```cpp
/*****************************************************************************
 * AUTHOR       : Faris Hijazi
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 * ASSIGNMENT 1 : Functions and Arrays
 * CLASS        : CS1A
 * SECTION      : MW 7:30PM
 * DUE DATE     : 02/15/19
 *****************************************************************************/
/*****************************************************************************
 * Functions and Arrays
 * ---------------------------------------------------------------------------
 * This program will receive an input file with the names, ids, and balances
 * of users, the program will prompt the user with a menu which will let the user
 * see the largest/smallest balance sum of all balances average of all balances
 * or search the array for a specific person. The results of this are output to
 * the specified output file.
 * ---------------------------------------------------------------------------
 * INPUT:
 *          input file and menu option
 * OUTPUT:
 *          output file
 *****************************************************************************/
#include "header.h"

int main()
{
    const int AR_SIZE = 10;

    ofstream oFile;        //OUT        - output file variable
    string outfile;        //IN         - name of output file
    string name[10];       //OUT        - name array
    int id[10];            //OUT        - id array
    float balance[10];     //OUT        - balances array
    int menuInput;         //IN & CALC  - menu item chosen
    int searchIndex;       //OUT        - index of search item
    bool nameFound;        //CALC       - name found/not found
    string nameSearch;     //IN         - name to search for
    menuoption menuChoice; //IN         - menu item chosen

    printHeader(cout, 'A', "Functions and Arrays", 1, "Faris Hijazi");

    input(outfile, name, id, balance, AR_SIZE);

    oFile.open(outfile);

    printHeader(oFile, 'A', "Functions and Arrays", 1, "Faris Hijazi");

    menu();
    cin >> menuInput;
    cin.ignore(1000, '\n');
    menuChoice = menuoption(menuInput);

    while(menuChoice > 0 && menuChoice < 6)
    {
        switch(menuChoice)
        {
            case EXIT           : break;
```

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58
59              case LARGERBALANCE  : searchIndex = searchBalance(LARGERBALANCE, balance,
    AR_SIZE);
60                                    cout  << "\nFinding the larger balance…\n\n";
61                                    oFile << "Larger Balance:\n";
62                                    oFile << left << setw(9) << "ID #"
63                                          << setw(25) << "NAME" << "BALLANCE DUE\n";
64                                    oFile << left << setw(9) << "----"
65                                          << setw(25) << "--------------------" <<
    "-----------\n";
66                                    oFile << left << setw(9) << id[searchIndex] << setw(25)
67                                          << name[searchIndex];
68                                    oFile <<  "$" << setprecision(2) << right << fixed <<
    setw(10) << balance[searchIndex]
69                                          << endl << endl << setprecision(6);
70                                    oFile.unsetf(ios::fixed);
71                                    break;
72
73              case SMALLERBALANCE : searchIndex = searchBalance(LARGERBALANCE, balance,
    AR_SIZE);
74                                    cout  << "\nFinding the smaller balance…\n";
75                                    oFile << "Smaller Balance:\n";
76                                    oFile << left << setw(9) << "ID #"
77                                          << setw(25) << "NAME" << "BALLANCE DUE\n";
78                                    oFile << left << setw(9) << "----"
79                                          << setw(25) << "--------------------" <<
    "-----------\n";
80                                    oFile << left << setw(9) << id[searchIndex] << setw(25)
81                                          << name[searchIndex];
82                                    oFile <<  "$" << setprecision(2) << right << fixed <<
    setw(10) << balance[searchIndex]
83                                          << endl << endl << setprecision(6);
84                                    oFile.unsetf(ios::fixed);
85                                    break;
86
87              case SUM            : cout  << "\nFinding the larger sum…\n";
88                                    oFile << "Sum of Balance for all persons:\n";
89                                    oFile << setprecision(2) << fixed;
90                                    oFile << "$" << setw(10) << sumAvg(SUM, balance, AR_SIZE);
91                                    oFile << endl << endl;
92                                    oFile << setprecision(6);
93                                    oFile.unsetf(ios::fixed);
94                                    break;
95
96              case AVERAGE        : cout  << "\nFinding the larger average…\n";
97                                    oFile << "Average of Balance for all persons:\n";
98                                    oFile << setprecision(2) << fixed;
99                                    oFile << "$" << setw(10) << sumAvg(AVERAGE, balance,
    AR_SIZE);
100                                   oFile << endl << endl;
101                                   oFile << setprecision(6);
102                                   oFile.unsetf(ios::fixed);
103                                   break;
104
105             case SEARCH         : cout << "\nWho do you want to search for (enter done to
    exit): ";
106                                   getline(cin, nameSearch);
```

```
107
108                                     searchIndex = search(LARGERBALANCE, name, AR_SIZE,
    nameSearch, nameFound);
109
110                                     if(nameFound)
111                                     {
112                                         oFile << "Search Name:\n";
113                                         oFile << left << setw(9) << "ID #"
114                                               <<setw(25) << "NAME" << "BALLANCE DUE\n";
115                                         oFile << left << setw(9) << "----"
116                                               <<setw(25) << "--------------------" <<
    "-----------\n";
117                                         oFile << left << setw(9) << id[searchIndex] << setw(25)
118                                               << name[searchIndex];
119                                         oFile <<  "$" << setprecision(2) << right << fixed <<
    setw(10) << balance[searchIndex]
120                                               << endl << endl << setprecision(6);
121                                         oFile.unsetf(ios::fixed);
122                                      }
123                                     break;
124             }
125             menu();
126             cin >> menuInput;
127             cin.ignore(1000, '\n');
128             menuChoice = menuoption(menuInput);
129         }
130         return(0);
131 }
132
```