

#### Problem Statement:

A college needs to develop a system to allocate open elective subjects to students. The system would work such that each student is allowed 5 choices with the respective preference numbers. 1 indicates the first preference, 2 indicates the second preference, and so on. Students would be allotted on the basis of their GPA, which means the student with a higher GPA would be allotted the subject they want. Every subject has a limited number of seats, and if all of them are filled, then the student would not be allotted their first preference. Their second preference would be checked, and if the second preference is full as well, then the third preference would be checked, and so on, until the student is allotted a subject of their choice. If a student's selected preferences are already full, then the student would be considered unallotted. For example, Mohit has filled his choices with the following preferences:

Note: Studentid and Subjectid are foreign keys in this table.  
A single Student cannot select the same subject twice.  
Table Name: StudentPreference

Studentid	Subjectid
159103036	P01491
159103036	P01492
159103036	P01493
159103036	P01494
159103036	P01495

Table Name: 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

Studentid	StudentName
159103036	Mohit Agarwal
159103037	Rohit Agarwal
159103038	Shohit Garg
159103039	Mrinal Malhotra
159103040	Mehreet Singh
159103041	Arjun Tehlan

Final Resultant table if the student has been allotted to a subject  
Table Name : Allotments

Subjectid	Studentid
P01491	159103036

Final resultant table if the student is unallotted:  
Table Name: UnallotedStudents

Studentid
159103036

Task is to write a stored procedure to assign all the students to respective  
according the above stated workflow

its respective students. The way the  
jective preference where number 1  
so on, the subjects are supposed to  
ith students with the highest GPAs  
seats so if a subject has 60 seats  
reference but instead second would  
ce would be checked, this process  
in case all the preferences that the  
ed as unalloted and would be  
ences and they are as following:

Preference	
	1
	2
	3
	4
	5

MaxSeats		RemainingSeats	
	60		2
	120		119
	90		90
	60		50
	60		60

GPA	Branch
	8.9 CCE
	5.2 CCE
	7.1 CCE
	7.9 CCE
	5.6 CCE
	9.2 CCE

e subject



Section	
A	
A	
B	
A	
A	
B	