**Case Study**

ABC Cardeals Pvt Ltd maintains caller’s data who are looking to buy new or used cars. Prospects can call or write an email and a support is given in terms of choosing the desired cars. The data description is as follow:

|  |  |
| --- | --- |
| **Variable Name** | **Description** |
| Lead\_Id | Every caller is assigned with a ID for tracking purpose (Unique) |
| Request\_Hour | Time of the day |
| Request\_Weekday | Day of the week |
| Request\_MonthDay | Day of Month |
| Within24 | Within what time period customer wants to buy car |
| Within48 | Within what time period customer wants to buy car |
| Within72 | Within what time period customer wants to buy car |
| WithinWeek | Within what time period customer wants to buy car |
| WithinWeeks | Within what time period customer wants to buy car |
| WithinMonth | Within what time period customer wants to buy car |
| ContactByEmail | Mode of contact |
| ContactByTelephone | Mode of contact |
| DistanceToDealer | Distance to the nearest dealer |
| LeadProvider\_Id | Person handling leads (One person might be handling multiple leads |
| Status | New or Used cars |
| YearOfCarModel | YearOfCarModel |
| Manufacturer | Car Maker |
| Model | Car Model |
| CarValue | Approximate value of the car |
| TradeInModelYear | Trade in Year |
| City | City |
| State | State |

**Based on data given you are required to answer below questions:**

1. Define variable types.
2. Give summary of each variables.
3. Which is the most commonly used mode of contact?
4. Within what period of time most leads would prefer to buy the car?
5. Who is the best and worst lead provider?
6. Do most of the customers prefer to buy new car?
7. Give the list of states with their car model name which is in more demand there?
8. Which is the best year for the manufacturer Toyota?
9. Create a new variable by combining the manufacturer name and model.
10. Create a new variable and the values conditionally.

If distance to dealer<10 -very near

>=10 and <50 -near

>=50 and <100 -far

>=100 -very far

1. Which is the distance within which most customers lie?
2. Give a list of car manufacturers and their average car value.
3. Which state has highest number of leads?
4. Give city wise max value of car deal.
5. Which manufacturer has the highest market share.