**Scenario Based Learning**

A company works with number of employees, all the works are dependents on the employees. Even if one of the employees resign the job immediately then assigned work will be not finished at the time, so delivery of the project to the clients will be delayed. Company planned to make solution for this, they want to know which employee may resign next. If they know previously, they can arrange alternative to avoid such problem. As an AI Engineer you must give Solution to this.

A) How will you achieve this in AI?

*By collecting feedback from employees, we can learn if they are satisfied with the workplace and interested in staying with the company.*

B) Find out the 3 -Stage of Problem Identification
   a. *Stage 1 – NLP*
   b. *Stage 2 – Supervised Learning*
   c. *Stage 3 - Classification*

C) Name the project
   *Resignation Risk Prediction*

D) Create the dummy Dataset

```
employees = [
  {
    "EmployeeID": 101,
    "Age": 28,
    "Gender": "Male",
    "Department": "IT",
    "JobRole": "Software Engineer",
    "ExperienceYears": 5,
    "YearsAtCompany": 3,
    "JobSatisfaction": 4,
    "MonthlyIncome": 45000,
    "PerformanceRating": 3,
    "PromotionLast5Years": "No",
    "Resigned": 0
  },
  {
    "EmployeeID": 102,
    "Age": 35,
    "Gender": "Female",
    "Department": "HR",
    "JobRole": "HR Manager",
    "ExperienceYears": 10,
```

```
    "YearsAtCompany": 7,
    "JobSatisfaction": 5,
    "MonthlyIncome": 60000,
    "PerformanceRating": 4,
    "PromotionLast5Years": "Yes",
    "Resigned": 0
  },
  {
    "EmployeeID": 103,
    "Age": 29,
    "Gender": "Male",
    "Department": "Sales",
    "JobRole": "Sales Executive",
    "ExperienceYears": 6,
    "YearsAtCompany": 2,
    "JobSatisfaction": 2,
    "MonthlyIncome": 32000,
    "PerformanceRating": 2,
    "PromotionLast5Years": "No",
    "Resigned": 1
  }
]
```