Name: Chun-Chi Huang
Course: Data Modeling
Professor: Michael McKee
Date: 02/01/2018

Chapter 2

Flight Risk:

a. Give a brief overview of the problem

They want to create a score, “Flight Risk”, to mean that the employee with a higher expected opportunity of quitting their jobs.

b. How can the problem be addressed through technology

Firstly, we need to figure out the factors affecting employees’ decision to quit. In this case, the factors could be salaries, raises, and job rotations. Next, they create a specific rule or equation to calculate these values within these factors. Finally, they come out a score which means the expected chance of quitting their jobs.

c. Develop a logical Data Model through MYSQL for that problem (just do 1-3 tables)

Three tables will be created. The first one is Salary Table, and it will show the employees’ IDs, employees’ position levels, individual salaries and the differences from average salaries. The second one lists the numbers of job rotation and raise. The third one is linking table showing position levels and their corresponding average salaries. Finally, I create the definition of Score of Flight Risk shown as follows.

Score of Flight Risk = (((Salary - Average Salary)/Average Salary) * 100 *(-0.5)+ Times of Job Rotation*(-0.25)+ Times of Raises*(-0.25))*100

The higher score indicates that the employee has a higher possibility of quitting.

Salaries Table

Employee_ID	Position_Level	Salary
1340	8	195000
2213	6	155000
1789	9	197000
2890	7	163000
1940	5	141000

Job Rotations and Raises Table

Employee_ID	Times_Job_Rotations	Times_Job_Raises
1340	5	5
2213	3	1
1789	5	3
2890	2	1
1940	1	1

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Positions and Salaries Table

Position_Level	Aveage_Salary
9	190000
8	180000
7	170000
6	160000
5	150000

Flight Risk View

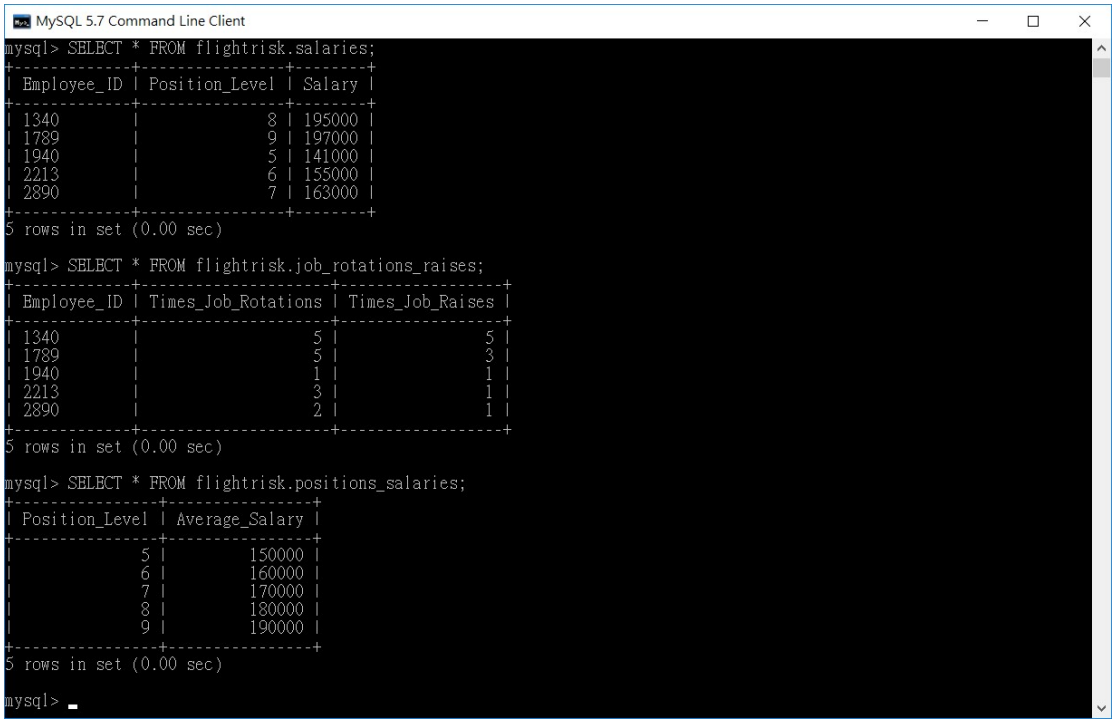
Employee_ID	Score
1340	-667
2213	56
1789	-384
2890	131
1940	250

Extra credit:

d. Physically Deploy Data model so that it becomes a real database

e. Create a Program using ODBC or JDBC for MYSQL to insert data from a form into one of the tables

The following picture represents that all the tables already input into a real database.



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The following result is the view of Flight Risk Score calculated from three upper tables with the equation.