

Identify the design paradigm the team chose for your prototype and explain why you chose that paradigm.

The design paradigm that my team chose for our prototype was the data-structured centered design. We chose this paradigm because we decided that we wanted to build a student/teacher record management system. The start of our design stemmed from the understanding that our program would be primarily manipulating data rather than functionality. This means that we initially had to understand the interactions between data elements in order to develop a control structure based on these interactions. In order to design such a system, it was essential that we create a database that would be able to store a large amount of data elements containing relationships between different table entities. All of our entities are composite because they are composed of multiple data elements. Also essential to our database was the schema utilized in creating it. This schema utilizes the users, student, course, enrollment, faculty, teaching, assignment, and grading entities in order to create relationships that are vital to the implementation of our system. All of these identities contain primary keys to enable these relationships. For example, the enrollment entity contains two foreign keys that reference the student id from the student table as well as the course from the course table. In doing so, an essential relationship can be made between these entities. As a result of this, each enrollment data entry can reference multiple students as well as a course that corresponds to it. This ensures that the enrollment table is limited to information specific to enrollment, but it can also easily access details from the other student and course entities.