**Data Structures and Algorithms**

**Lab Report**

**Lab01**



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| Class | Data Structures and Algorithms CSC211 (**BCE-3B**) |
| Instructor’s Name | Dilshad Sabir |

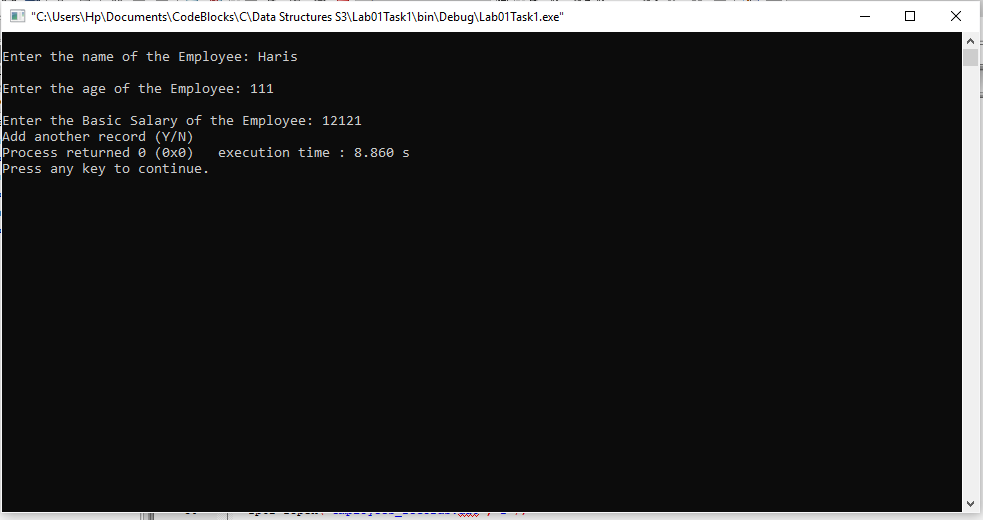
**In Lab Tasks**

**Task 1:**

**Build and run the program given in Code Listing 1.**

**Solution:**

After running the program in codeblocks, solution is shown below.



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**Task:2**

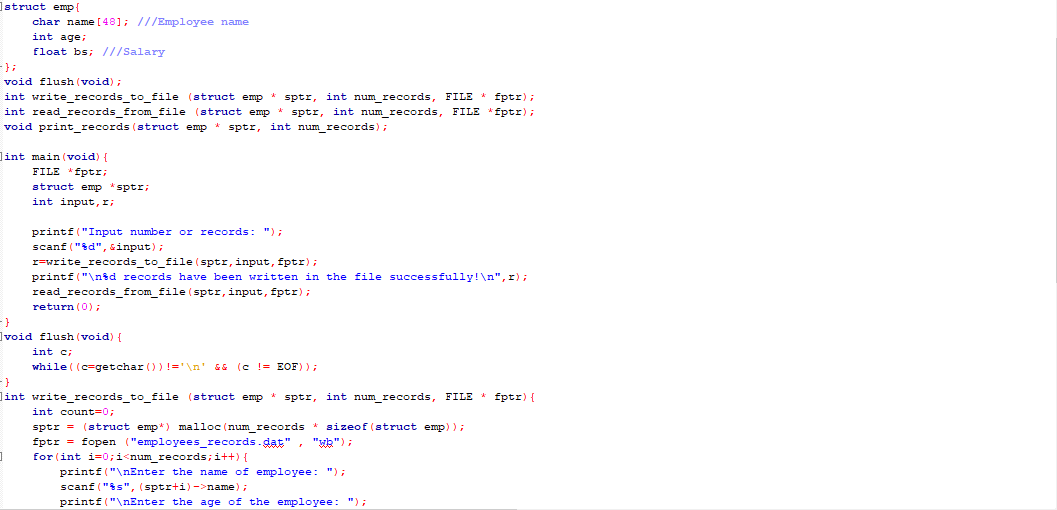
The program in Code Listing 1 writes a single record to the file. Modify it, to use a function ‘**write\_records\_to\_file**’ with following prototype:

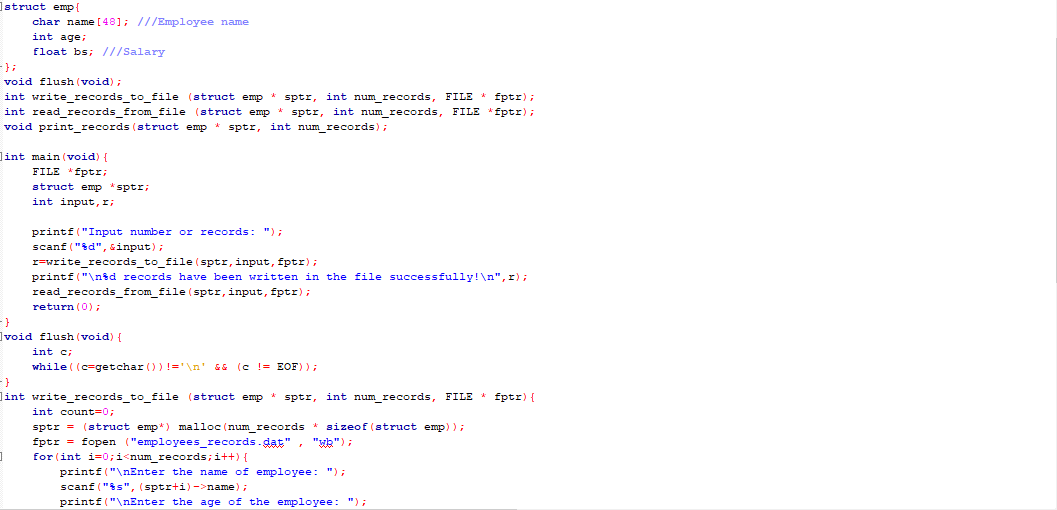
int **write\_records\_to\_file** (struct emp \* sptr, int num\_records, FILE \* fptr)

This function should write **’num\_records’** number of structures from a dynamically allocated memory pointed to by ‘**sptr’** to a file pointed to by **‘fptr’**. It should return the number of structures successfully written to the file.

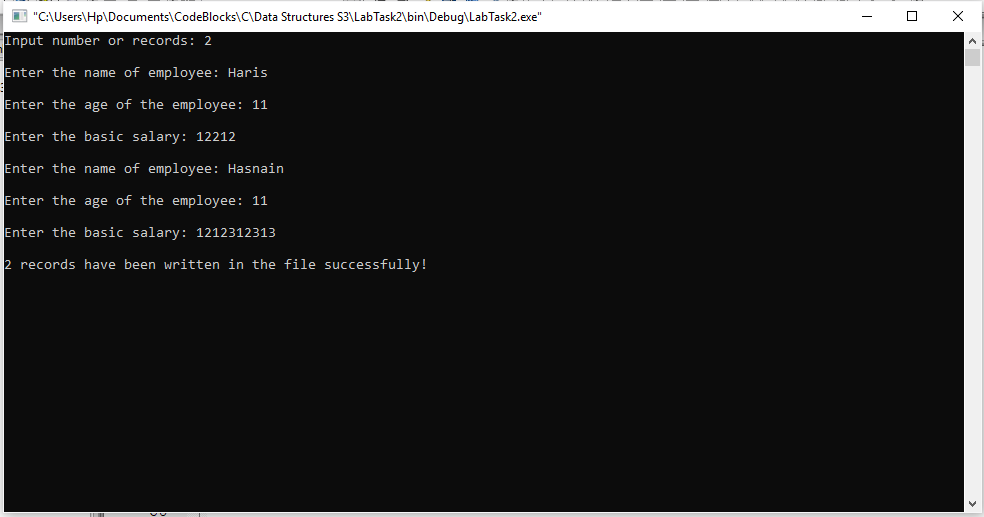
Solution:

I am attaching my code below, for this program,





The result for this program is shown below,



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**Task:3**

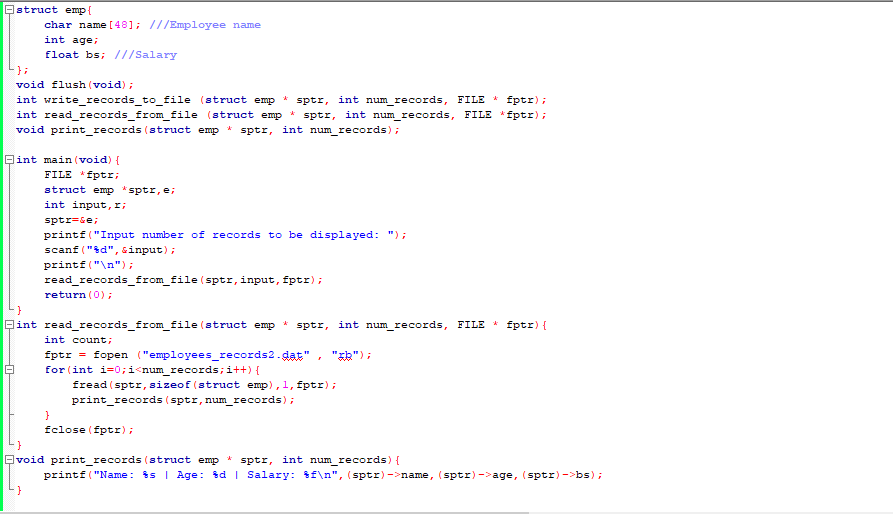
Write functions ‘read\_records\_from\_file’, and ‘print\_records’ with following prototypes:

int **read\_records\_from\_file**(struct emp \* sptr, int num\_records, FILE \* fptr)

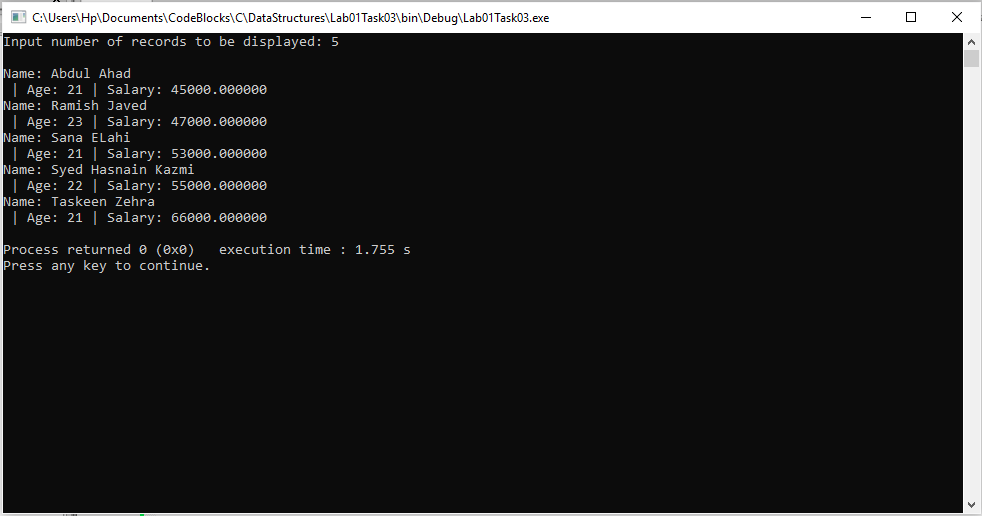
void **print\_records**(struct emp \* sptr, int num\_records);

Solution:

I am attaching my code below, for this program,



The result for this program is shown below,



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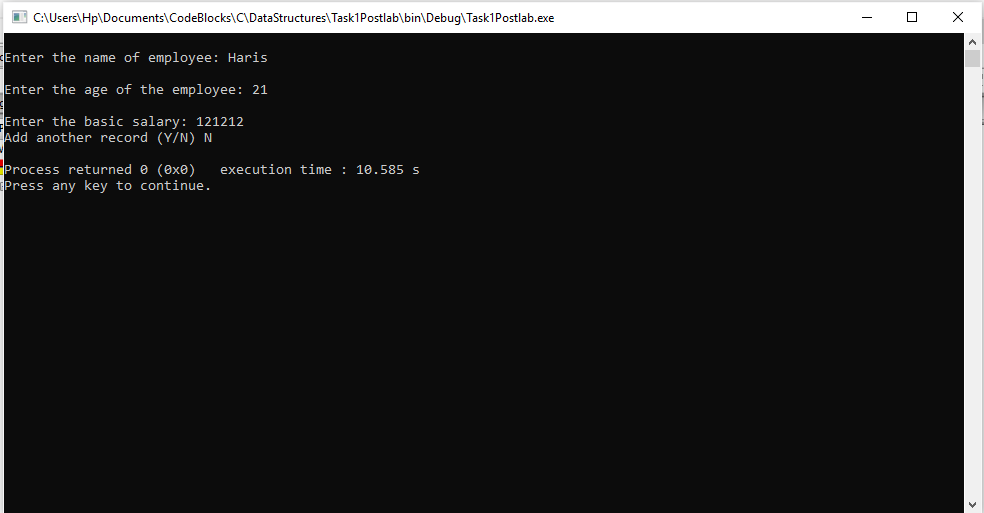
POST LAB

Question:

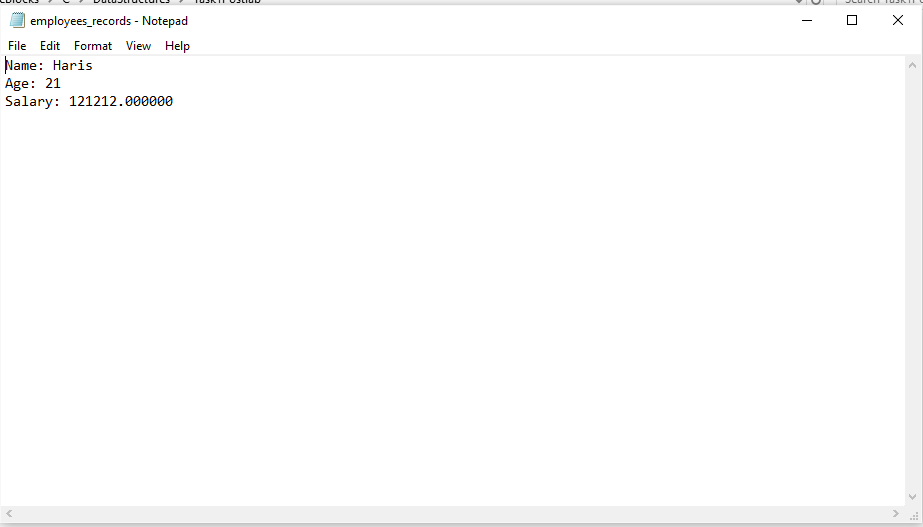
The structures that you write in a file using ‘fwrite()’ are written in the binary format and cannot be viewed in a text editor properly. Your task is to write the contents of these structures in the text format so that the contents may be viewed in a text editor.

Solution:

When we run our code and input data,



The data is stored in notepad in text format,



\_\_\_\_\_\_THE END\_\_\_\_\_\_\_\_