

UMass Boston CS 240
Homework 5
Due on May 1 at 5 PM (EDT)

Information:

- Required comment on top of the program file, please fill the following details:
 - o Your Name,
 - o Date when created file,
 - o How you approached the solution
 - o Challenges faced.
- Following homework files and the output screenshots need to be submitted on **Gradescope:**
The filenames are case sensitive, kindly put all filenames as lowercase.
 - o program1.c – 45 points
 - o program2.c – 45 points
 - o readme.txt – 10 points
 - Students worked with:
 - Books/Websites consulted:
 - Time spent on homework (hours):

Homework programs (2):

1. program1.c - Create a C program that reads a CSV file with id, name, and balance. The program should calculate and output the total number of accounts, total balance across all accounts, and the account numbers and balances of the top 5 accounts with the highest balances in descending order.

Input File:

https://cs.umb.edu/~aaditya/sample_code/lecture-15/accounts.csv

Output:

Total accounts: 5

Total balance: \$35,500.00

Top 5 accounts:

Account name_1: \$12,000.00

Account name_2: \$10,000.00

Account name_3: \$7,500.00

Account name_4: \$5,000.00

Account name_5: \$2,000.00

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2. program2.c – The task is to extend an existing phonebook program given in class, adding new options to the menu to import and export phonebook records from a CSV file or vice versa.

Program to extend: https://cs.umb.edu/~aaditya/sample_code/lecture-15/13_phonebook.c

To add the import and export functionality, you will need to write code to read and write CSV files. The CSV files should contain the contact details in a specific format, such as:

CSV Format:

Name, Phone Number

John Doe, 1234567890

Jane Smith, 0987654321

The new menu options should be like:

1. Add Contact
2. Delete Contact
3. Search Contact
4. Display All Contacts
5. Import from CSV
6. Export to CSV
7. Exit