Assignment

File processing and objects

The purpose of this assignment is to eventually get you to understand serialization. Serialized classes are classes that their instantiated objects can be printed to files.

There are a few phases in accomplishing the task of serialization.

Phase 1. C File processing

In this phase, you are required to create a text based CRM. Customer Relations Management programs are designed to keep track of business leads and current customers.

You need to create a random file (and a structure) that keeps customers

1. Integer ID
2. String Phone number
3. String Name
4. String LastName
5. String Email
6. Bool Gender

You also need to create a menu to

1. Create Random file
2. Add record
3. Modify record
4. Delete Record
5. Search Record
6. Exit

Check the sanity of a shut down:

You need to make sure your users choose exit from the menu to exit the program. In any other occasion, you consider that the program crashed ungracefully and you need to report this to the user next time he/she runs the program.

To do this, at the start of the program you check the value of the only record in the sequential file, if the word “ABNORMAL” is saved in the file or if the sequential file does not exist (for the first time ever running the program), that means the program has crashed, you need to give user a heads up by printing a message. Immediately after you should save the word “ABNORMAL” in the sequential file. ONLY when the user chooses exit, you overwrite the sequential file with the word “NORMAL”.

Create Random file:

Must create the file if the file does not exist and or if you decide to do it by instructing through keyboard. Consider that you have maximum of 1000 employees.

Add record:

Must get data from keyboard and save in the file, proper messaging should be provided to let the user know that process was done successfully.

Edit record:

Must get the ID first, retrieve the record and show on screen, ask user to input again and save it in the file again with corrected data. Proper messaging should be provided to let the user know that process was done successfully.

Delete Record

Must get the ID first, retrieve the record and show on screen, ask for confirmation to delete, once confirmed, replace the record with blank record. Proper messaging should be provided to let the user know that process was done successfully.

Search Record:

Must get the ID first, retrieve the record and show on screen.

Rubrics for Phase 1:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Seq File implementation | Add record | Edit Record | Delete Record | Menu And Loop | Check for existing random |
| Well implemented 20% | Well implemented 20% | Well implemented 20% | Well implemented 20% | Well implemented 10% | Well implemented 10% |
| Have bugs 10% | Have bugs 10% | Have bugs 10% | Have bugs 10% | Have bugs 5% | Have bugs 5% |
| Not compiling  0% | Not compiling  0% | Not compiling  0% | Not compiling  0% | Not compiling  0% | Not compiling  0% |