PHASE I, Group Project (Parts I & 2 are to be completed in Phase I)

Part I: System Analysis (Forms/Reports, Data Model, and Documentation)

This part defines the scope of your project (both phases) and its requirements. Include a narrative that describes the setting for your project, a list of the major business activities, prototypes of the required forms/reports, and business rules (constraints) to complete the documentation. In Phase II, you will revisit the tasks of this phase to further refine these items.

To complete this assignment, interview employees and/or managers of the business to determine the tasks that they must perform (business activities) and the information that they need to make decisions. **A paper prototype of *every* form or report that eventually will built in this phase and Phase II should be in this submission.** These prototypes are NOT to be created in Access in the systems analysis portion of Phase I.

Use Word, Excel, or Visual Basic to create prototype output forms and reports that the user desires and that display test data. (Note that no data flow diagrams are required.) At least one of the prototype forms (You will not implement this report in Access in this phase.) and at least one of the prototype reports must have subgroups (You will implement one of these reports in this phase).

At least one report that has subgroups must have a sum, maximum, minimum, or average by subgroup. For an example of a form with subgroups, see Kroenke, p. 144. On this form, each company can have multiple contacts. For an example of a report with subgroups, see Kroenke, p. 140. This report displays multiple supplier companies for some of the parts. Although this report does not display a sum by subgroup, imagine a sum of price by subgroup. In this scenario, the sum of the prices for Cedar Shakes would be $42.00, etc. A grand total could be added at the bottom. If a minimum for each subgroup were displayed rather than a sum, the minimum price for cedar shakes would be $12.50, etc.

Professionally draw a *conceptual* (logical) **E-R diagram** to model the entities (with attributes and relationships) that the users wish to track in the business you have chosen for your project. Include **at least one 1:M relationship** and **at least one M:N relationship (or** **Association relationship)***.* Use the IE crow’s foot data modeling graphical symbols and concepts (as illustrated by Kroenke).

The forms/reports from your systems analysis should be the basis for the above entities/relationships. If an entity does not appear on any of the forms/reports, it has no logical reason for being in the data model. The **narrative, a list of the major business activities, the major required forms/reports,** and **business rules** (constraints) complete the documentation of the entity relationship model. An explanation of the purpose for each form/report prototype and for each form/report built in Access will add clarity to the documentation.

The documentation ‘proves’ to the owner of the system that you understand their needs. The documentation, in this case, explains to me the scope and requirements of your project. Without an excellent explanation, I will not understand what you are attempting to accomplish and, as a result, your grade will suffer. In the real world, the user would not be likely to award your company the job.

**Part I Deliverables --** A **Word file (only one)** which contains a narrative with the following items:

1. The first ***seven*** pages of this document with the last and first names, in last name alphabetical order, of all group members typed in the upper right-hand corner of the header along with a continuation of page numbers that now exist in this document (Use camel-casing as shown.),
2. A narrative explaining your business and your project,
3. A list of the major activities of the business,
4. Desired output forms/reports prototypes with test data (These should be created with Word, Excel, or Visual Basic rather than Access),
5. An explanation of the content and use of each form/report,
6. At least one form prototype which displays subgroups,
7. At least one report prototype which displays subgroups with either a sum, maximum, minimum, or average by subgroup(One of these prototype reports will be implemented as an Access application, Part II, #6 below),
8. A Kroenke-style IE crow’s foot conceptual/logical E-R diagram,
9. A formal list of business rules (constraints) that explain and limit the entity instances and data values on the forms and reports (At a minimum, all entities must be defined and a discussion is provided to explain when an instance would be created. While the cardinalities are represented graphically on the data model, some cardinalities may require, for clarity, a detailed explanation.).

**Part II: Database Creation and Application Development for the E-R Diagram’s 1:M Relationship (***Every group member must author something in this part of the project***.)** Only **two** of the tables from Part I should be in this database.

1. Create a parent table and child table in your database to match the required 1:M relationship on your E-R diagram. Include the following elements in either this parent or this child:
	1. Use the field names specified on your E-R Diagram.
	2. Include at least one numeric field.
	3. Use a **primary key**.
	4. \*\*Enter data that illustrates the 1:M relationship.\*\*
	5. Create an **input mask** for at least one field in at least one table that will enforce the entry of alphanumeric values with special characteristics (not the input mask wizard).
	6. Use a **default** value for some field in at least one table (not the Access default of 0).
	7. Use a **validation rule** and **validation text** for at least one field in at least one table.
	8. Use the **input mask wizard** to create an input mask for at least one field in at least one table, e.g., social security number, phone number, etc.
2. Create the relationship between the two tables above.
3. Enforce referential integrity.
4. Create two data entry forms (all fields), one for each of the two tables (tables created for Part II, #1). Use the Form Wizard but customize the two forms to be more visually appealing and to display **all** data entered. The fields on each form should be from the single table.
5. Enter data to illustrate the 1:M relationship between the parent and child in the relationship.
6. Create two reports, one for each of the two tables created for Part II, #1 – one for the parent and one for the child). Use the Form Wizard but customize the reports to be more visually appealing and to display **all** of the included captions and data. These reports need not include all of the attributes but each report should have only data from a single table.
7. Create a third report that is based on both tables (tables created for Part II, #1). The report must **not** include the linking fields (PK & FK). The report must display some part of a parent table with a list of corresponding child records that displays a sum, maximum, minimum, or average by subgroup (parent) for all parents. This report is the subgroup report (prototype) from #7 in the **Part I Deliverables** list above. A count of the rows does ***not*** meet this requirement.
8. All reports in the .aacdb file must display the same data as in the corresponding prototype forms/reports for Part I.

***If you have a ‘real’ project & wish to negotiate different requirements, see me.***

**Part II Deliverables:**

1. **Stapled Hardcopy** (*not* e-mailed)
	1. An “authorship list:” A listing of every item in your project with the name(s) of those who authored each item. On this list, authors must initial each occurrence of their name, e.g., form, report, narrative, data model, table, table normalization, relationship creation, test data, prototype, etc.
	2. The relationships diagram from Access that displays all of the fields of both tables in the required 1:M relationship.
	3. The three required reports that are implemented as Access applications (data matches that in the **.accdb** file)
	4. Do NOT print and include the Word file. Submit the Word file as described below.
2. **A *Blackboard submission to the Phase I assignment*** pagefrom the group leader that has *two* attachments:
	1. the **Word** file from Part I **(only one)** &
	2. theproject **.accdb** file -- ***Every* group member must implement some part of the Access requirements**.

**Group Size:** In this phase, a 10% penalty will be applied to the grade of any group without exactly four members unless a different number is approved by me in writing.

**Late Projects:** Late projects are assessed a 5 percent late penalty per day (including weekend days). The late penalty assessment will begin at 2:30 p.m. on the due date. **Get any hardcopy submission time-stamped and put it in my mailbox in the BUSN office or under my office door at your own risk.**

**Grading Criteria**

**Part I:**

* All eight deliverables are present and complete (60% of the points is the highest grade if one item is missing).
* Deliverables were professionally produced and e-mailed as required (not graded otherwise).
* The narrative is written with complete, grammatically correct sentences.
* The narrative includes a list of business functions, definitions of each entity, a description of the events that would cause the creation of an entity instance, and, sometimes, an explanation of the business requirements that might necessitate certain cardinality rules.
* There are no spelling errors in any of the deliverables.
* All images in the file have been formatted so that, when moved, the documentation remains easily understood.
* User specified forms/reports (prototypes created as specified above) with test data are included, along with the required explanation.
* Kroenke-style IE crow’s foot model is used for the E-R diagram. All parts of the E-R diagram are specified. The correct word forms and symbols are used and their placement on the diagram is correct.
* The E-R diagram includes at least one 1:M relationship
* The E-R diagram includes at least one M:N relationship (or Association relationship).
* The E-R diagram, the narrative, business activities, the business rules, and forms/reports are consistent.
* The narrative, list of business activities, formal list of business rules, and form/report examples provide a clear rationale to explain the E-R diagram
* The E-R diagram is an excellent model of the users’ view of the data.
* The product evidences in depth work and analysis, and professionalism.

Part II (*Every group member must author some accdb product*.):

* ***Stapled* Hardcopy**
* **“**AuthorshipList**”**
	+ Item
	+ Author(s) of item (initialed by author)
* Relationship Diagram
* Three Reports (Access implementation)
* ***Blackboard assignment submission*** with attachments
* **.accdb** file
* **.accdb** file includes only **two** tables
* **Word** file (from Part I)
* **All blanks on this page filled-in**
* Different font
* Different color
* **Match Forms/Reports in Narrative**
* **Parent & child tables to match E-R diagram 1:M relationship with**
* Descriptive table names beginning with tbl

Parent: tbl\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Child: tbl\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Fields names match E-R diagram names
* Each field defined in the Description column of Design View
* Primary keys exist
* Input mask to enforce special alphanumerics (not a wizard) Location\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Default value (not Access default) Location\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Validation rule Location\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Validation text Location\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Input mask (wizard) Location\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Relationship created between parent & child in 1:M relationship on E-R**
* Enforce referential integrity
* Test data to illustrate 1:M relationship
* **Data entry form for parent from previous 1:M**
* Helpful form name beginning with frm\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* All data displayed
* Appealing
* **Data entry form for child from previous 1:M**
* Helpful form name beginning with frm\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* All data displayed
* Appealing
* **Parent report from previous 1:M**
* Helpful report name beginning with rpt\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* All data visible
* Appealing
* **Child report from previous 1:M**
* Helpful report name beginning with rpt\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* All data visible
* Appealing
* **Parent/child report from previous 1:M**
* Helpful report name beginning with rpt\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Linking field **not** displayed

Linking Field names in Parent\_\_\_\_\_\_\_\_\_

& Child\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Child Sum(Avg…) by Parent (***not*** a count)
* All data visible
* Appealing

# **General Guidelines**

* Appropriate data types
* Appropriate field sizes
* Appropriate indexing
* Appropriate default values
* Appropriate field captions
* Appropriate field requirement
* Appropriate input masks
* Field definitions
* Descriptive titles for reports & forms

## All materials must be professionally produced. Any hand-written or hand-drawn items will not be graded.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Grading Rubric for Project*** | *Sophisticated* | *Competent* | *Not Yet Competent* | *Unacceptable* |
| Completeness, Clarity, Organization, & Correctness(85%) | All items on the grading criteria are present and, with a few minor exceptions, correct. Project is clear, logical, & well organized. Reader easily can follow line of reasoning.  | All items on the grading criteria are present and, with a few minor, exceptions correct. Project is generally clear & well organized. A few minor points may be confusing. Reader/user recognizes any errors to be the result of oversight. | All items on the grading criteria are present and, with a few intermediate exceptions, correct. Reader/user can read & evaluate Project only with effort. Some arguments are not clear. Organization seems haphazard. Some key information is missing. | Items on the grading criteria are missing and/or there are major errors. Reader/user can read & evaluate Project only with great effort if at all. Many arguments are not clear. Organization seems lacking. Extensive key information is missing. Project evidences little study.  |
| Grammar(10%) | Sentences are complete & grammatically correct; they flow together easily. Words are chosen for their precise meaning. All words are spelled correctly. | For the most part, sentences are complete & grammatically correct; they flow together easily. With a few exceptions, words are chosen for their precise meaning. All words are spelled correctly. | Readers can follow the documentation, but they are distracted by some grammatical errors and use of slang. Some sentences are incomplete/halting, and/or vocabulary is somewhat limited or inappropriate. All words are spelled correctly. | Readers can follow very little of the documentation because they are distracted by grammatical errors, use of slang, incomplete sentences, & limited or inappropriate vocabulary. Misspelled word(s) appear in the project. |
| Style(5%) | A common style is used throughout the documentation and database applications. | Except for a few minor deviations, a common style is used throughout the documentation and database applications. | The reader/user is distracted by the variations in style used throughout the documentation and database applications. | The reader/user is distracted by wide-ranging variations in style used throughout the documentation and database applications. |

## Adapted from Cross, Using Rubrics to Provide Feedback to Students

I will use the previous six pages to record my evaluation of your project. Remember to enter the required information about the names of tables, etc. in the above grading criteria.

Your creation will be copied over this page. A ‘next page’ break was created to get this new page. Be careful not to delete the section breaks and not to change the margins.

Put your names in the header but leave in the page numbers. If you need help with Word, feel free to stop by my office for a quick tutorial.

I encourage you and your group to get started as soon as possible and to stop by my office frequently to ask questions about your project. I am happy to provide guidance so that you can have a successful learning experience and project. Even before you understand all of the words in this assignment, you can begin by finding a project situation and defining the information needs (forms and reports) of the users.