POWER BI COURSE PROJECT - 2024

PROJECT DEVELOPED BY
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PUMO TECHNOVATION
INDIA PRIVATE LIMITED

PROJECT TITLE SHEET
POWER BI WITH
MYSQL

Project Report submitted in Partial fulfilment requirement for the proficient Certificate course

Done By

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Under the Guidance of
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ABOUT THE PROJECT:

Power BI is a business analytics tool developed by Microsoft that allows users to visualize data, share insights, and make data-driven decisions. It's widely used for transforming raw data into interactive reports and dashboards. Here are the key aspects of Power BI…

Key Features

- **Data Visualization:** Power BI provides interactive dashboards and reports with a variety of visualization options, such as charts, graphs, and maps, enabling users to explore data in an intuitive way.

- **Data Integration:** Power BI connects to various data sources, including Excel, SQL databases, cloud services like Azure and Google Analytics, and even on-premises systems, to bring data into one place.

- **Real-Time Analytics:** It offers real-time dashboards that update as data changes, which is valuable for monitoring key business metrics continuously.

- **Power Query:** The tool enables users to clean, transform, and load data easily using Power Query, a built-in tool that simplifies data preparation tasks.

- **Collaboration and Sharing:** Power BI allows users to share reports and dashboards across teams and departments, fostering collaboration. It also integrates with Microsoft Office tools like Excel and SharePoint for seamless sharing**.**

- **Artificial Intelligence (AI):** Power BI includes AI-powered features such as natural language processing (NLP) and machine learning to enhance data analysis and predictions.

- **Custom Visualization and DAX**: Users can create custom visualizations and use DAX (Data Analysis Expressions) for advanced calculations and data modeling.

MYSQL SCREENSHOT

CODE FOR HOTEL STAY COUNT

Power Bi.py

```
646
647
648     import mysql.connector
649     import random
650     import time
651
652
653     mysql=mysql.connector.connect(
654         host="localhost",
655         user="power",
656         password="root",
657         database="powerbi"
658     )
659     mycursor=mysql.cursor()
660     names=('krish','bheem','ram','han','rock','arjun','anu')
661     ages=(21,22,23,24,25,26,27)
662     DOBS=(1991,1992,1993,1994,1995,1996,1997)
663     room_cost=(400,800,1200,1500,2000,2500,3000)
664     ids=(1,40,100,200,300,400,500)
665     room_numbers=(1,30,121,212,321,231,321)
666
667
668
        1 usage
669     def insert_data():
670         while True:
671             name=(random.choice(names))
672             age=(round(random.uniform( a: 21, b: 27)))
673             DOB=(round(random.uniform( a: 1991, b: 1997)))
674             room_cost=(round(random.uniform( a: 400, b: 3000)))
675             id = (round(random.uniform( a: 1,  b: 500)))
676             room_number=(round(random.uniform( a: 1, b: 321)))
```

Power Bi.py

```
669  def insert_data():
677
678          sql="insert into power_bi(name,age,DOB,room_cost,id,room_number)values(%s,%s,%s,%s,%s,%s)"
679          power_bi=(name,age,DOB,room_cost,id,room_number)
680          mycursor.execute(sql,power_bi)
681          mysql.commit()
682
683          time.sleep(2)
684          print("data insert successfully")
685
     1 usage
686  def select_data():
687          sql="select * from power_bi"
688          mycursor.execute(sql)
689          myresult=mycursor.fetchall()
690          for i in myresult:
691              print(i)
692
     1 usage
693  def update_data(names,ages,DOBS,room_cost,ids,room_numbers):
694          sql="update power_bi set name=%s,ages=%s,DOBS=%S,=room_cost=%s,id=%s where room_number=%s"
695          power_bi=(names,ages,DOBS,room_cost,ids,room_numbers)
696          #ower_bi=(ids,room_numbers,)
697          mycursor.execute(sql,power_bi)
698          mysql.commit()
699          print("data update successfully")
700
     1 usage
701  def delete_data(room_number):
702          sql="delete from power_bi where room_number=%s"
703          power_bi=(room_number,)
704          mycursor.execute(sql,power_bi)
```

Power Bi.py

```
701  def delete_data(room_number):
705          mysql.commit()
706          print("data delete successfully")
707
     1 usage
708  def main():
709      while True:
710          print("enter the options")
711          print("1=Insert Data:")
712          print("2=select data:")
713          print("3=update data:")
714          print("4=delete data:")
715          print("5=quit")
716          choice=int(input("enter the choice:"))
717
718          if choice == 1:
719              insert_data()
720              print("data insert successfully")
721
722          elif choice == 2:
723              select_data()
724              print("data selected inn")
725
726          elif choice == 3:
727              names=input("enter the name:")
728              ages=int(input("enter the age:"))
729              DOBS=int(input("enter the dob:"))
730              room_cost=int(input("enter the room_cost:"))
731              ids = int(input("enter the id:"))
732              room_numbers=int(input("enter the room_number:"))
733              update_data(names,ages,DOBS,room_cost,ids,room_numbers)
```

Power Bi.py

```
708  def main():
734
735          elif choice == 4:
736              room_numbers=int(input("enter the room_number:"))
737              delete_data(room_numbers)
738
739          elif choice == 5:
740              quit()
741
742          else :
743              print("data error 404!")
744
745  if __name__ =="__main__":
746      main()
```

CODE FOR SCHOOL STUDENT'S GRADE'S

PROJECT SUMMARY

- **Data Visualization:** Only necessary data is added to the database for effective data visualization.
- **Student Information and Grades:** Student information, including grades and roll numbers, is added to the project.
- **Primary Key for Data Access:** The roll number serves as the primary key, making it easy to access data by roll number.
- **Power BI for Data Visualization:** The delivery of data with visualizations is done in Power BI, allowing users to easily access and filter information, particularly by grades in exams.
- **Database Operations in MySQL:** The project involves MySQL for database operations, with connections using INSERT, SELECT, UPDATE, and DELETE commands.
- **Numpy for Random Data Generation:** NumPy functions are used for generating random data where needed.

Power Bi.py

```python
import mysql.connector
import random
import time

mysql=mysql.connector.connect(
    host="localhost",
    user="power",
    password="root",
    database="school"

)

mycursor=mysql.cursor()

names=('arjun','timmy','sonia','linda','sam')
ages=(10,13,14,12,11)
subjects=('tamil','english','french','science','russian')
grades=('A+','A','B','B+','C','C+','D')
roll_numbers=(1,5,8,10,12)

1 usage
def insert_data():
    while True:
        name = random.choice(names)
        age = random.randint( a: 10,  b: 15)
        subject = random.choice(subjects)
        grade = random.choice(grades)
        roll_number = random.randint( a: 1,  b: 150)

        # Ensure the column names in the query match the table structure
        sql = "INSERT INTO school123 (name, age, subject, grade, roll_number) VALUES (%s, %s, %s, %s, %s)"
        school123 = (name, age, subject, grade, roll_number)
```

Power Bi.py

```
769  def insert_data():
780          mycursor.execute(sql, school123)
781          mysql.commit()
782          time.sleep(2)
783          print("Data inserted")
784
     1 usage
785  def select_data():
786
787          sql="select * from school123 where roll_number=%s"
788          school123=(roll_numbers,)
789          mycursor.execute(sql,school123)
790          myresult=mycursor.fecthall()
791          for i in myresult:
792              print("data selected successfully")
793
     1 usage
794  def update_data(names,ages,subjects,grades,roll_numbers):
795          sql="update school123 set name=%s,age=%s,subject=%s,grade=%s where roll_number=%s"
796          school123=(names,ages,subjects,grades,roll_numbers)
797          mycursor.execute(sql,school123)
798          mysql.commit()
799          print("data updated")
800
     1 usage
801  def delete_data():
802          sql="delete from school123"
803          mycursor.execute(sql)
804          mysql.commit()
805          print("data deleted")
```

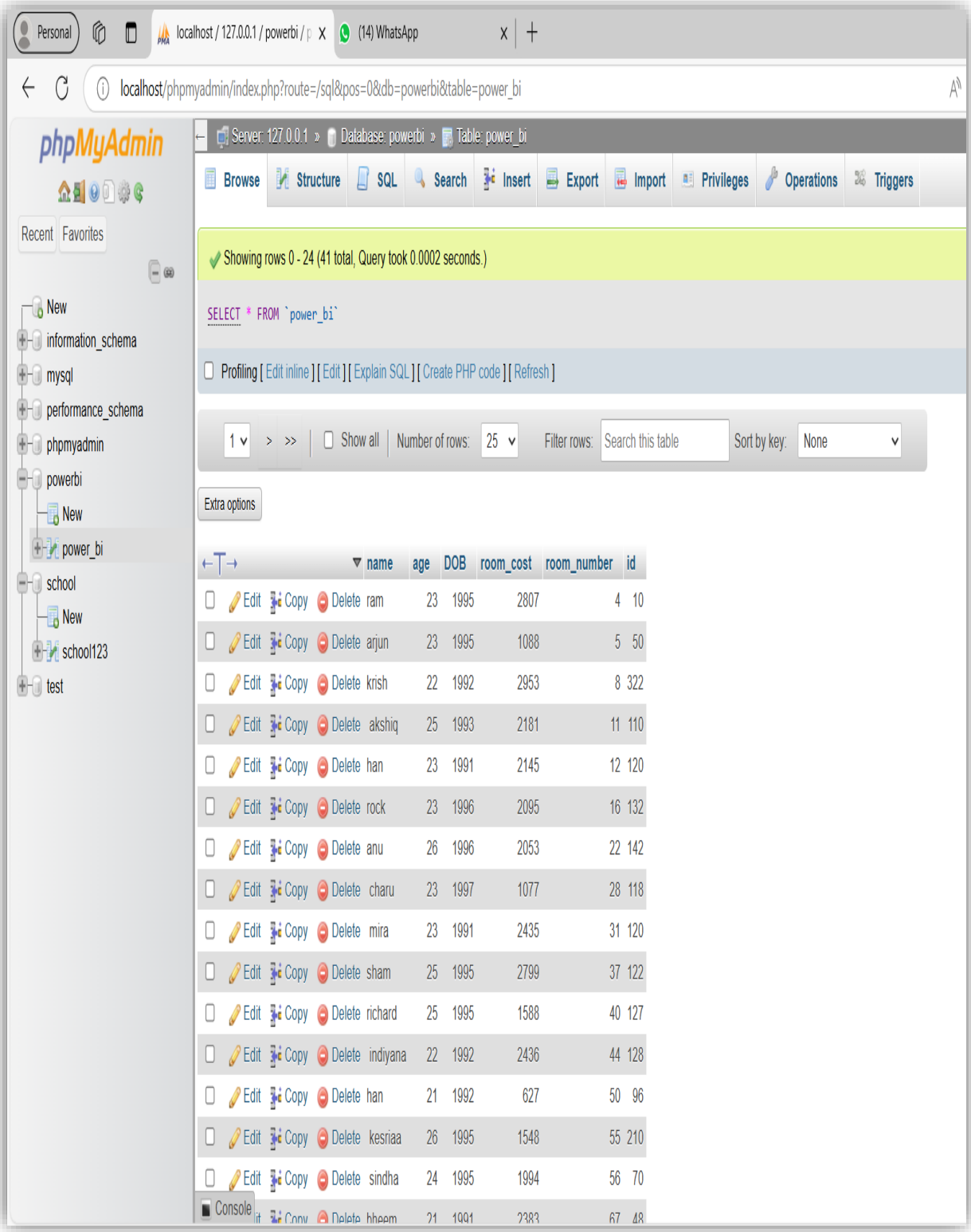
Power Bi.py

```
809

    1 usage
810 def main():
811     while True:
812         print("choose the option")
813         print("1-insert data:")
814         print("2-select data:")
815         print("3-update data:")
816         print("4-delete data:")
817         print("5-break")
818
819         choice=int(input("enter the data:"))
820
821         if choice == 1:
822             print("data insert")
823             insert_data()
824
825         elif choice == 2:
826             print("data select")
827             select_data()
828
829         elif choice == 3:
830             names=input("enter the name:")
831             ages=int(input("enter the age:"))
832             subjects=input("enter the subject:")
833             grades=input("enter the grades:")
834             roll_numbers=int(input("enter the roll_number:"))
835             update_data(names,ages,subjects,grades,roll_numbers)
836             print("data updated")
837
838         elif choice == 4:
839             delete_data()
```

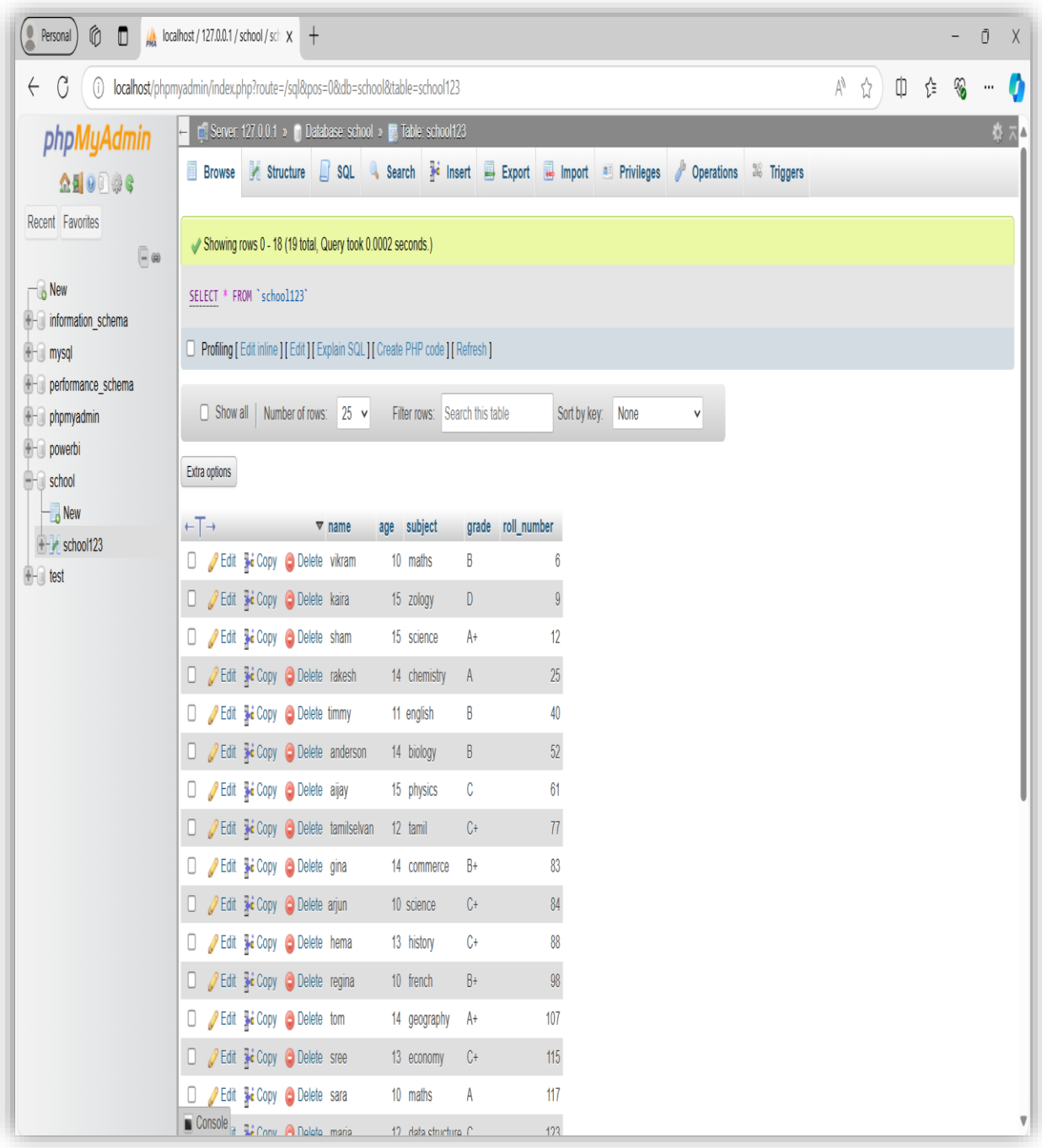
Power Bi.py

```
810     def main():
836             print("data updated")
837
838         elif choice == 4:
839             delete_data()
840             print("data deleted")
841
842         elif choice == 5:
843             break
844
845         else:
846             print("data error 401!")
847
848 if __name__=="__main__":
849     main()
850
851
852 #
```


Personal
localhost / 127.0.0.1 / powerbi /
(14) WhatsApp
localhost/phpmyadmin/index.php?route=/sql&pos=0&db=powerbi&table=power_bi
phpMyAdmin
Recent
Favorites
New
information_schema
mysql
performance_schema
phpmyadmin
powerbi
New
power_bi
school
New
school123
test
Server: 127.0.0.1 » Database: powerbi » Table: power_bi
Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
Operations
Triggers
Showing rows 0 - 24 (41 total, Query took 0.0002 seconds.)
SELECT * FROM `power_bi`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all
Number of rows: 25
Filter rows: Search this table
Sort by key: None
Extra options
name age DOB room_cost room_number id
Edit Copy Delete ram 23 1995 2807 4 10
Edit Copy Delete arjun 23 1995 1088 5 50
Edit Copy Delete krish 22 1992 2953 8 322
Edit Copy Delete akshiq 25 1993 2181 11 110
Edit Copy Delete han 23 1991 2145 12 120
Edit Copy Delete rock 23 1996 2095 16 132
Edit Copy Delete anu 26 1996 2053 22 142
Edit Copy Delete charu 23 1997 1077 28 118
Edit Copy Delete mira 23 1991 2435 31 120
Edit Copy Delete sham 25 1995 2799 37 122
Edit Copy Delete richard 25 1995 1588 40 127
Edit Copy Delete indiyana 22 1992 2436 44 128
Edit Copy Delete han 21 1992 627 50 96
Edit Copy Delete kesriaa 26 1995 1548 55 210
Edit Copy Delete sindha 24 1995 1994 56 70
Console

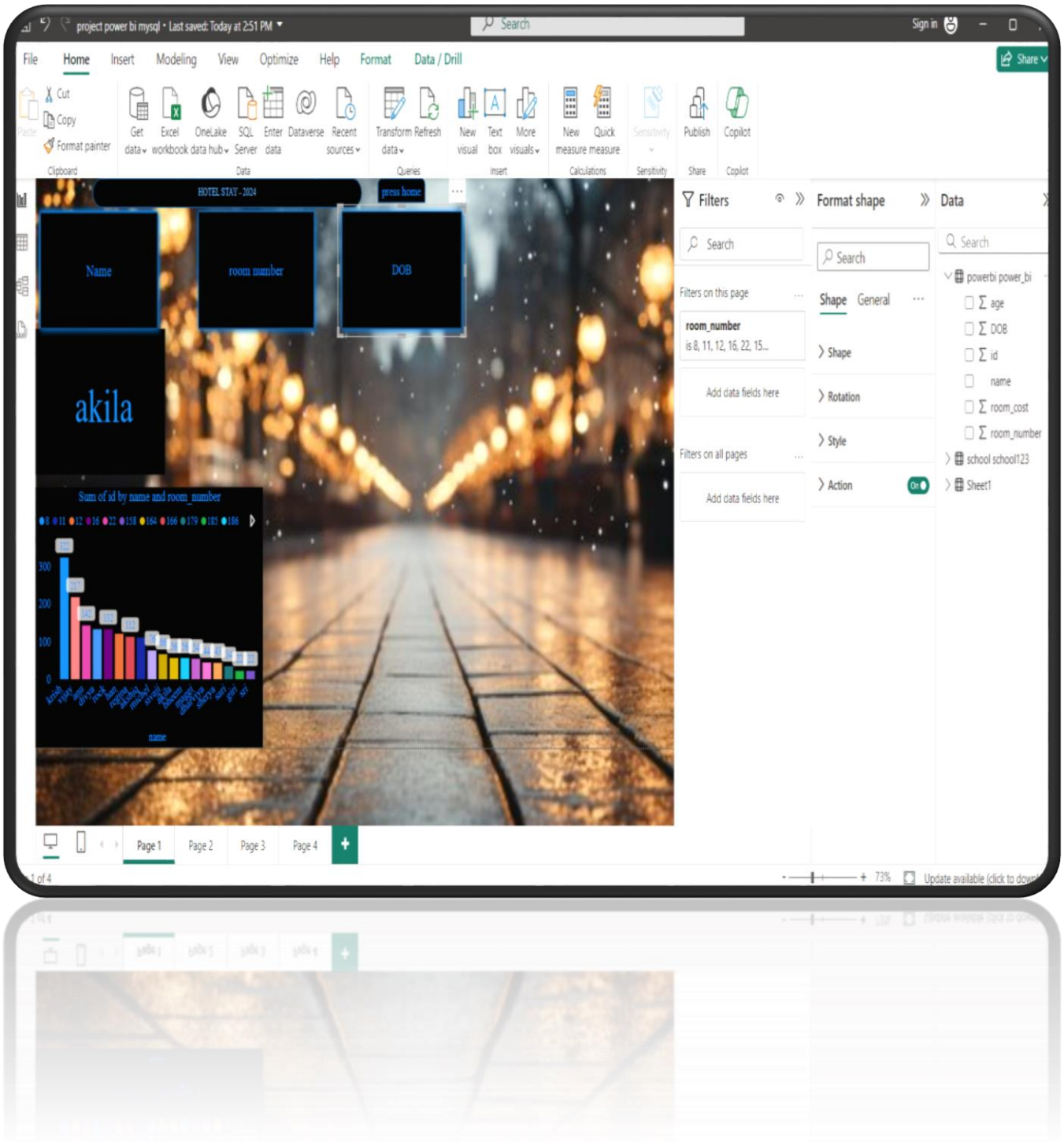
DATABASE SCREENSHOT

FOR SCHOOL STUDENTS

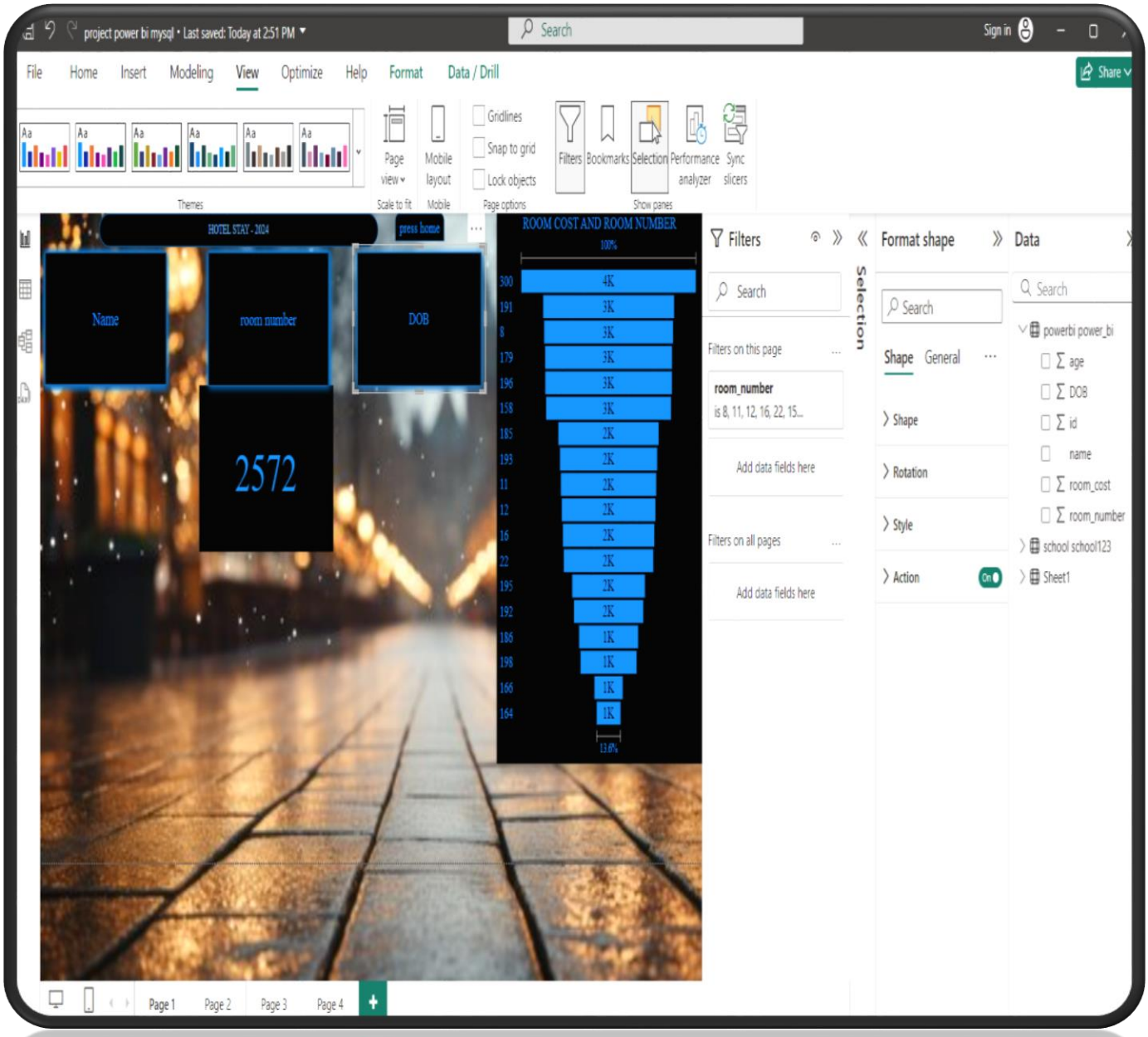


HOTEL STAY

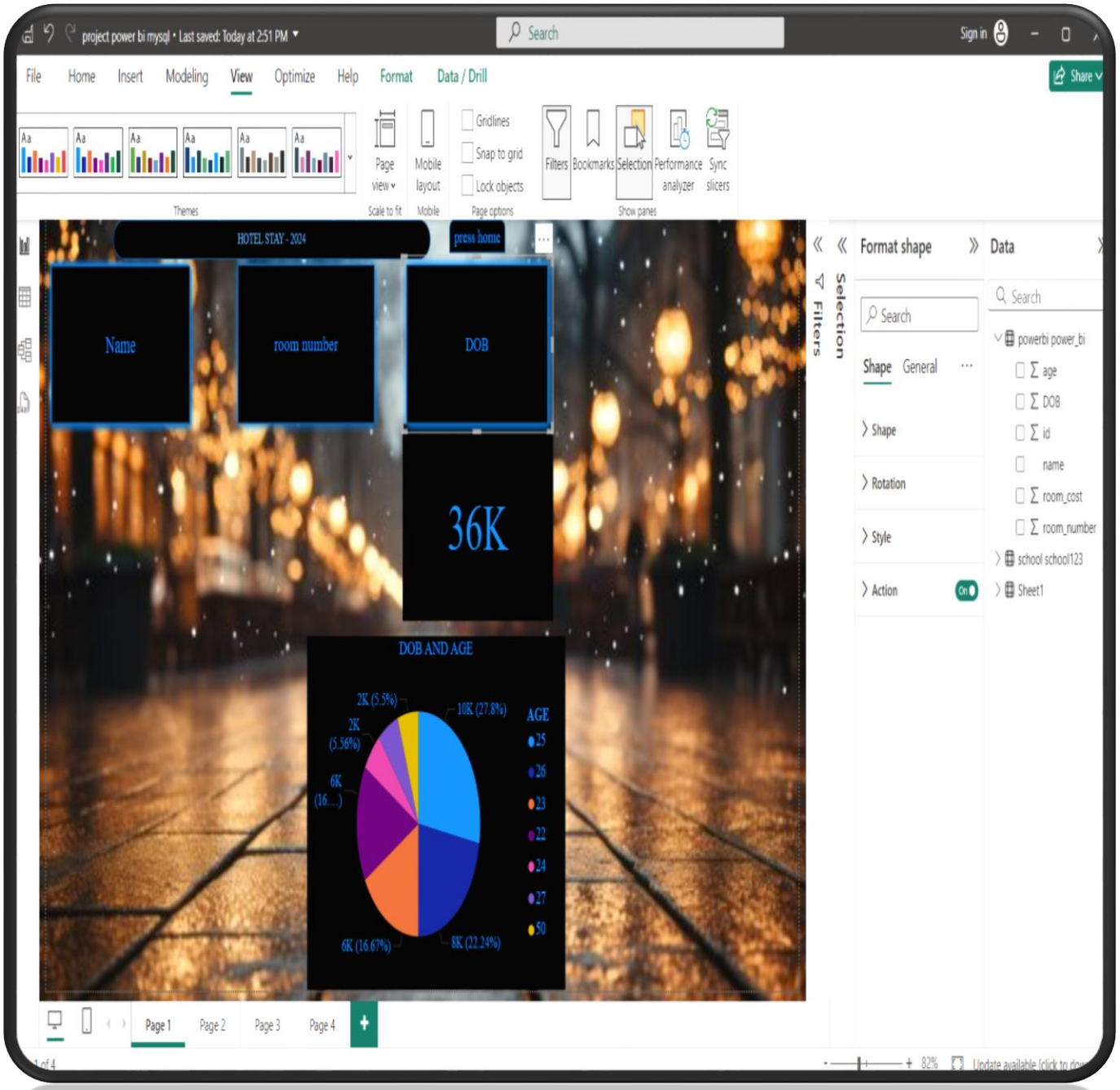
DASHBOARD AND GRAPH



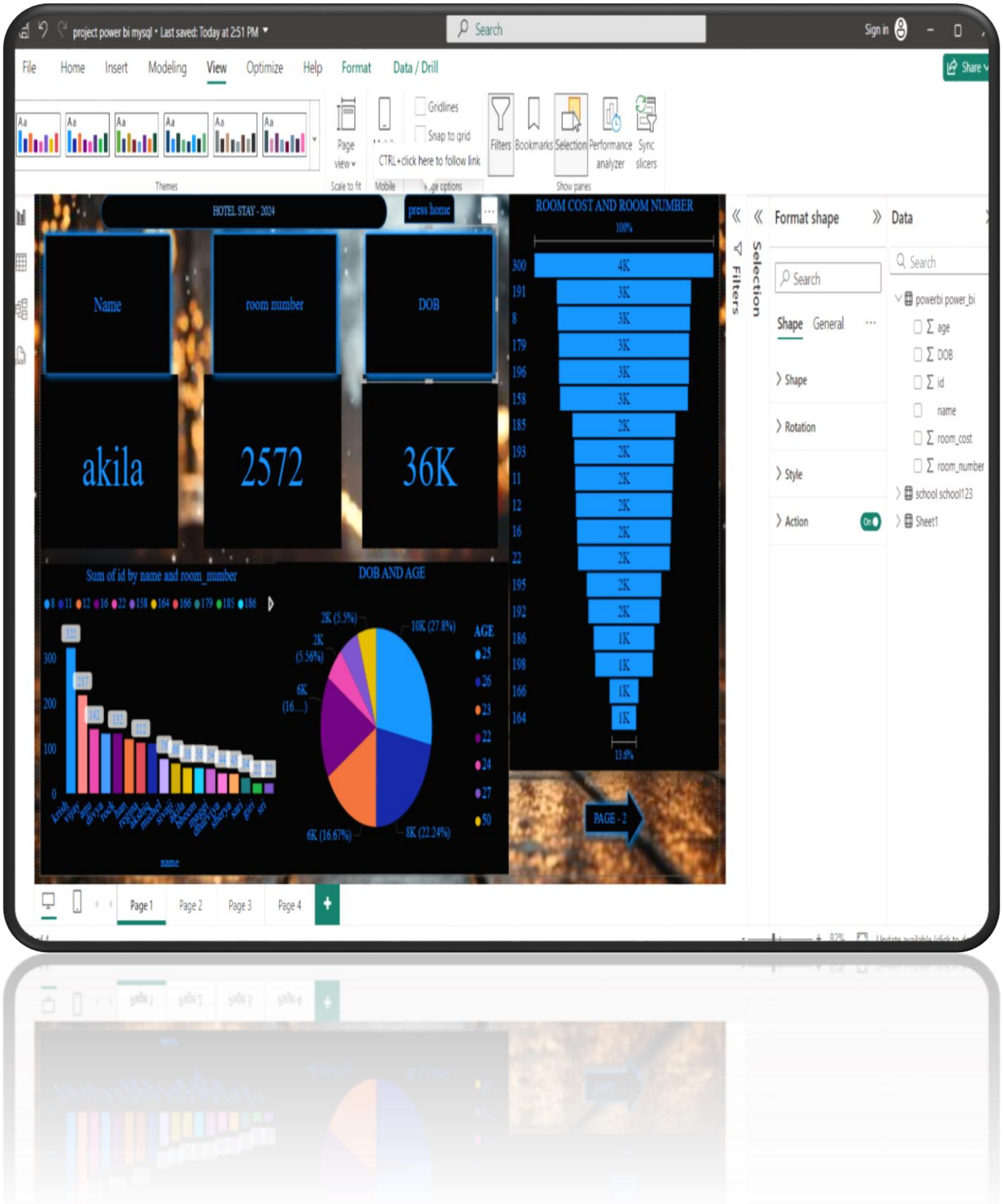
PICTURE -2


project power bi mysql • Last saved: Today at 2:51 PM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Themes
Page view
Mobile layout
Gridlines
Snap to grid
Lock objects
Filters
Bookmarks
Selection
Performance analyzer
Sync slicers
Scale to fit
Mobile
Page options
Show panes
HOTEL STAY - 2024
press home
Name
room number
DOB
2572
ROOM COST AND ROOM NUMBER
100%
300 4K
191 3K
8 3K
179 3K
196 3K
158 3K
185 2K
193 2K
11 2K
12 2K
16 2K
22 2K
195 2K
192 2K
186 1K
198 1K
166 1K
164 1K
13.0%
Filters
Search
Filters on this page
room_number
is 8, 11, 12, 16, 22, 15...
Add data fields here
Filters on all pages
Add data fields here
Selection
Format shape
Search
Shape
General
Shape
Rotation
Style
Action
On
Data
Search
powerbi power_bi
age
DOB
id
name
room_cost
room_number
school school123
Sheet1
Page 1
Page 2
Page 3
Page 4

PICTURE 3

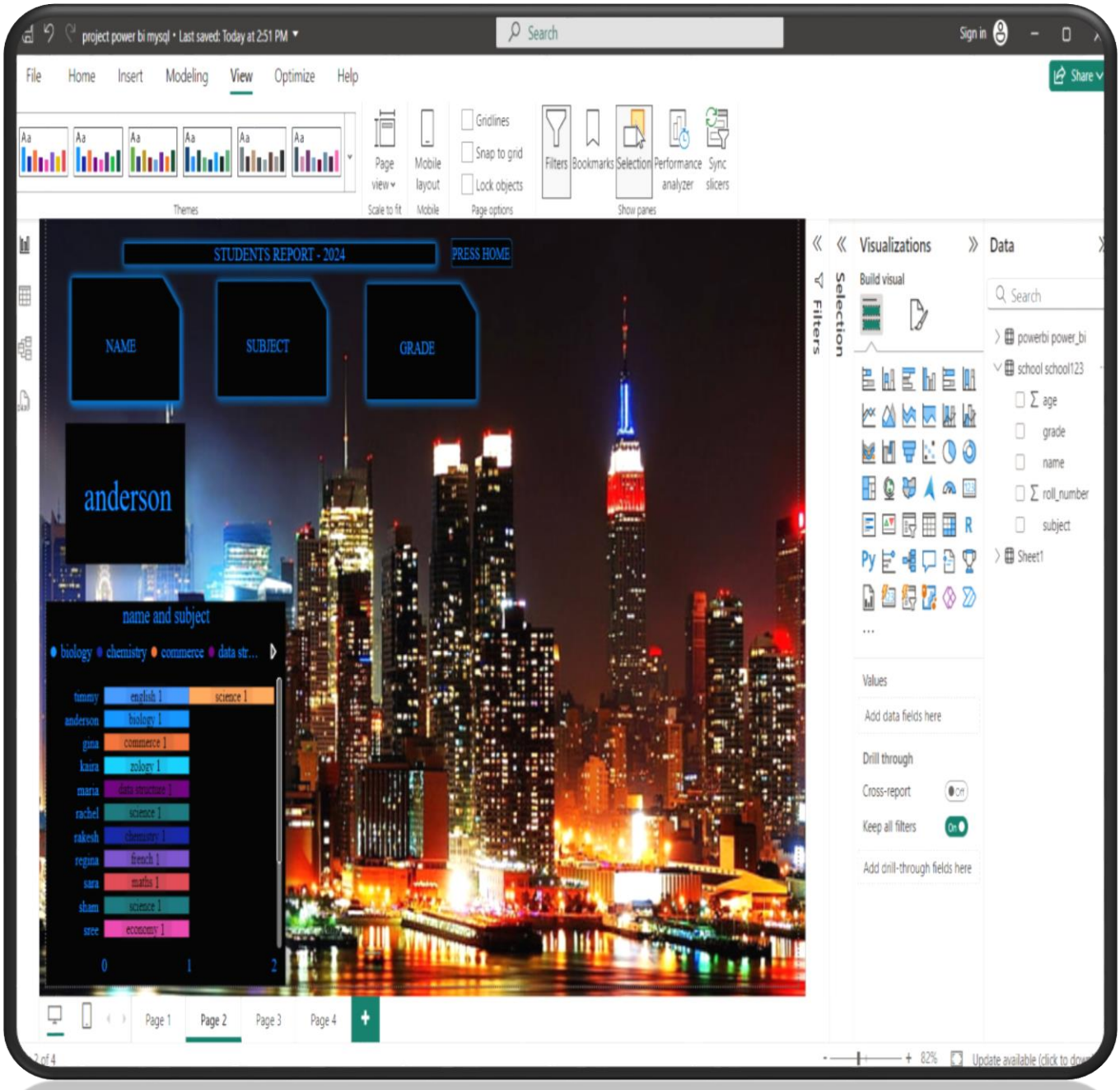

project power bi mysql • Last saved: Today at 2:51 PM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Themes
Page view
Mobile layout
Gridlines
Snap to grid
Lock objects
Filters
Bookmarks
Selection
Performance analyzer
Sync slicers
Scale to fit
Mobile
Page options
Show panes
HOTEL STAY - 2024
press home
Name
room number
DOB
36K
DOB AND AGE
2K (5.5%)
10K (27.8%)
2K (5.56%)
6K (16....)
6K (16.67%)
8K (22.24%)
AGE
25
26
23
22
24
27
50
Format shape
Data
Search
Shape
General
Shape
Rotation
Style
Action
On
powerbi power_bi
age
DOB
id
name
room_cost
room_number
school school123
Sheet1
Selection
Filters
Page 1
Page 2
Page 3
Page 4
82%

DASHBOARD


HOTEL STAY - 2024
press home
Name
room number
DOB
akila
2572
36K
ROOM COST AND ROOM NUMBER
Sum of id by name and room_number
DOB AND AGE
AGE
name
PAGE - 2
Page 1
Page 2
Page 3
Page 4
Format shape
Data
Shape
General
Rotation
Style
Action
Selection
Filters
powerbi power_bi
age
DOB
id
name
room_cost
room_number
school school123
Sheet1

SCHOOL STUDENTS COUNT AND GRADES

DASHBOARD AND GRAPH



PICTURE - 2


project power bi mysql • Last saved: Today at 2:51 PM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Themes
Page view
Mobile layout
Gridlines
Snap to grid
Lock objects
Filters
Bookmarks
Selection
Performance analyzer
Sync slicers
Scale to fit
Mobile
Page options
Show panes
STUDENTS REPORT - 2024
PRESS HOME
NAME
SUBJECT
GRADE
biology
Visualizations
Build visual
Data
Search
powerbi power_bi
school school123
age
grade
name
roll_number
subject
Sheet1
Legend
grade
Values
Sum of roll_number
Details
name
Tooltips
Add data fields here
Drill through
Filters
Selection
Page 1
Page 2
Page 3
Page 4

PICTURE - 3


project power bi mysql • Last saved: Today at 2:51 PM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Themes
Page view
Mobile layout
Gridlines
Snap to grid
Lock objects
Filters
Bookmarks
Selection
Performance analyzer
Sync slicers
Scale to fit
Mobile
Page options
Show panes
STUDENTS REPORT - 2024
PRESS HOME
NAME
SUBJECT
GRADE
A
GRADE AND NAME
GRADE
A
C+
B+
C
A+
B
D
Visualizations
Build visual
Data
Search
powerbi power_bi
school school123
age
grade
name
roll_number
subject
Sheet1
Selection
Filters
Legend
grade
Values
Sum of roll_number
Details
name
Tooltips
Add data fields here
Drill through
Page 1
Page 2
Page 3
Page 4

DASHBOARD


project power bi mysql • Last saved: Today at 2:51 PM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Share
Themes
Page view
Mobile layout
Gridlines
Snap to grid
Lock objects
Filters
Bookmarks
Selection
Performance analyzer
Sync slicers
Scale to fit
Mobile
Page options
Show panes
Expand
STUDENTS REPORT - 2024
PRESS HOME
NAME
SUBJECT
GRADE
anderson
biology
A
GRADE AND NAME
GRADE
A
C+
B+
C
A+
B
D
name and subject
biology
chemistry
commerce
data str...
timmy
anderson
gina
kasra
marva
rachel
rakesh
regina
sara
sham
sree
tamilselvan
tom
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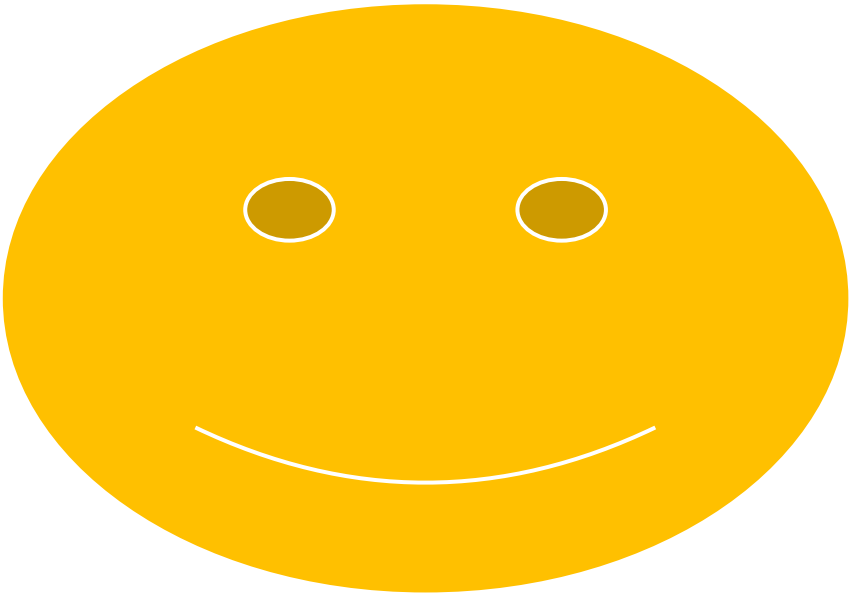
PAGE - 2
PAGE - 3
Page 1
Page 2
Page 3
Page 4
Filters
Selection
Visualizations
Data
Search
powerbi power_bi
school school123
age
grade
name
roll_number
subject
Sheet1



THANK YOU