TechSaksham

CaseStudyReport

DataAnalyticswithPowerBI

“360-DEGREEBUSINESSANALYSISOF ONLINE DELIVERY APPS”

“SAKTHIKAILASH WOMEN'S COLLEGE -DHARMAPURI”

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ABSTRACT

In the digital world, Online food ordering system is mainly designed primarily function for use in the food delivery industry. This systemwillallowhotelsandrestaurantstoincreaseonlinefoodordering such type of business. The customers can be selected food menu items just few minutes. In the modern food industries allows to quickly and easilydelivery on customer place. Restaurant employees then usethese orders through an easy to delivery on customer place easy find out navigate graphical interface for efficient processing.

INDEX

Sr.No.	TableofContents	Page No.
1	Chapter1:Introduction	4
2	Chapter2:ServicesandToolsRequired	6
3	Chapter3:ProjectArchitecture	7
4	Chapter4:ModelingandResult	9
5	Conclusion	15
6	FutureScope	16
7	References	17
8	Links	18

CHAPTER 1

INTRODUCTION

1.1 ProblemStatement:

Different food delivery applications often provide different offers or discounts. Users are also not satisfied with their delivery time and random cancellations.

Thecurrentfooddeliveryapplicationsprovidedifferentdiscountsonthesameitem butindifferentplatform.Itisalsoseenthatdeliverytimeofanitemis notsamein all the applications. Adding all the discounts and estimated delivery time of different food joints under a single interface will be economical and less time consuming.

1.2 ProposedSolution:

The proposed solution is to develop a Power-BI dashboard that can analyze and visualize BusinessAnalysis of food deliveryApp. It's time to create solutions for theproblem.To understandtheirsituation,Ihavetostepintotheir shoes.Hereare the ideas that I have thought of Bringing discounts and offers of different applicationsunderasingleinterface.Comparingthedeliverytimeofdifferentaps together.Userswillgetanideaofthetimingsandtheycanchooseaccordingly.No cancellation guarantee should be provided before placing an order maybe in form ofaniconwhichcanbe accessedbythe restaurant managerandconnected totheir website.

1.3 Feature:

- **Real-Time Order Tracking**: The dashboard will provide real-time order tracking of Hungry customers want their meals delivered fast.
- **Customer Segmentation**: It will segment customers based on perceptions about service quality, bargain hunter, impatient, interested in new innovations, etc.
- **TrendAnalysis**:Thedashboardwillidentifyanddisplaytrendsincustome r behavior.
- **Predictive Analysis**: It will use historical data to predict future customer behavior.

1.4 Advantages:

- **Timesaving**: Tosaveconsumers' timebyremovingtheneedtogoto restaurants in person or stand in queue for takeaway orders.
- **PromotionsandDiscounts**: Toprovideexclusiveoffers,discounts,and loyalty awards to draw in new clients and keep existing ones coming back.
- **RevenueGeneration**:Bringmoneythroughdeliveryfees,commissions from affiliated eateries, and prospective advertising opportunities.

1.5 Scope

Food delivery apps are third-party services that connect restaurants with customers, convenience stores, and more. Insucha technologicalera, people find it difficult to visit restaurants. Most often, they are unable to manage time for picking up their order. Therefore, most of them like to use the food delivery app. They allow customers to order food from restaurants, compare prices, and see estimated delivery times. Food delivery apps also help restaurants improve customersatisfactionbyreducingwaittimes and helpingemployees connect with customers.

CHAPTER2SERVICES

AND TOOLS REQUIRED

2.1 ServicesUsed:

Therearenumerousbenefitsofonlinefooddeliveryservice,suchas

- Audiencescanmakeordersfromanywhereelse.
- Theonlinedeliveryservicesavestimefromthecustomerside.
- Restaurantscancollectbettercustomerdata.
- Most restaurants offer online **food delivery 24 hours**. That's why customers can make **late night food delivery orders**.

2.2ToolsandSoftwareusedTools:

- **Power BI**: The main tool for this project is Power BI, which will be used to create interactive dashboards for real-time data visualization.
- **Power Query**: This is a data connection technology that enables you to discover, connect, combine, and refine data across a wide variety of sources.

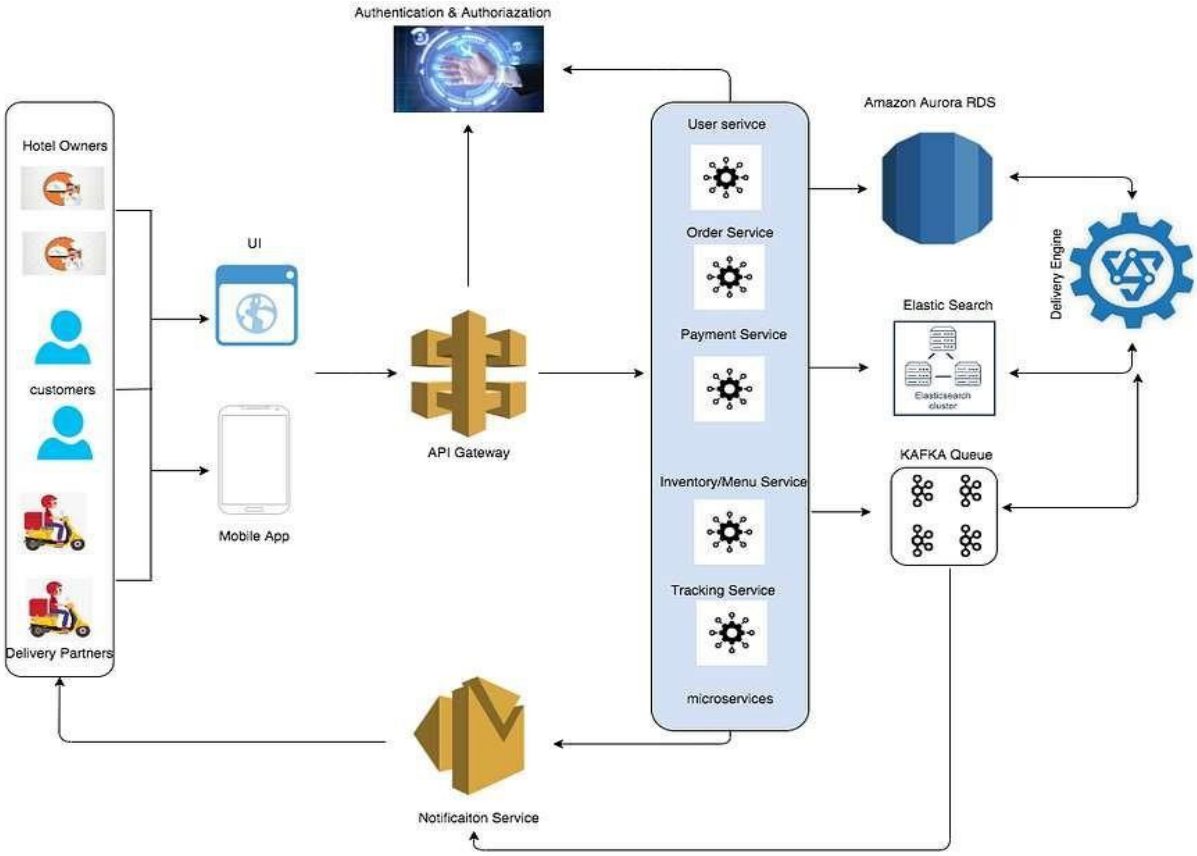
SoftwareRequirements:

- **PowerBIDesktop**:ThisisaWindowsapplicationthatyoucanuse to create reports and publish them to Power BI.
- **Power BI Service**:This is an onlineSaaS (Software as a Service) servicethatyouusetopublishreports,createnewdashboards,and share insights.
- **PowerBIMobile**:Thisisamobileapplicationthatyou canuseto access your reports and dashboards on the go.

CHAPTER3

PROJECTARCHITECTURE

3.1 Architecture



Here’sahigh-levelarchitecturefor theproject:

1. **DataStorage**:Fooddeliveryappsusedatabasestostoredataab out users, restaurants, orders, and more.
2. **DataProcessing**:Fooddeliveryappscanusedatatohelpimprov e customer satisfaction, build brand image, and increase sales.
3. **Machine Learning**: Food delivery apps use machine learning to improve their algorithms, which can help users get a more personalized experience. For example, Zomato uses machine learning to automate menu digitization, create personalized restaurant listings, and predict food preparation times.
4. **Data Visualization**: The processed data and the results from the predictive models are visualized in real-time using Power BI. Power BI allows you to create interactive dashboards that can provide valuable insights into the data.
5. **DataAccess**:ThedashboardscreatedinPowerBIcanbeaccess ed through Power BIDesktop,Power BIService(online), andPower BI Mobile.

This architecture provides a comprehensive solution for real-time analysis of food delivery apps. However, it's important to

note that the specific architecture may vary depending on the food delivery connection,specificrequirements,andbudget.It’salsoimportantto

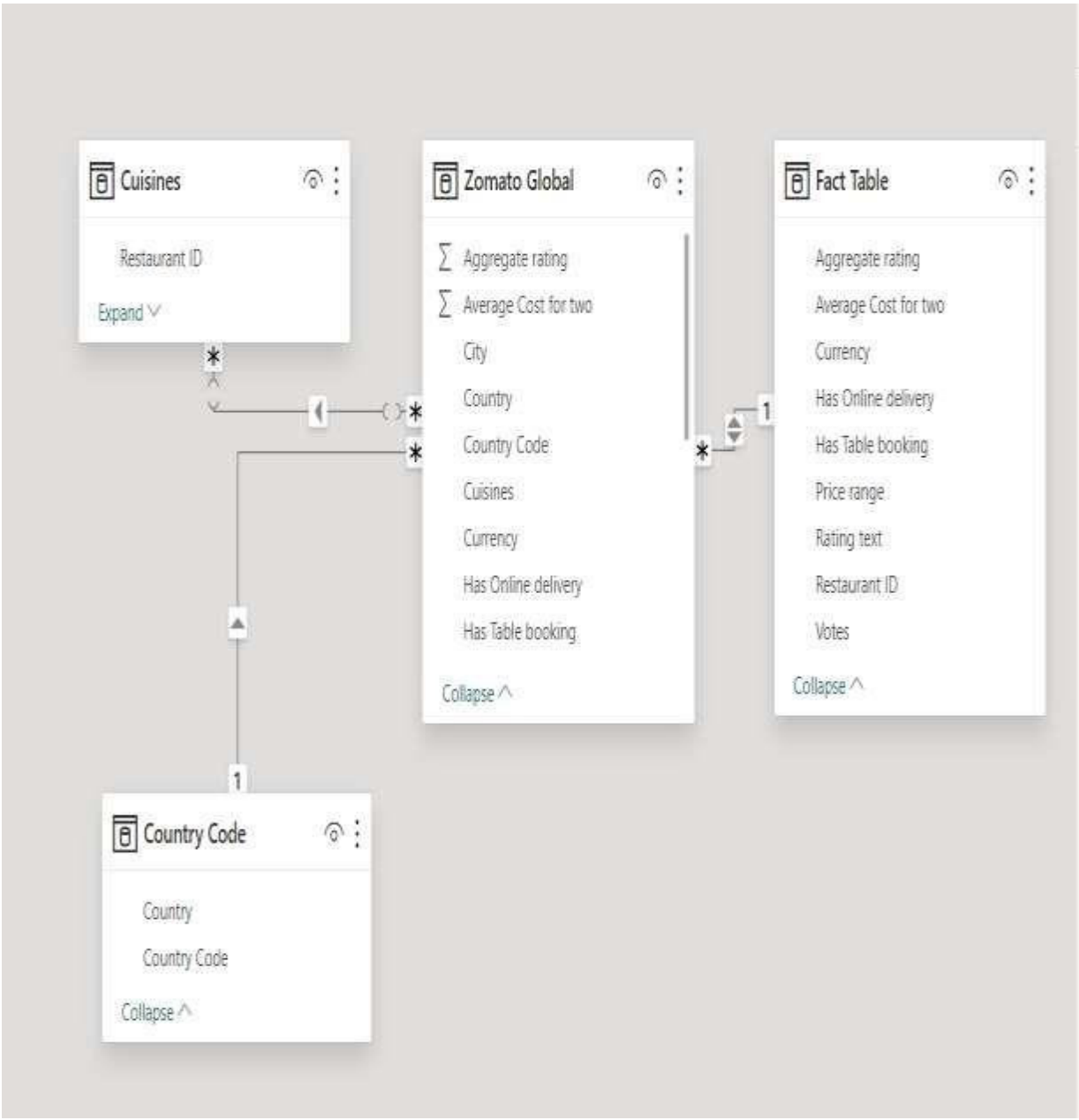
ensurethat all tools and services comply with relevant dataprivacyand security regulations.

CHAPTER 4

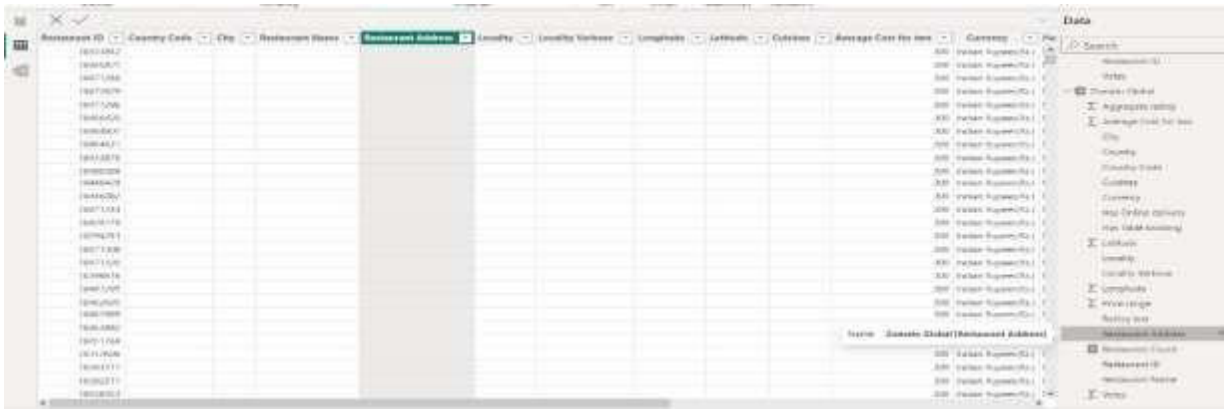
MODELINGANDRESULT

Managerelationship

The“cuisines”filewillbeusedasthemainconnectorasitcontainsmostkeyidentifier (Restaurant ID, Fact table and Zomato global) which can be uses to relates the 4 data files together. The “country code” file is use to link the client profile geographically with “Zomato global”


Cuisines
Restaurant ID
Expand
Zomato Global
Aggregate rating
Average Cost for two
City
Country
Country Code
Cuisines
Currency
Has Online delivery
Has Table booking
Collapse
Fact Table
Aggregate rating
Average Cost for two
Currency
Has Online delivery
Has Table booking
Price range
Rating text
Restaurant ID
Votes
Collapse
Country Code
Country
Country Code
Collapse
1
*

Country Code	Country
94	Indonesia
191	Sri Lanka
214	UAE
1	India
30	Brazil
14	Australia
208	Turkey
189	South Africa
216	United States
215	United Kingdom
162	Phillipines
166	Qatar
37	Canada
148	New Zealand
184	Singapore



Report view

```
Continent = SWITCH('Country Code'[Country Code],189,"Africa",215,"Europe",37,"NAM",216,"SAM",14,"Oceania",148,"Oceania","Asia")
```

Country Code	Country	Continent
94	Indonesia	Asia
191	Sri Lanka	Asia
214	UAE	Asia
1	India	Asia
30	Brazil	Asia
14	Australia	Oceania
208	Turkey	Asia
189	South Africa	Africa
216	United States	SAM
215	United Kingdom	Europe
162	Phillipines	Asia
166	Qatar	Asia
37	Canada	NAM
148	New Zealand	Oceania
184	Singapore	Asia

ModellingforGenderandAgedata

Notice that the Gender and age of the client are missing from the data. These can be formulated from the birth number YYMMDD where at months (the 3rd and 4th digits) greater than 50 means that client is a Female. We can create a column for Gender.

Forbirthday,weneedtoreducethebirthmonthofthefemaleby50andthenchange the date format to DD/MM/YYYY adding 1900 to the year.

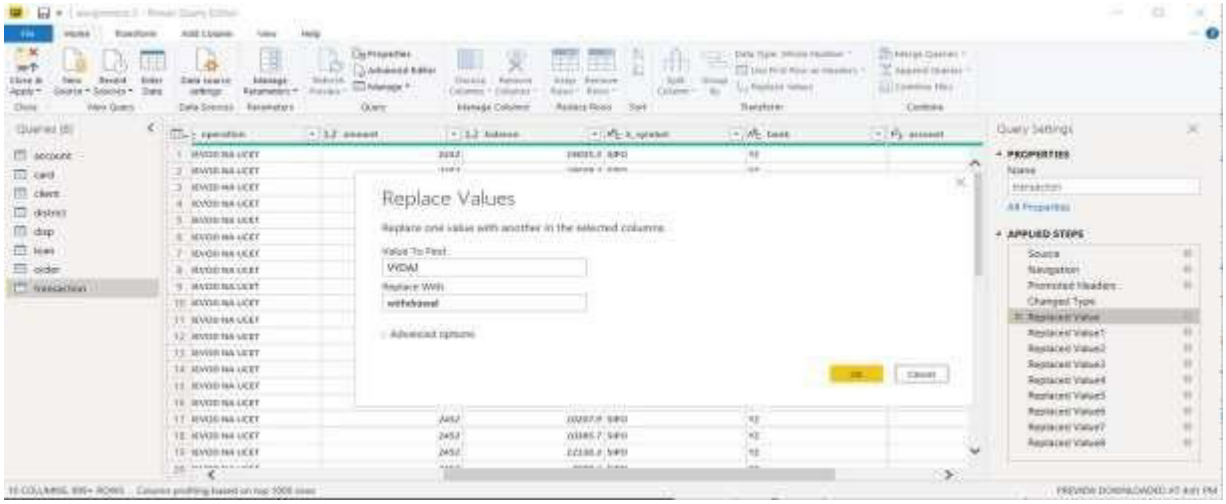
ForAge, we shall assume it is year 1999 as explain previously and use it to minus from the birth year.

```
1  age = 1999 -RIGHT(client[Birthday],4)
```

client_id	birth_number	district_id	Gender	Birthday	age	age (groups)
2	450204	1	M	04/02/1945	54	36 -54 Baby Boomers

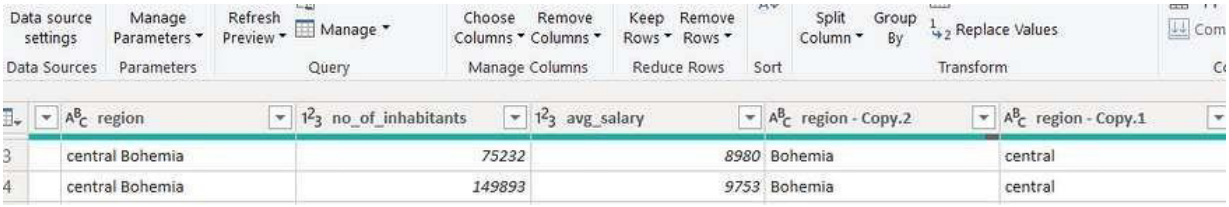
Replacingvalues

SetsomefieldstoEnglishforeasyunderstanding,wereplacevaluestoEnglishwith the Power Query Editor.

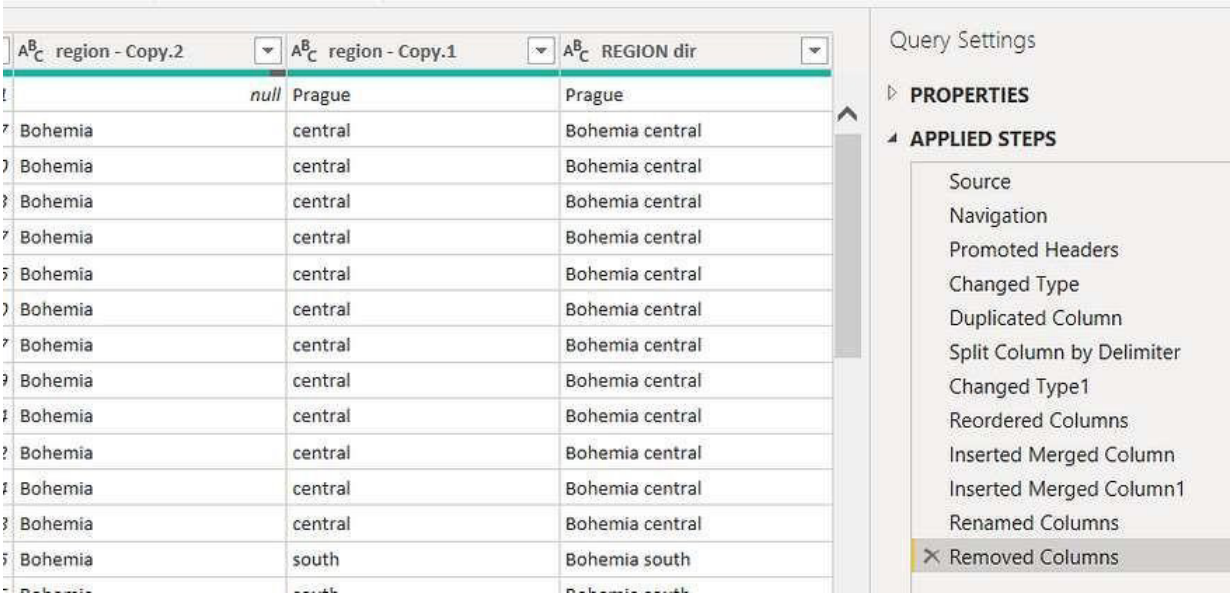


ChangingtheorderofRegionnameatPowerQuery

Duplicatethe“district/region”thensplitcolumnusingspaceasdelimiter.



ThenmergecolumnbyRegionanddirection.Refertoappliedstepsfordetails.



Grouping ofagebyranges

Asthecustomers’agerangesfrom12to88,weshallgroupthemintodifferent generation age range for easier profiling, we will group the ages into 5 groups.

TheGenYare youths,

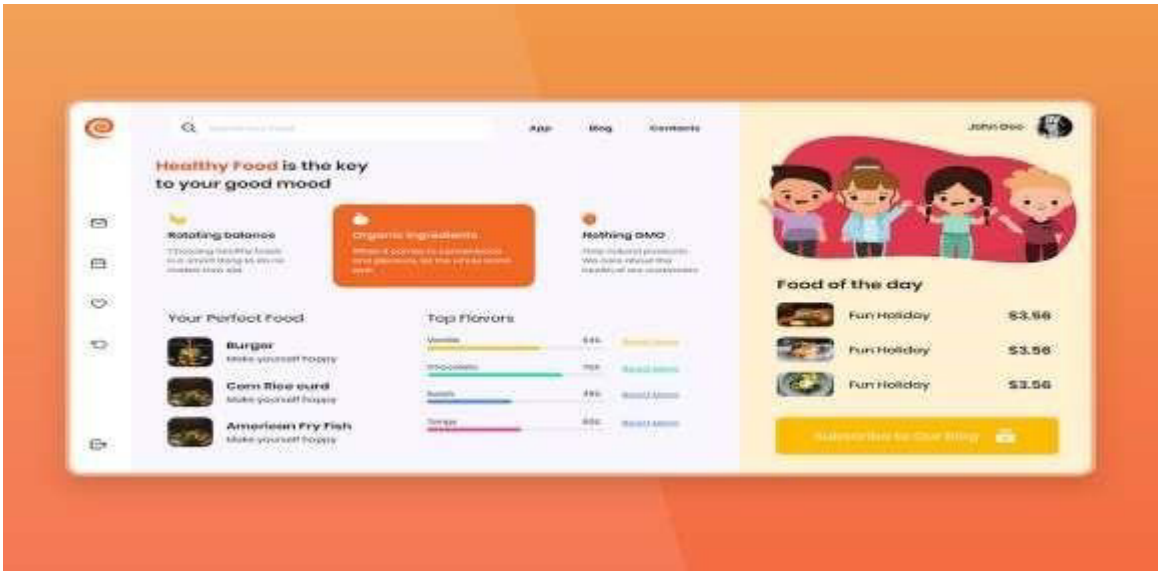
GenXareyoungworkingadults,somestartingtheirfamiliesBaby Boomer are working adults with families.

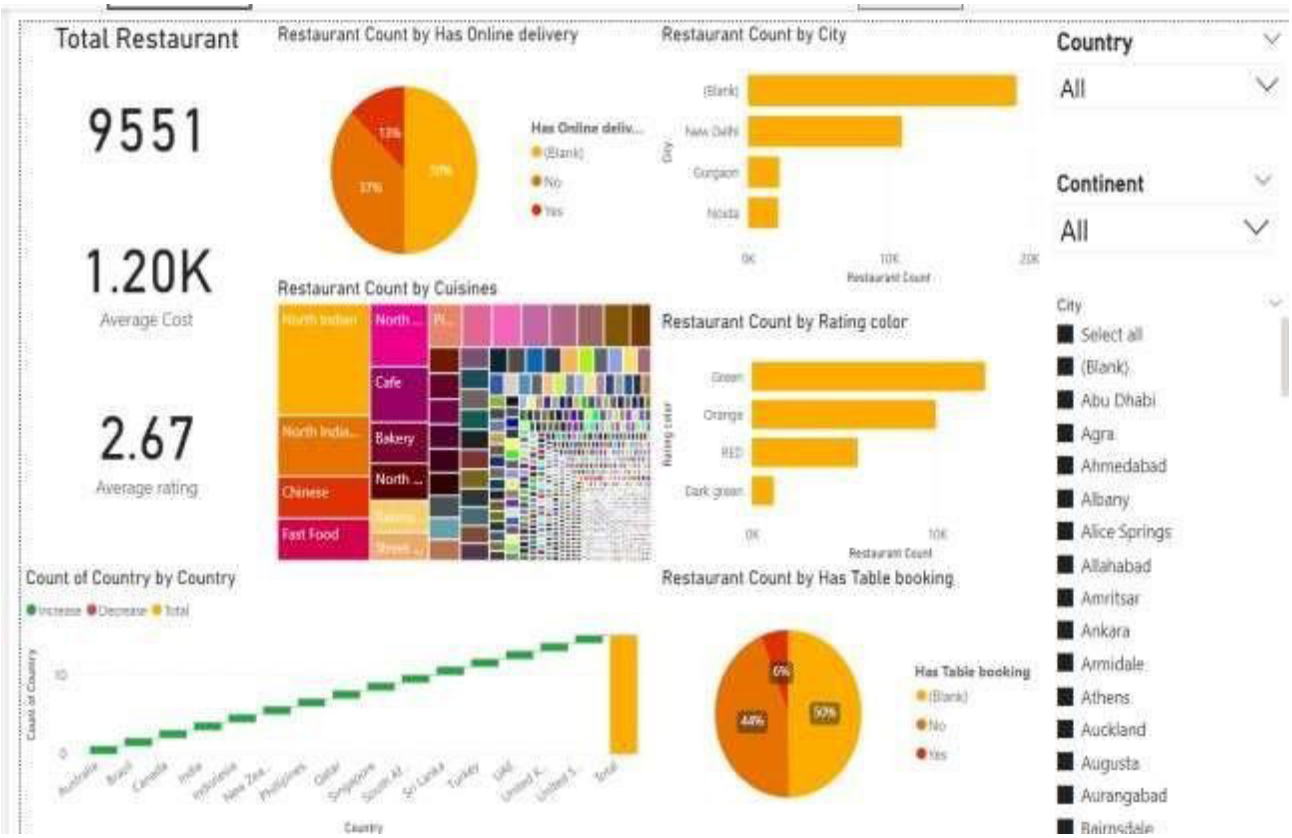
ThesilentGenerationssomeareworkingandretired,livingonpensions. The greatest Generation, retired elderly living on pensions.

Valuesofsuchas“accountId”havealsobeensetasText.

AndDistrictnamehavebeencategorizedasplacetobeuseforthemaptoshowthe sum of the inhabitants in each region.

Dashboard


Healthy Food is the key to your good mood
Your Perfect Food
Burger
Corn Rice curd
American Fry Fish
Top Flavors
Food of the day
Fun Holiday
$3.56


Total Restaurant
9551
1.20K
Average Cost
2.67
Average rating
Restaurant Count by Has Online delivery
Has Online deliv...
(Blank)
No
Yes
Restaurant Count by City
(Blank)
New Delhi
Gurgaon
Noida
Restaurant Count by Cuisines
North Indian
Cafe
Bakery
Chinese
Fast Food
Restaurant Count by Rating color
Green
Orange
RED
Dark green
Restaurant Count
Count of Country by Country
Increase
Decrease
Total
Country
Restaurant Count by Has Table booking
Has Table booking
(Blank)
No
Yes
Country
All
Continent
All
City
Select all
(Blank)
Abu Dhabi
Agra
Ahmedabad
Albany
Alice Springs
Allahabad
Amritsar
Ankara
Armidale
Athens
Auckland
Augusta
Aurangabad

CONCLUSION

Nowadays, the traditional way of going to a restaurant and eating has reducedconsiderably.It'sanewagewheretechnologydominateshumanlife. With the software and technological devices, exceptions are reduced and even terminated. Also, people prefer easy, quick and safe access to everything. This project is designed to meet the requirements of a restaurant. The Online Food OrderingSystemprovidesasimplewaytostoredetailsofthecustomer,foodite ms availableandtogeneratethebill.Itisaninterfacethatallowsthecustomertoord er the desired food which he/she can relish within a span of forty-five minutes.

The project is designed is such a way that the user can modify the primary information required to manage theirprofile successfully suchas the information about the deliver address and contact number. With this platform we developed, wearehopingtoreducetimewasting,avoidmisunderstandings,provideeasyd ata flow, customer pleasure, and less hard work. We believe that we have accomplished our goals and satisfied with the code we developed.

FUTURESCOPE

The future scope of this project is vast. With the advent of advanced analytics and machine learning,PowerBI canbeleveragedtopredictfuturetrends basedonhistoricaldata.Integrating thesepredictiveanalytics intotheprojectcouldenablethebank toanticipatecustomerneeds and proactively offer solutions. Furthermore, Power BI's capability to integrate with various datasourcesopensupthepossibilityofincorporatingmorediversedatasetsforamoreholistic view of customers. As data privacy and security become increasingly important, future iterationsofthisprojectshouldfocusonimplementingrobustdatagovernancestrategies.This would ensure the secure handling of sensitive customer data while complying with data protectionregulations.Additionally,theprojectcouldexploretheintegrationofreal-timedata streamstoprovideevenmoretimelyandrelevantinsights.Thiscouldpotentiallytransformthe waybanksinteractwiththeircustomers,leadingtoimprovedcustomersatisfactionandloyalty.

REFERENCES

1. https://cuzegbu.medium.com/ux-case-study-food-delivery-app-design-2a001c78db96
2. https://bootcamp.uxdesign.cc/ux-case-study-online-food-delivery-aac10a67d2e

LINK

https://github.com/Abhitha22/360-degree-business-analysis-of-Food-Delivery-Apps