

Assessment for Introduction to Data Structures.

Task

The follow is to be completed to verify your learning. You should start with an empty project and copy in the given code.

1. Create a program that uses two functions to enter the account information and then print out the account information. The main function is given, you will need to create the ReadInput and WriteOutput functions. Here is an example of a run of the program

```
.....

Enter number of customers: 2

Enter data for 1 account holder:
Enter <name>: Bob

Enter <accNo>: 123

Enter <accType>: c

Enter <balance>: 34

Enter pdate<dd mm yy>: 02 03 20

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Enter data for 2 account holder:
Enter <name>: Bill

Enter <accNo>: 124

Enter <accType>: s

Enter <balance>: 23

Enter pdate<dd mm yy>: 02 04 20

-----
-----
Name: Bob
Acc Num: 123
Account Type: c
Balance: 34
Date <ddmmyy>: 2/3/20
-----
Name: Bill
Acc Num: 124
Account Type: s
```

Balance: 23
Date <ddmmyy>: 2/4/20

Here is the code:

```
#include <ti/devices/msp432p4xx/driverlib/driverlib.h>

/* Standard Includes */
#include <stdint.h>
#include <stdbool.h>
// fn decl
void ReadInput(int n);
void WriteOutput(int n);
// struct declaration
struct date
{
    int dd;
    int mm;
    int yy;
};
struct Account
{
    int accNo;
    char accType;
    char name[20];
    int bal;
    struct date pdate; // date of payment
};
struct Account cust[100]; // declare an array of 100 customers

void main()
{
    int n;
    int i;
    printf("Enter number of customers: ");
    scanf("%d", &n);
    // read data into structure
    for (i=0;i<n;i++)
        ReadInput(i);
    //write output
    for (i=0;i<n;i++)
        WriteOutput(i);
} // end of main
// fn definitions
```

2. Now create a simpler account structure that has an id, name, and balance. Create an array of this data type. Create a function to enter a set of accounts. Create a function to print out the data. Finally, create a function that will sort the array of accounts by the balance.

Here is an example of the Output:

Enter no of account holders<n>
3

Enter data for customer[1]
Enter <name>: Bob

Enter <accNo>: 124

Enter <balance>: 34

Enter data for customer[2]
Enter <name>: Biff

Enter <accNo>: 127

Enter <balance>: 30

Enter data for customer[3]
Enter <name>: Jane

Enter <accNo>: 130

Enter <balance>: 25

Details of the account sorted on balance
Customer[1]
Name: Bob
AccNo: 124
Balance: 34

Customer[2]
Name: Biff
AccNo: 127
Balance: 30

Customer[3]
Name: Jane
AccNo: 130
Balance: 25

Compile, Build, and debug your programs.

Take a Screen shot showing the terminal output.