

CS 7700 Programming Project

Spring 2026

Project plan is due on 2/25, Wednesday.

Final report is due on 4/20, Monday.

1. Design and implement a database (with at least 3 tables) for an application of your choice.
 - You can use a database you have created before.
2. Design and implement a set of transactions which are meaningful for your database and application.
 - The minimum number of transactions is 3.
 - Each transaction can be implemented in C, C++, Visual Basic, Java, Python, or any other high-level programming language that can embed SQL queries.
 - You can use any DBMS available to you, such as MS Access, MySQL, Oracle, etc.
3. Chapter 10 in 7th edition (or Chapter 13 in 6th edition) describes how to embed SQL statements in programs.
 - An example of embedding SQL queries in a Java program for an MS Access database is available at <https://cecs.wright.edu/~schung/cs7700.htm>
4. **Upload your project plan (in a single pdf file) to Pilot by 2/25, including the descriptions of**
 - ER model and DB Schema (i.e., structure) of your database to use.
 - Input, output, and functionality (i.e., behavior) of each transaction to be implemented.
 - DBMS to use.
 - Programming language to use.
5. **Upload the final report (in a single pdf file) to Pilot by 4/20.** Your final report should include the followings:
 - ER diagram and Relational schema of your database.
 - Print out (or snapshot) of the Content of relations (i.e., data tables).
 - Description of your transactions, including the input data, output data, functionality, etc.
 - Printout (or snapshot) of the transaction programs.
 - Printout (or snapshot) of the transaction results.
 - Discussion:
Discussion can include your comments on the design and implementation, performance and functionality of the DBMS you used, trial and error, future topics, etc.
Basically, you can include any technical things that you learned (doing the project) that you want to share with other students in this class, and any technical things that can demonstrate how much effort you made on the project.
6. **Grading:** Your final report will be graded based on {project plan 5%, specification of transactions 5%, design of transactions 7%, correctness of programs 7%, discussion 6% }