Assignment: Exercise, Normalization

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Taking in consideration the following table:

Student (StudentNum, StudentName, NumCredits, AdvisorNum, AdvisorName, (CourseNum, CourseDescription, Term, Grade))

1. Identifying repeating groups: CourseNum, CourseDescription, Term, Grade
2. Normalizing
   1. Student table to the *first normal form*:

Student (StudentNum, StudentName, NumCredits, AdvisorNum, AdvisorName)

StudentCourse(StudentNum, CourseNum, CourseDescription, Term, Grade)

* 1. Advisor to the *first normal form*:

Student (StudentNum, StudentName, NumCredits)

Advisor(AdvisorNum, AdvisorName)

1. The data base have the following tables

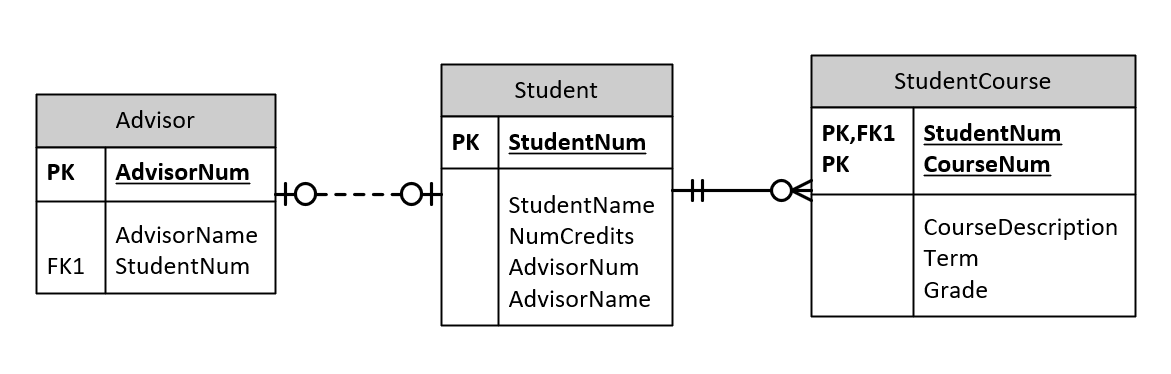


Figure . Normalized Student Table

Student (StudentNum, StudentName, NumCredits)

Advisor(AdvisorNum, AdvisorName)

StudentCourse(StudentNum, CourseNum, CourseDescription, Term, Grade)

1. To allow the relation from students to Course be 1 to many, the next modifications need to be made:
   1. Create a table Course

Course(CourseNum, CourseDescription)

* 1. Remove fields from Student Course table:

StudentCourse(StudentNum, CourseNum, Term, Grade)

* 1. This will be the final schema:

Student (StudentNum, StudentName, NumCredits)

Advisor(AdvisorNum, AdvisorName)

Course(CourseNum, CourseDescription)

StudentCourse(StudentNum, CourseNum, Term, Grade)

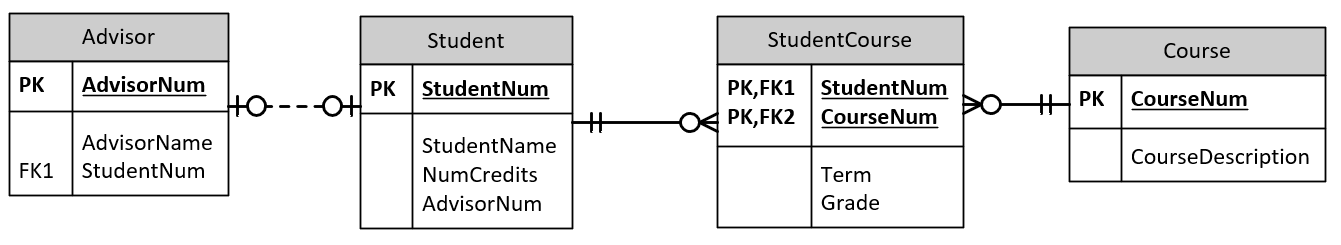


Figure . Normalized Data Base Design for College Data Base