Q1. Airline satisfaction prediction using Machine Learning (4M)

Detailed Problem Statement - The aviation competition is growing as airlines attempt to acquire and retain customers. The change in airline passengers' behavior following the pandemic crisis, travel restrictions, the ensuing economic crisis, market liberalization, high technology, and reorganization has resulted in airline services. Airlines can quickly and effectively adapt and change the market in such a competitive environment, which is crucial to the highly competitive aviation industry's success. In reducing expenditure, the aviation sector has become aggressive. Price is first used as the main competitive instrument. Airlines realis the quality of services is very important and affect the perception and satisfaction that results in the purchase of airline services.

Many previous research studies identify that winning excellent services in the aviation industry can gain competitive advantages. Passengers compare the airline to other airlines and to many industries and factors. Airlines thus need to provide an excellent service and facility for the passengers. Therefore, several investigations on service quality have been carried out on the notion that customer perception and evaluation of service quality.

You have been hired by one of the leading aviation firms to build a Machine Learning model. that helps them to identify the satisfaction levels of the customers.

Q2. Consider that you have been hired as a Data Scientist for a Banking firm, analyze the last marketing campaign the bank performed and identify the patterns that will help us find conclusions in order to develop future strategies by using bank.csv dataset: (2M)

Out of the first 20 people,

1. What are the top two job profiles (highest number of people working)?
2. Determine whether a greater number of people have completed secondary studies or tertiary studies who eventually opt for loan.

Q3. The values of independent variable X and dependent variable Y are given below: 2M

X	Y
0	2
1	3
2	5
3	4
4	6

Find the equation of a straight line passing through these values. Estimate the value of Y when X=10

Q4. Consider that you have been hired as a Data Scientist for Zomato, the Indian multinational restaurant aggregator and food delivery company, assume the following scenario and visualize the questions that follow by using "test_zomato.csv" dataset: 7M

Out of the first 10 restaurants,

- 1. Which city or cities have the most expensive restaurants?
- 2. Which city or cities have the cheapest restaurants?
- 3. Which city or cities have the highest rated restaurants?
- 4. Which restaurant or restaurants do not provide a table booking facility?

For Indian restaurants in between index numbers 1400 to 1405(excluding),

- 1. Which restaurant has less than 4/5 rating?
- 2. Which restaurant is the most expensive?
- 3. Which restaurant is the cheapest?