Power BI DAX Project Solution

	About Dataset
	The dataset includes banking details such as customer ID, loan information, home ownership, and credit history in the 'Bank Detail' table. The 'Customers Detail' table contains customer information like name, gender, age, and income. The 'Calendar' table provides date-related information for analysis, including month, quarter, and fiscal year.
A	Installation
Q	Downloading **Power BI Desktop.**
1	Go to https://powerbi.microsoft.com/en-us/desktop/ and select "Power BI Desktop" from the "Products" tab.
2	Go to the Power BI Desktop download page
3	Click "Download free"
4	Select your system version (32-bit or 64-bit)
5	Click "Download"
6	Locate the downloaded file in your downloads folder
7	Double-click to start the installation
8	Follow on-screen instructions
9	Launch Power BI Desktop from the desktop shortcut or the Windows Start menu.
Instruction:	Download and install Power BI Desktop from Instruction: Download and install Power BI Desktop from the official website and start exploring its features for creating impactful reports.
	PROJECT TASKS
B	**Data Modeling**
Q	Creating a relationship between tables in Power BI using a common column, it improve the accuracy and reliability of data analysis and visualization in the model view of Power BI?
1	Calendar(Date) VS Bank_Details (Date joined)
Relationship Type	One-to-One.
Description	One-to-One between 'Calendar' (Date) and 'Bank_Details' (Date joined) for date-based analysis.

2	Customer_Details (Customer ID) Vs Bank _Details (Customer ID)
Relationship Type	One-to-One
Description	One-to-One between 'Customer_Details' (Customer ID) and 'Bank_Details' (Customer ID) for linking customer details with respective bank details.

C	**Data view**
1	Display all geographical datasets in Power BI along with their corresponding data categories, such as city, country, state, and region.
Hint	To show geographic data with its categories like city, country, state, and region, use Power BI's map visual. It's an easy and effective way to analyze and display geographical information.
	Calculated column
D	**Visual Insights**
QUE	Show the total number of customers, average annual income, average monthly debt, and total credit balance.
Visual Used	Cards
Hint	Get an overview of key customer metrics in one glance.
DAX Formula	Total Customers: COUNTROWS('Customers Detail') Average Annual Income: AVERAGE('Customers Detail'[Annual Income]) Average Monthly Debt: AVERAGE('Bank Detail'[Monthly Debt]) Total Credit Balance: SUM('Bank Detail'[Current Credit Balance])
QUE	Display the average age of customers based on gender?
Visual Used	Pie Chart
Hint	Compare the average age of male and female customers in a visually appealing way.
DAX Formula	AVERAGEX('Customers Detail', 'Customers Detail'[Age], 'Customers Detail'[Gender])
QUE	View the distribution of loans by purpose and average monthly debt.
Visual Used	Area Chart
Hint	Understand the relationship between loan purposes, loan volume, and average monthly debt.
DAX Formula	X Axis: 'Bank Detail'[Purpose] Y Axis: SUM('Bank Detail'[Total Loans]) Secondary Y Axis: AVERAGE('Bank Detail'[Monthly Debt])

QUE	Show the trend of current credit balance over time based on the date joined.
Visual Used	Area Chart
Hint	Analyze the change in current credit balance over time for different customers.
DAX Formula	SUM('Bank Detail'[Current Credit Balance])
QUE	Compare the total loan amount by state using a clustered bar chart.
Visual Used	Clustered Bar Chart
Hint	Visualize the loan volume by state to identify regions with the highest loan amounts.
DAX Formula	SUM('Bank Detail'[Loan Amount])
QUE	Easily navigate and compare performance based on different time intervals.
Visual Used	Bookmark Navigator
Hint	Values - Year/Quarter/Month/Day Easily navigate and compare performance based on different time intervals.
QUE	Filter data by year/quarter using a slicer.
Visual Used	Slicer
Hint	Interactively filter data by year or quarter for deeper analysis.
DAX Formula	Year: = YEAR('Calendar'[Date]) Quarter: = "Q" & FORMAT('Calendar'[Date], "Q")
QUE	Display the title name of the company using the Text Box?"
Visual Used	Text Box
QUE	Create an animated background for a page using a GIF image?"
Image	GIF (Video Image)
F	**Published Report**
1	Power BI reports can be published and shared with others, making it easy to collaborate and work with others on data analysis projects.
Hint	Power BI's ability to publish and share reports facilitate seamless collaboration and teamwork in data analysis projects.