

CS 631 - Project

Deliverable 1

Requirements

Deliverable 1 must contain an analysis of the intended database system, and a conceptual schema. It must describe the problems encountered in this phase and justify the solutions.

What is expected:

1. Outline the goals of this phase of the project.
2. Analyze the entire application for the City Library and come up with an extended ER diagram. Use the notation for E/R model constructs and additional notation for specialization/generalization hierarchies we learned in class.
 - Show entity types, relationship types (including class/subclass relationship types), and attributes. Show different types of attributes (simple/composite, single-valued/multi-valued, stored/derived) if needed. Show roles on recursive relationship types.
 - Show key attributes (only one key per entity type should be shown on the ER diagram).
 - Include structural constraints (cardinalities ratio and participation constraints). Use both notations for the constraints of relationship types on the diagram as an exercise (the traditional one and the (min, max) notation).
 - Use some diagram editor to draw a clean diagram.
3. Mention any assumptions you made in doing the above that go beyond what is given in the project description. In particular, mention all assumptions that led you in determining structural constraints.
4. Make a list of constraints that apply over and above what you can show in the diagram. In particular make a list of additional keys for entity types (if there are any).
5. Besides the above, comment on the difficulties you faced in doing this conceptual design task.

NOTE: The above specification will drive your subsequent phases. As in any actual design and implementation, you will be revising what you do here as you proceed through the phases. Please be explicit and detailed when writing your deliverable. This will help you in the long run!