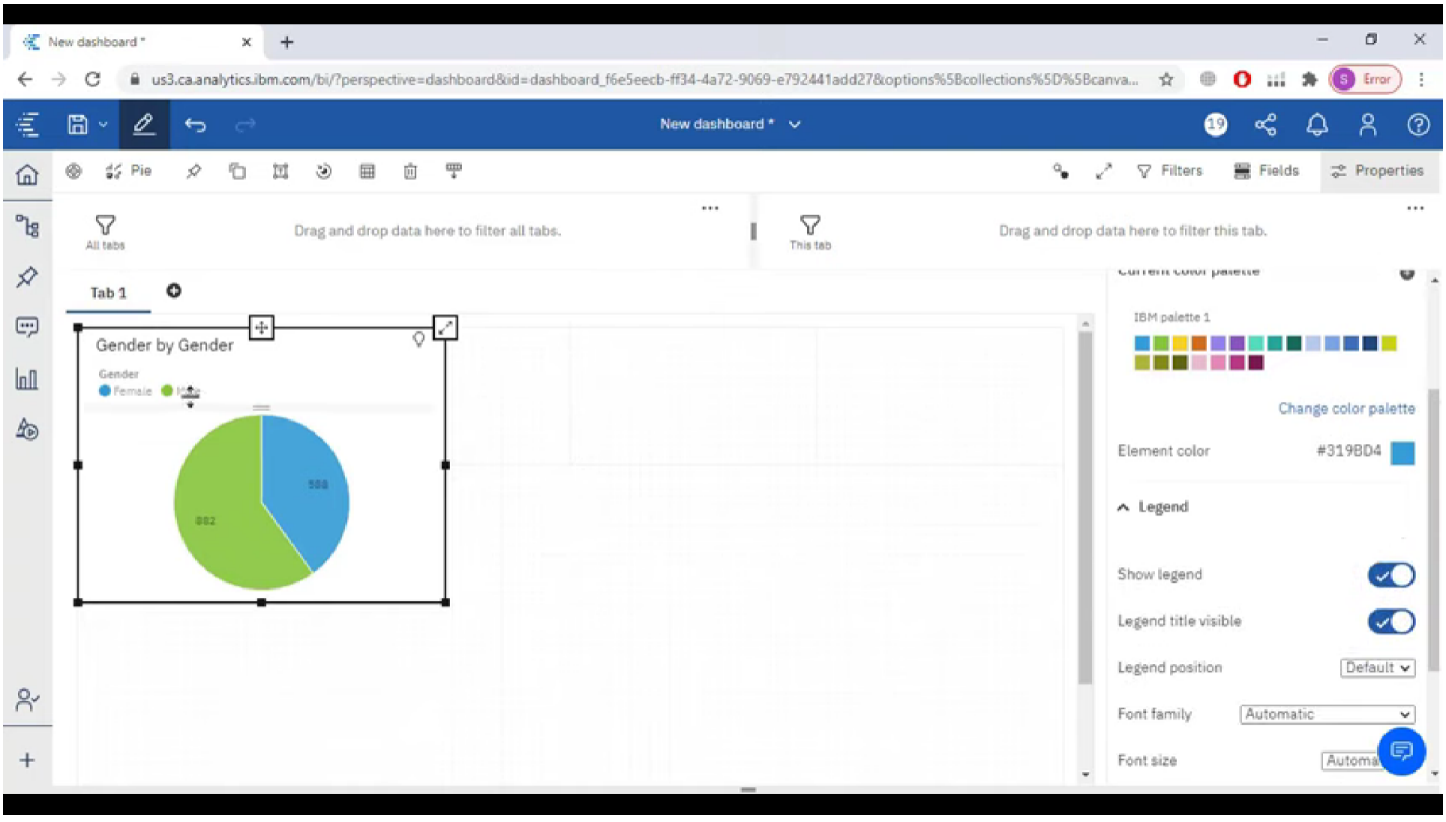
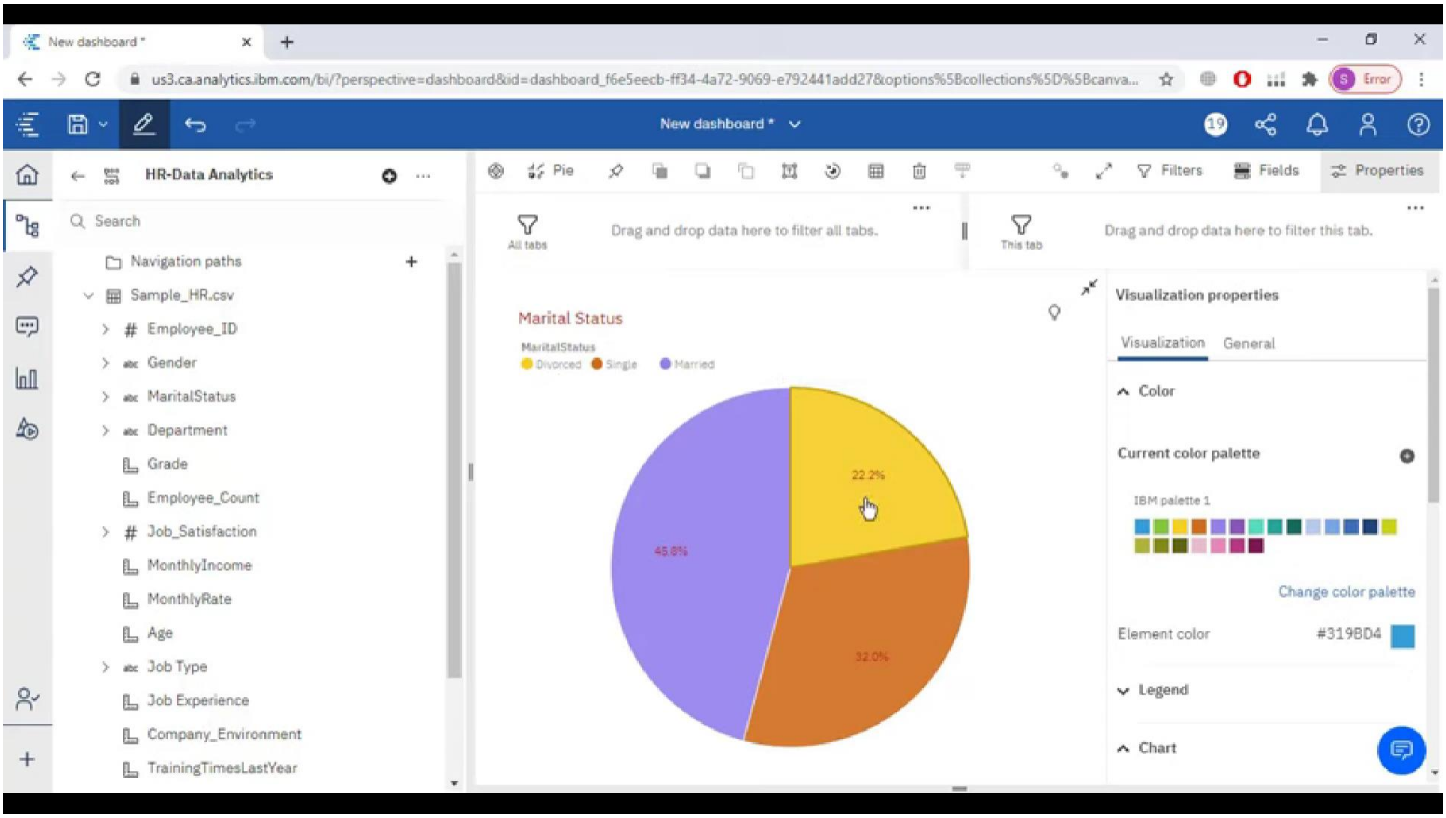


DESIGNING PHASE

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MonthlyRate
Age
Job Type
Job Experience
Company_Environment
TrainingTimesLastYear
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This tab
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Marital Status
MaritalStatus
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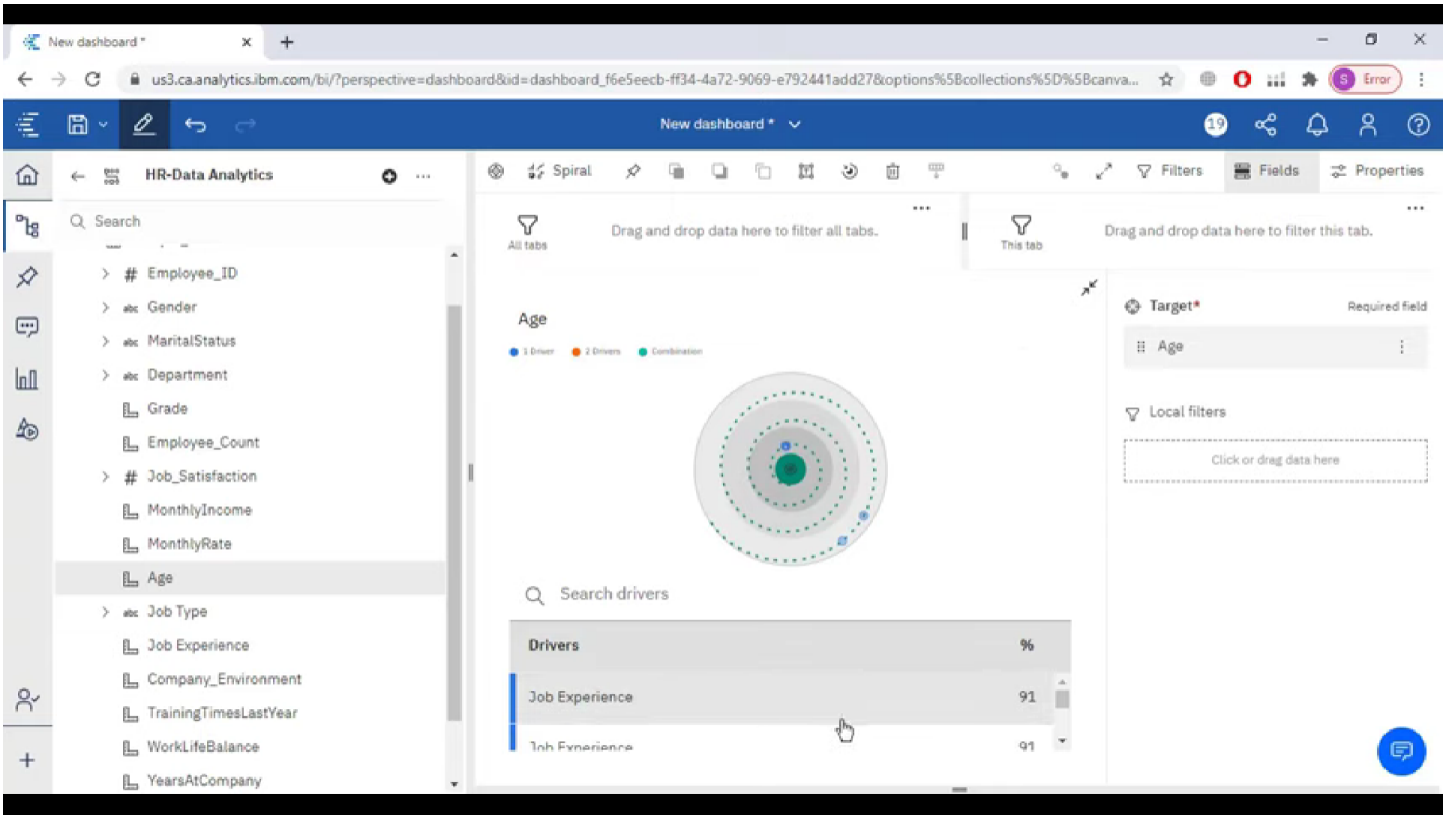
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New dashboard *
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Filters
Fields
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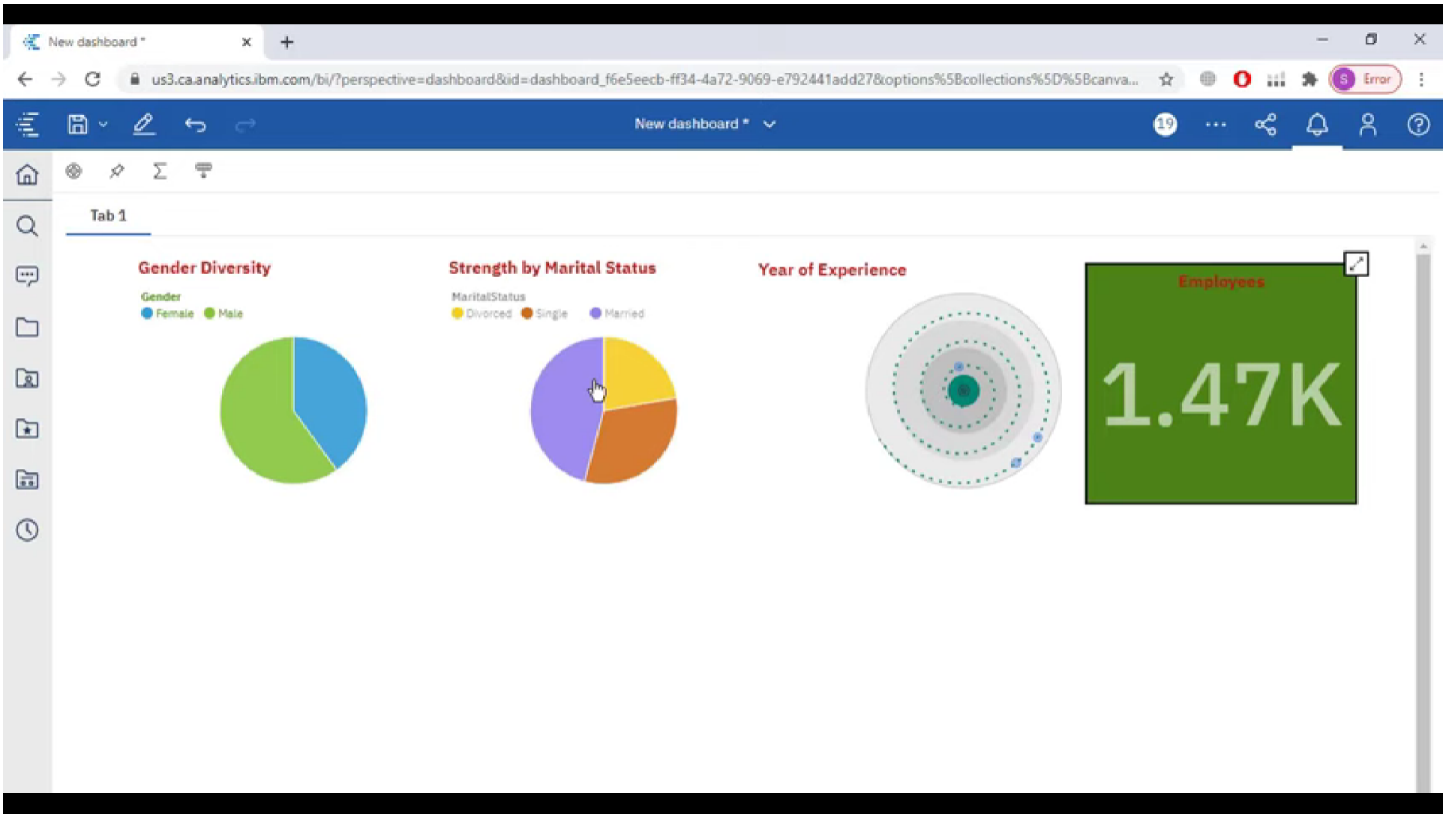
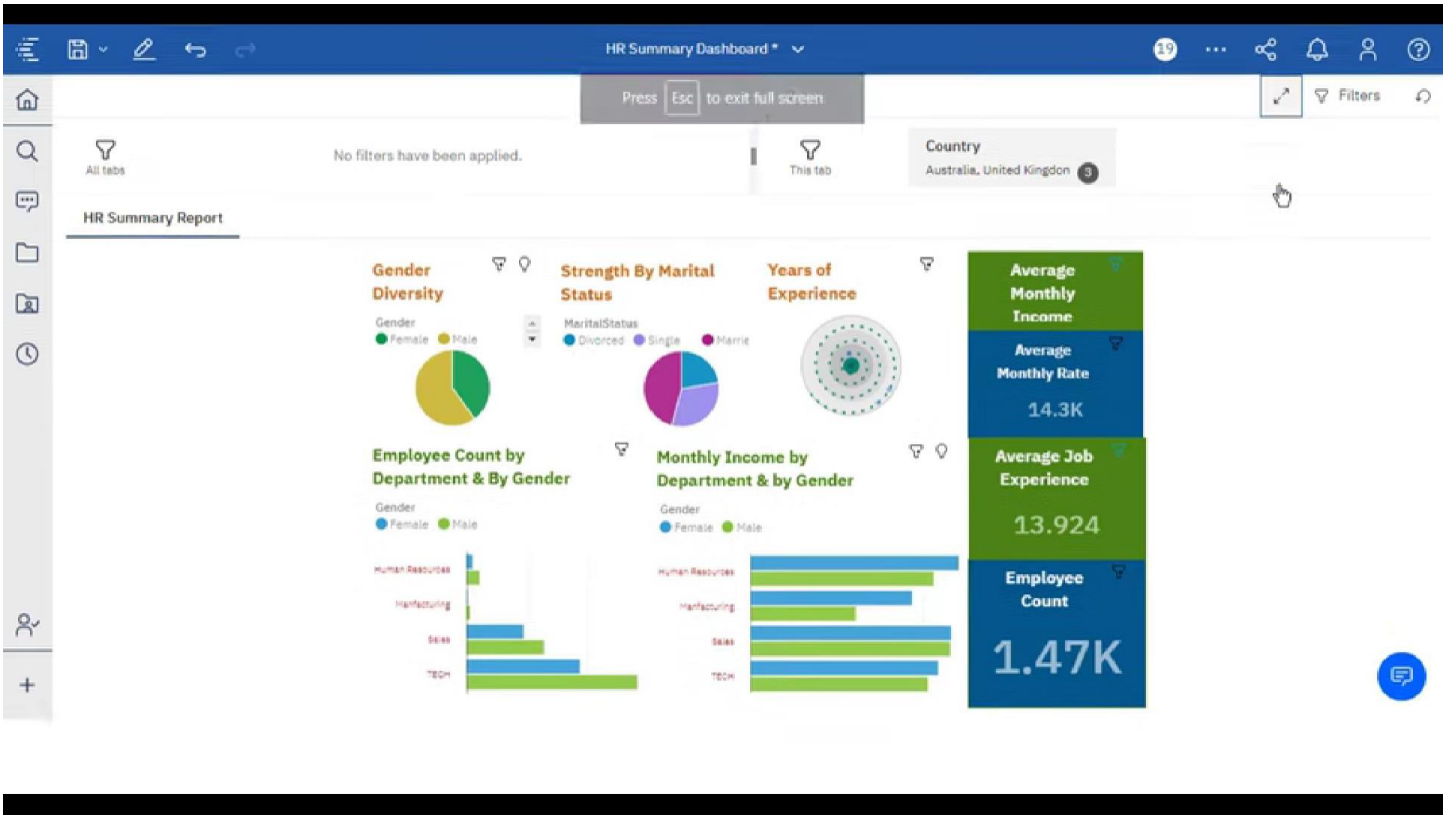


FINAL OUTPUT:



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