

Problem Statement:

A college needs to develop a system to allocate open elective subjects to its respective students. The way the system would work is that each student is allowed 5 choices with the respective preference where number 1 indicates the first preference number 2 indicates second preference and so on, the subjects are supposed to be allotted on the basis of the students GPA, which means the student with students with the highest GPAs are allotted the subject they want .Every subject has a limited number of seats so if a subject has 60 seats and all of them are filled then the student would not be allotted his first preference but instead second would be checked, if the second preference is full as well then the third preference would be checked, this process would be repeated till the student is allotted a subject of his/her choice in case all the preferences that the student has selected are already full then the student would be considered as unallotted and would be marked so. For example,

Note: Studentid and Subjectid are foreignkeys in this table . A single Student cannot select the same subject twice.

Table Name: StudentPreference

| Studentid | Subjectid |
|-----------|-----------|
| 159103036 | P01491 |
| 159103036 | P01492 |
| 159103036 | P01493 |
| 159103036 | P014914 |
| 159103036 | P01495 |

TableName:SubjectDetails Note: Subjectid is the primary key for this table

| Subjectid | SubjectName |
|-----------|-------------|
|-----------|-------------|

| | |
|---------------|-----------------------------|
| P01491 | Basics of Political Science |
| P01492 | Basics of Accounting |
| P01493 | Basics of Financial Markets |
| P01494 | Eco philosophy |
| P01495 | Automotive Trends |

Table Name: StudentDetails Note: StudentId is the primary key for this table

| Subjectid | SubjectName | GPA | Branch | Section |
|------------------|-----------------|-----|--------|---------|
| 159103036 | Mohit Agarwal | 8.9 | CCE | A |
| 159103037 | Rohit Agarwal | 5.2 | CCE | A |
| 159103038 | Shohit Garg | 7.1 | CCE | B |
| 159103039 | Mrinal Malhotra | 7.9 | CCE | A |
| 159103040 | Mehreet Singh | 5.6 | CCE | A |
| 159103041 | Arjun Tehlan | 9.2 | CCE | B |