

Exercise 3

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Allen Academy is a small, college preparatory school founded by the Allen family in Douglasville, Georgia. The oldest brothers, twins Dan and Fred, cofounded the school with Dan in charge of curriculum development and Fred in charge of administrative aspects of running the school. After a few years, the next brother, Hugh, was hired to coordinate the school's athletic program. Later, a fourth brother, Jack, and a sister, Laurel, opened a second Allen Academy fifty miles from the first to provide the same opportunity for children in Fayetteville, Georgia.

Allen Academy admits only 150 students annually, roughly 30 students in each of grades eight through twelve. The school operates on the semester system. The school is investigating converting their manual information and records system to a computer-based database system. The type of information maintained or needed is described next.

Student information includes name, address, class, homeroom assignment, home telephone number, parent's work telephone numbers, and any extraordinary medical information (allergies, required medication, etc.) that needs to be accessed in case of an emergency. The courses taught each have a name, location and time. Only one section of each course is needed. The systems should allow a user to obtain a student's schedule for the current semester. A complete grade history for each student is maintained, as is a history of any participation in extracurricular activities such as sports, band, or chorus. Since Allen Academy is a private school, a record of each student's tuition payments is maintained.

The information system should also provide information on all of the teachers at the school. The name, address, highest education level attained, the date every degree earned by the teacher was granted and the institution where the degree was earned, and salary information must be accessible. Each teacher's schedule should be accessible, including the time and place where each class meets.

Your task is to describe the database metadata for a database to support this situation by creating tables in the new diagram in MySQL Workbench.