SACRAMENTO STATE UNIVERSITY
College of Business Administration

MIS 155 – 4GL Applications

P6 - Executive Information System

Points: 100   Due Date: Wednesday, May 10

P6 brings together the various components of Developer that were presented and discussed throughout the semester to complete an executive information system (EIS). Although the final design is of your own choosing, it should focus on retrieving and presenting information with the least amount of layering (i.e., menus, steps, screens, etc.) and inconvenience to the user, yet offer the flexibility to support a variety of tasks (keep in mind this is a EIS and not a TPS; thus, the requirements and expectations are different). The major components that comprise the system, an online query, report generation and graphic modeling, should function in a manner that will support semi-structured decision making tasks engaged by the user.

What is an EIS?

An executive information system differs principally from transaction processing systems (TPS) and management information systems (MIS) in its objectives. Essentially, TPS and MIS support structured decision making tasks through predetermined information formats (e.g., periodic reports, registers, etc.). In the context of Huber's three phases of decision making (decision, design and choice), the decision-maker follows a series of predefined procedures in each phase that lead to a *correct* decision. The role of a TPS or MIS is to supply correct and detail information that relates directly to a procedure or task in a timely manner (i.e., *providing the right information at the right time in the right format*).

Not all decisions fall into the structured category. In contrast to TPS and MIS, an EIS focuses on assisting its executive (management) users through semi- and unstructured decision making tasks. The methods and procedures to resolve such tasks are unknown (to some degree) due to their novelty to the organization (i.e., nonrecurring, ad hoc) and/or qualitative nature (i.e., the incorporation of qualitative factors). In the absence of methods and procedures, the executive must rely upon his/her knowledge, judgement and intuition to complete the task. The EIS supports the executive through these tasks, and does not make his/her decisions.

"An EIS is designed to facilitate the analysis of information critical to the overall operation of an organization and to provide an arsenal of tools that can support the strategic decision-making processes conducted by top executives" (Marakas, 1999). Essentially, it monitors both internal and external activities (i.e., disturbance management, entrepreneurial, resource allocation, negotiation), and provides them (executives) with various views (from broad to detailed) of the organization's performance. Two of its most common features are drill-down reports and graphs. Because an EIS is designed to satisfy the information needs of a particular executive, it

Recyclable paper. Please recycle.   *Updated: April 19, 2006*
Reduce, Reuse, Recycle

1

is a customized installation. Thus, the interface or dialogue system should be intuitive to the user. In contrast to this project, a fully implemented EIS draws upon data from different sources.

Specifications

This assignment provides you with the opportunity to incorporate many of their concepts and techniques for presenting information into a single working application. The final version will include all the components presented throughout the semester (i.e., P1-5). Figure 1 illustrates the organization and composition of the EIS.
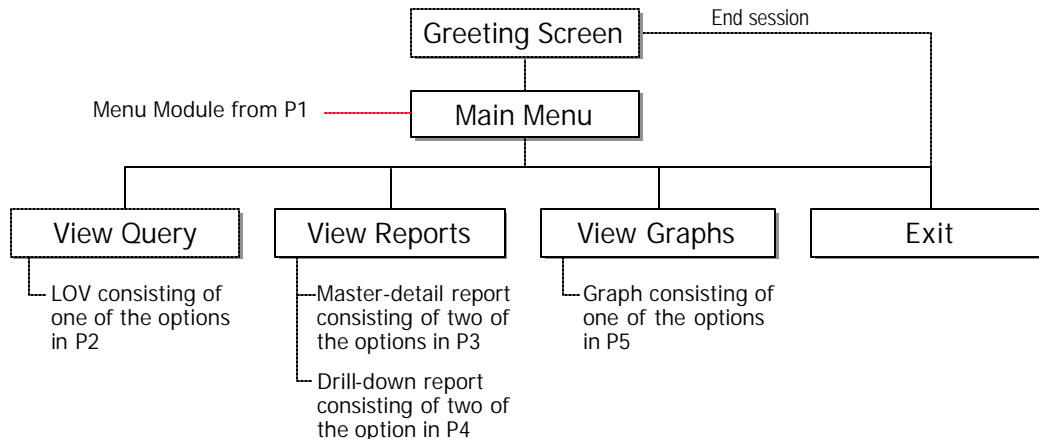

Figure 1. Organization of EIS

System Components

As illustrated in Figure 1, the user enters the system through a greeting screen. If the user chooses to continue, s/he will be presented with the main menu. Otherwise, the session will terminate. The following paragraphs describe each component.

- Greeting Screen. The greeting screen is similar to the one developed in P1. The user has the option of continuing to the main menu or exiting (i.e., terminating the session). All other forms will inherit the properties specified in P1 from this form module.

- Menu Module. Except for the greeting screen, all forms will display the same menu module. Follow the specifications of P1. All forms will inherit the menu module through the CALL_FORM from the main menu form module.

- Main Menu. Four options appear on the main menu: View Query, View Reports, View Graphs, and Exit. Refer to the P1 specifications. If the user chooses to exit the system, the application terminates; it does NOT return to the greeting screen.

- View Query. This component follows the specifications of P2 for the master-detail block and LOV (refer to P2). Implement one of the three options from P2.

- View Reports. The view reports function allows the user to view two reports, the master-

detail report and drill-down. Implement two of the four master-detail options from P3, and two of the three drill-down options from P4.

- View Graphs. The view graphs function will consist of both graph options from P5. Rather than displaying a (static) single year, the pie or bar chart year will be determined from a list item with years 2000 through 2005. As in the case of P5, display the graphs in a single chart item on the form module.

     15 Point Bonus. Include a working drill-down graph of one of the following options:

Option	First graph shows…	Drill-down shows…
1	Proportion of sales revenue or volume for all stores for a selected year	Trend over the 12 months for the store and selected year.
2	Proportion of sales revenue or volume for all music categories for a selected year. Place ~~record labels~~ music categories with annual sales revenue or volume less than 3 percent of all sales revenue or volume (for all music categories) in an "other" slice.	Trend over the 12 months for the music category and selected year.

General Specifications

Apply the following specifications to your system:

- All forms should display the same menu module and be uniform in appearance, including fonts, canvas color[1], window and canvas size and terminology. Create a property class that will allow all (other) forms to inherit these properties. The menu module should also be inherited from the main menu module through the CALL_FORM. Maximize both the form module and MDI windows.

- Apply accurate and descriptive titles and labels (e.g., category title, record label name, months, etc.) to the reports, graphs and forms.

- Appropriately format all numeric and date fields; apply an appropriate format mask.

- Aesthetically arrange the report and graphs; appearance counts.

- Follow the specifics of the individual assignments, P1 through P5.

Note. Be sure to apply the ***common sense rule*** (see P1-5). If ***you*** have difficulty understanding your displays, the user certainly isn't going to fare any better!

Warning! Following the ScreenCam and Camtasia videos and the examples used in the class

---

[1] To comply with ADA requirements, the color should be white or a very pale shade of a light color.

Recyclable paper. Please recycle.   *Updated: April 19, 2006*
Reduce, Reuse, Recycle

3

notes too closely will be a detriment to your grade. *Be creative!*

Group Activities

Group membership is strictly the choice of the individuals. The group's size can be between one and four members. Under no circumstance will the number of members exceed four. *Be sure to wisely select your members.*

Learning Objectives of the Group

Group activities offer several invaluable professional development experiences. During this assignment, please be aware of the following cognitive activities you will be exposed to and develop yourself to become a better professional person:

- The *art* of listening (i.e., listening to what other have to say)
- Negotiation, persuasion, tolerance and humility (i.e., resolving differences and accepting the outcomes in a professional manner)
- Time management and coordination (i.e., working together through the assignment of tasks)
- Creative thought activity through parallel human processing (i.e., developing synergies through meaningful interactions among all group members)
- Leadership (i.e., taking responsibility for your actions and those of the group, promoting meaningful actions, setting an example for work actions and quality, bringing out the best among all group members)

Peer Assessments

The peer assessment provides an opportunity to recognize individuals who have involved themselves *beyond their share* of work (the opposite applies as well). Such effort will be recorded (i.e., added or subtracted points) to the individual's P6 grade. Peer evaluation forms will be posted under a separate document.

Tangibles

Submit the following items in an organized and professional presentation:

☑ All Developer files on 3-1/2 inch diskette, CD or USB flash memory. Be sure NOT to specify the drive and directory paths in your modules. ***Test*** *your system* from the default or working directory before submitting it. Your assignment will be graded on *what was received*, *not on what was supposed to have been submitted.*

   Warning! Check your diskettes for viruses. Any assignment with a virus will not be graded.

☑ Printouts of all reports, graphs and forms. Screen captures may be used for the graphs and forms. Print them from either a word processing or presentation (e.g., Power Point) file.

Recyclable paper. Please recycle.
Reduce, Reuse, Recycle   *Updated: April 19, 2006*

4

☑ A menu map documenting the arrangement of the system's <u>completed</u> components and their file names associated with them. This may be done as a chart in Power Point.

☑ Refer to the syllabus (pages 6-7) for other requirements.

As stated in the syllabus, no late assignments will be accepted.