CISC 4305

Project (50 Pts)

Due Date: Last Day of Classes at 11:59 PM Central (MyCampus)

Topics: Various:

Project overview:

In Computer Science, searching and sorting are the two most frequently performed tasks by professionals and end users alike. For instance, when you type a search key word on the web, thousands of online documents are ***searched*** and entries matching the key word are returned most likely ***sorted*** in the order of relevance or via other criteria. When an admission officer at a college/university wants to see the names of all the incoming freshmen, s/he may want to have access to all the students whose classification is freshman. Bursar's office may be interested in knowing all the students whose fees have not been paid in full. These are just few examples.

Professor Gang, being the friendly person that he is, has been struggling with how to keep track of his friends, acquaintances, family members, and colleagues. Furthermore, he frequently meets people but quickly forgets relevant information (name, nationality, profession, email, etc.). As a senior Computer Science Major, who just completed Data Structures and Algorithms, he turned to you (team of 2) to resolve this problem. You are to develop a software application named **IKGContacts** that accepts (either from key board or input file) a Title, full name, nationality, state, country (of residence), email, phone, and race. Your software should incorporate a functionality to use any of the 8 fields as a sort/search criteria. For instance, I should have the freedom to sort the data by emails (ascending order), title, state, etc.

Tips to getting started:

- Get your team together and share this exciting news
- Put together a project plan after getting specifications (see above)
- Devise a schedule, including team meetings, and note the due dates.

Project details:

Project assignments will be performed according to the groups formed in the class. Group members will be asked to rate the level of effort expended by other team members. Results may be used as a factor in determining an individual's project grade.

Teams are expected to perform the following as minimum requirements:

- Create a master document (Word or PDF) that addresses and explains all the major requirements.
- Partition the work among the two team members
- With respect to Software Life Cycle (development, use and maintenance) list and discuss all of the key software development phases (Analysis, Design, Implementation, and Testing – ADIT) that you team undertook in completing this project (include pictures and diagrams when necessary).
- Be prepared to submit your project no later than **11.59 PM** on the last day of classes.
- See "Project Guidelines" for specific deliverables.

Project Guidelines and Deliverables

- Showcase your understanding of the key topics learned over the semester:
  a. Demonstration your understanding of lists
  b. Demonstrate your understanding of pointers
  c. Demonstrate your understanding of searching/sorting algorithms

- Project Deliverables include:
  a. Project file that include all the associated files (Word/PDF, Image, UML, etc.)
  b. Various development phases (see Programming Example on page 576)
  c. Diagrams or images
  d. Any other items your team used in the project planning and implementation phase (a-d must be included in a zip folder).

- **NO** LATE PROJECTS OR PROJECT PIECES WILL BE ACCEPTED. **NO** SECOND CHANCES FOR WRONG PROGRAM/PROJECT, NON-WORKING PROGRAM, OR MISSING PIECE, WILL BE GIVEN.
- One team member may submit your project
- See the Grading Rubric for Point Value:
- All diagrams must include at least:
  a. Name and purpose
  b. Clear relationship to the project and requirements

CISC4305 – Data Structures & Algorithms Final Project Deliverables/Grading Rubric.

Criteria	Ratings				Pts
Submission	All related files submitted **5 pts**	Some related files missing – **0 pts**			**5pts**
Uniqueness /Working	Final project is clearly unique and clearly address the minimum requirements laid out in Overview. **15 pts**	Final project includes some aspect of uniqueness, works but does not clearly meet the minimum requirements **10 pts**	Final project includes very minor aspect of uniqueness, compiles but does not work as described **5 pts**	Final project does not includes any aspect of uniqueness and does not compile or run **0 pts**	**15pts**
Rigor	Final project clearly shows rigor and includes extensive coding/program, maximum effort necessary for a final project, uses key searching/sorting algorithms, and works as planned **20 pts**	Final project shows some rigor and includes reasonable coding/program, maximum effort necessary for a final project, uses key searching/sorting algorithms, and somewhat works as planned **10 pts**	Final project shows no rigor but includes some coding/program, compiles but does not produce correct results **5 pts**	Final project shows no rigor, coding/program, and does not compile **0 pts**	**20 pts**
Research/ Plan	Final project was well researched/planned, using at least 5 relevant topics/concepts covered during the course of the semester **5 pts**	Final project was somewhat researched/planned, using at least 3 relevant topics/concepts covered during the course of the semester **2 pts**	Final project was not researched/planned at all, used no topics/concepts covered during the course of the semester **0 pts**		**5pts**
Write-up	The Final project document was well written showing/discussing all of the development phases and other aspects **5 pts**	The Final project document wasn't well written and only showed/discuss some of the development phases and aspects **2 pts**	The Final project document wasn't well written/submitted and showed/discuss none of the development phases and aspects **0 pts**		**5pts**
Total Points: 50					