

```
*****  
* Employee Record System (ERS) *  
* Long Beach City College LBCC *  
* 4901 East Carson Street *  
* Long Beach, CA 90808 *  
*****
```

U S E R G U I D E

---



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## 1.0 GENERAL INFORMATION

### 1.1 *System Overview*

This is a Modularized Console Application. Data that reads an input file and fills appropriate arrays. Default files contain 30 records containing the following fields: First Name, Last Name, Middle Initial, Employee ID#, State, ZIP, hours worked, and rate of pay. After proper transfer of data this program can then further do the following :

- ✓ Data can then be sorted by ID# or Last Name.
- ✓ Rapid reporting of the highest and the lowest paid employees.
- ✓ Summaries of the total hours worked and pay.
- ✓ Individual records can be searched by Last name or ID#.
- ✓ Reports can be generated.

This system was built with C++ to run on a Windows® based machine with controlled access. Though this program is operational there are some known bugs.

### 1.2 *Project References*

Microsoft® Visual C++ Express Edition 2008

C++ PROGRAMMING “From Problem Analysis to Program Design” by D.S. Malik

And support from <http://cbisdl.lbcc.edu/moodle/course/view.php?id=67>

### 1.3 *Authorized Use Permission*

*The contents of the Employee Record System (ERS) are available for individual, educational, and research purposes. Any commercial use of ERS content requires permission from the student. See below for additional guidelines for individual collections. Use of the ERS is governed by the terms and conditions of the licenses and agreements between the professor and the student. Individual agreements between LBCC and the student take precedence over the general guidelines stated here. If you have questions about permitted uses for any content on ERS in these pages, please contact madeup@email.com.*

### 1.4 *User Access*

Upon access the full functionality of the ERS is password protected. Contact the system administrator to have a user name and password created.

## 2.0 Using the Application

This chapter will cover how to use the program

### 2.1 Start Up

The Employee Record System (ERS) is set up in a folder containing:

- an executable file      -ERS\_2010.exe
- a user list                -userDir.txt                (future version to use protected database)
- an access log            -accessLog.txt            (future version to use \*.log ?)
- an error log             -errorLog.txt             (future version to use \*.log ?)
- 2 data files             -taxData.txt             (future version to use \*.dat?)  
                              -inputData.txt            (may be named accordingly)
- a report file            -report.txt                (may be named accordingly)

*for the purpose of demonstration in this manual, these files will be located and created in G:\ERS\..*

#### 2.1.a Run

Run the executable ERS\_2010.exe. You will be welcomed with a login screen.

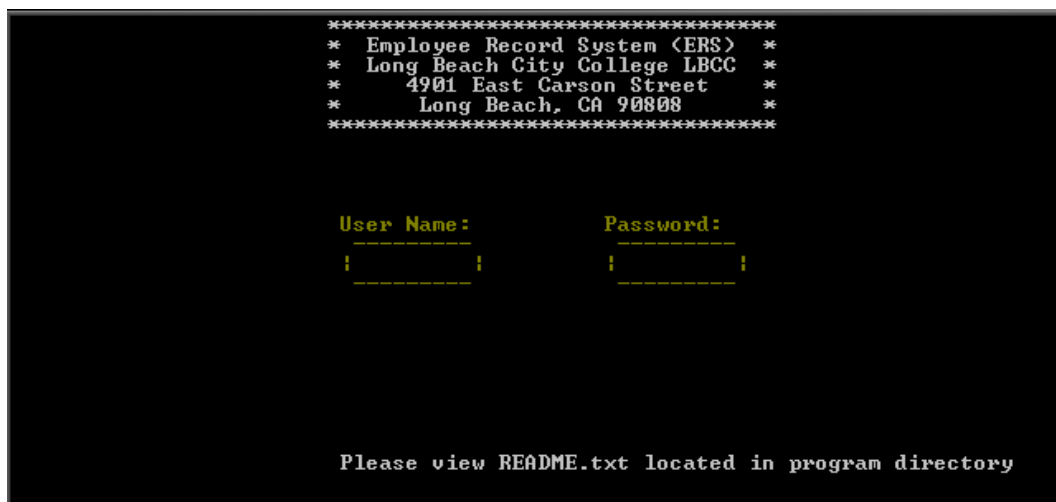


Figure 0-1

## 2.1.b Username/Password

There are 3 attempts allowed to enter the correct keys to log into the ERS.

```
User Name:      Password:
-----
|_          |      |          |
-----

Invalid User-Name or password
Try entering the information again
1 of 3 attempts remaining!
```

```
*****
* Employee Record System (ERS) *
* Long Beach City College LBCC *
* 4901 East Carson Street      *
* Long Beach, CA 90808        *
*****

User Name:      Password:
-----
|lweef          |      |***          |
-----

Invalid User-Name or password
Try entering the information again
3 of 3 attempts remaining!

Permission to access the system denied!
Please see your administrator for user-name and password help.

Program will terminate! Please view README.txt located in program directory
Press any key to continue . . . _
```

The ERS uses encryption to handle the passwords in the user list ( if this data is altered the user may need to see the system administrator to reset the password. \*current known vulnerability in this version)

If the username and password are correct, *success!* And on to the program..

```
User Name:      Password:
-----
|!taziz          |      |!*****          |
-----

Login successful...

Press any key to continue . . .

Please view README.txt located in program directory
```

We will be using –

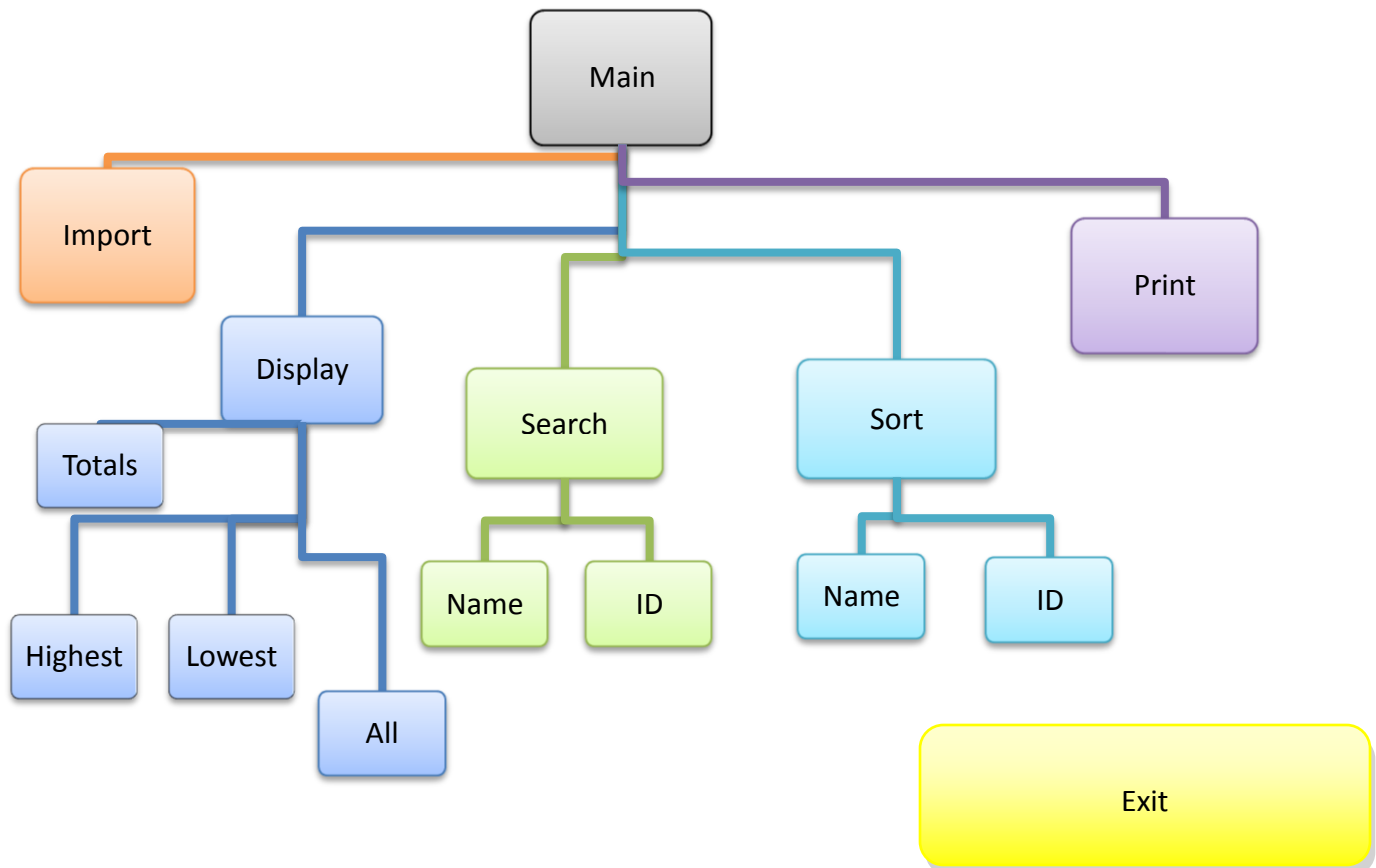
Username: **taziz**

Password: **password**

- *for this demonstration.*

## 2.2 Menu Structure

The menus used in the ERS are colored to help identify which function of the system the user is accessing. In all menus the user has the option to return to the previous menu or exit the program.



### 2.2.a Main Menu

```

  MAIN MENU
  =====
  1. IMPORT
  2. DISPLAY
  3. SEARCH
  4. SORT
  5. PRINT
  6. EXIT
  -----

  Please enter your selection: _

  - Description
  - loads file to be processed
  - shows records from import file
  - searches records per user
  - sorts records per user
  - prints file to user's desktop
  - exits program
  
```

## 2.2.b Display Menu

```
      D I S P L A Y
=====

1. LOWEST SALARY
2. HIGHEST SALARY
3. TOTAL HOURS & INCOME
4. ALL RECORDS
5. RETURN to MAIN MENU
6. EXIT
-----

Please enter your selection:
```

## 2.2.c Search Menu

```
      S E A R C H
=====

1. by LAST NAME
2. by ID
3. RETURN to MAIN MENU
4. EXIT
-----

Please enter your selection: _
```

## 2.2.d Sort Menu

```
      S O R T
=====

1. by LAST NAME
2. by ID
3. RETURN to MAIN MENU
4. EXIT
-----

Please enter your selection:
```

## 2.2.e Import/Print\*

\*Both the Import (1)  
and the Print (5) Option  
do not use menu screens.  
The user is prompted directly  
from the main menu.

## 2.3 Read Employee Records – Importing

```

      MAIN MENU      - Description
      =====
      1. IMPORT      - loads file to be processed
      2. DISPLAY     - shows records from import file
      3. SEARCH      - searches records per user
      4. SORT        - sorts records per user
      5. PRINT       - prints file to user's desktop
      6. EXIT        - exits program
      =====

      Please enter your selection: 1
      Enter input filename: badname
  
```

The Import option allows the user to load the data into the system. At this time the tax data will also be loaded. If there is a problem with the tax document, it will not be calculated with the NET column. All documents should be contained in the same folder otherwise this may cause some errors. The current version allows multiple files to be loaded (current known bug – records do not cross check). The ERS will remove bad data and mark in error log (known bug – system does not handle missing data, thought it will process remaining data causing erroneous errors)

If the file cannot be found in the root folder the user will be prompted to enter a filename until the file is found. Future version will have an escape from this loop. When a file is found the user will be notified of the number of records containing bad data.

```

      Cannot Open the input file.
      Please try again...
      Enter input filename:
      Enter input filename: finaldata
      FANTASTIC! Your file was found.
      C:\Users\Alias None\Desktop\finaldata.txt
      Cannot Open the input file.
      Please try again...
      Enter input filename: finaldata
      FANTASTIC! Your file was found.
      C:\Users\Alias None\Desktop\finaldata.txt
      Press any key to continue . . .
      2 records contain bad data!
      Press any key to continue . . .
  
```

NOTE (All errors are logged and all successes are logged from the import option under the user name to maintain transparency and help IT locate errors.)



## 2.4 Display Employee Records

The display option offers various requests for the user to display.

### 2.4.a Lowest Salary

This option offers to display the record with the lowest salary.

### 2.4.b Highest Salary

This option offers to display the record with the highest salary.

Both options, the lowest (2.4.a) and the highest 2.4.b), display the entire record below the Display Menu screen as shown below.

```

      D I S P L A Y
      =====
      1. LOWEST SALARY
      2. HIGHEST SALARY
      3. TOTAL HOURS & INCOME
      4. ALL RECORDS
      5. RETURN to MAIN MENU
      6. EXIT
      -----

      Please enter your selection: 2

      FIRST   LAST      I    ID #  STATE  ZIP    HOURS  RATE   NET
      -----
      Joseph  Lopes      0    100015  CA    90808    50   100.00  5000.00
      Press any key to continue . . .
  
```

### 2.4.c Totals

Totals are also displayed below after calculation as such:

```

      D I S P L A Y
      =====
      1. LOWEST SALARY
      2. HIGHEST SALARY
      3. TOTAL HOURS & INCOME
      4. ALL RECORDS
      5. RETURN to MAIN MENU
      6. EXIT
      -----

      Please enter your selection: 3

      Total hours worked and total cost of all employees =
      -----
                        Totals hours worked :    1305.00
                        Overall cost : $ 38305.90
      -----
      Press any key to continue . . .
  
```

## 2.4.d All Records

The user may also display a formatted list of all records as they are currently sorted (see section 2.6 Sort Records) The records are displayed on a cleared screen formatted as they would be saved in an output file (see section 2.7 – Save Records).

| FIRST   | LAST        | I | ID #   | STATE | ZIP   | HOURS | RATE  | NET     |
|---------|-------------|---|--------|-------|-------|-------|-------|---------|
| Moshiur | Ahmed       | A | 100001 | CA    | 90805 | 40    | 12.50 | 500.00  |
| Tasmia  | Amaat       | B | 100002 | CA    | 90706 | 35    | 25.60 | 896.00  |
| Victor  | Barboza     | C | 100003 | CA    | 90706 | 42    | 30.00 | 1260.00 |
| Carlos  | Detorres    | D | 100004 | CA    | 90804 | 50    | 20.45 | 1022.50 |
| Tyree   | Ek          | E | 100005 | CA    | 90755 | 60    | 15.60 | 936.00  |
| Amine   | El-Maziati  | F | 100006 | CA    | 90815 | 20    | 9.75  | 195.00  |
| Loubna  | El-Maziati  | G | 100007 | CA    | 90815 | 25    | 10.50 | 262.50  |
| Theresa | Eyssallenne | H | 100008 | CA    | 90715 | 40    | 20.00 | 800.00  |
| Craig   | Griffith    | I | 100009 | CA    | 90804 | 40    | 45.00 | 1800.00 |
| Rodney  | Hallett     | J | 100010 | CA    | 90808 | 43    | 25.25 | 1085.75 |
| Andrew  | Hegstrom    | K | 100011 | CA    | 90808 | 45    | 13.50 | 607.50  |

The format fields are non changing. Please see the system administrator if there are any discrepancies in the names used for the institution or company for which the ERS is installed.

## 2.5 Search Records

Searching records behaves much like that of the Display Records (2.4.a-b) Highest /Lowest. The Record sought is displayed below the menu as the entire record. If by Name results in more than one\* result, the user will be notified and the last result found by the system will be displayed. The user will be suggested to use ID search method instead. ( \*known bug – future version to display all results.)

All searches found or not are recorded in the access log.

Searches that result in not found will notify user and return the user to the search menu. See next page.

```

      S E A R C H
=====
  1. by LAST NAME
  2. by ID
  3. RETURN to MAIN MENU
  4. EXIT
=====

Please enter your selection: 1

Please Enter a Last NAME : _

```

```

      S E A R C H
=====
1. by LAST NAME
2. by ID
3. RETURN to MAIN MENU
4. EXIT
-----

Please enter your selection: 1

Please Enter a Last NAME : badLAST
No record found!
Press any key to continue . . .

```

```

      S E A R C H
=====
1. by LAST NAME
2. by ID
3. RETURN to MAIN MENU
4. EXIT
-----

Please enter your selection: 2

Please Enter Employee ID : 1000000
No record found!
Press any key to continue . . .

```

```

      S E A R C H
=====
1. by LAST NAME
2. by ID
3. RETURN to MAIN MENU
4. EXIT
-----

Please enter your selection: 1

Please Enter a Last NAME : Reed

FIRST   LAST      I      ID #  STATE  ZIP    HOURS  RATE   NET
-----
Ricky   Reed        Z      100026  CA     90221   40     11.50  460.00
Press any key to continue . . . _

```

```

      S E A R C H
=====
1. by LAST NAME
2. by ID
3. RETURN to MAIN MENU
4. EXIT
-----

Please enter your selection: 1

Please Enter a Last NAME : El-Maziati
More than one record found. Please try search by ID
Press any key to continue . . .

FIRST   LAST      I      ID #  STATE  ZIP    HOURS  RATE   NET
-----
Loubna  El-Maziati  G      100007  CA     90815   25     10.50  262.50
Press any key to continue . . .

```

## 2.6 Sort Records



Sorting Records does just that – SORT.

A User can sort alphabetically by last name or ascending numerically by ID number.

Once Records have been sorted they cannot be re-unsorted. They will remain as sorted until another sort option has been executed.

## 2.7 Save Records

| FIRST    | LAST        | I | ID #   | STATE | ZIP   | HOURS | RATE   | NET     |
|----------|-------------|---|--------|-------|-------|-------|--------|---------|
| Moshiur  | Ahmed       | A | 100001 | CA    | 90805 | 40    | 12.50  | 500.00  |
| Tasmia   | Amaat       | B | 100002 | CA    | 90706 | 35    | 25.60  | 896.00  |
| Fady     | Attia       | X | 100024 | CA    | 90706 | 40    | 28.00  | 1120.00 |
| Victor   | Barboza     | C | 100003 | CA    | 90706 | 42    | 30.00  | 1260.00 |
| Carlos   | Detorres    | D | 100004 | CA    | 90804 | 50    | 20.45  | 1022.50 |
| Sopha    | Dip         | Y | 100025 | CA    | 90713 | 40    | 28.00  | 1120.00 |
| Tyree    | Ek          | E | 100005 | CA    | 90755 | 60    | 15.60  | 936.00  |
| Amine    | El-Maziati  | F | 100006 | CA    | 90815 | 20    | 9.75   | 195.00  |
| Loubna   | El-Maziati  | G | 100007 | CA    | 90815 | 25    | 10.50  | 262.50  |
| Theresa  | Eyssallenne | H | 100008 | CA    | 90715 | 40    | 20.00  | 800.00  |
| Faycal   | Ferhat      | C | 100029 | CA    | 90814 | 25    | 65.00  | 1625.00 |
| Craig    | Griffith    | I | 100009 | CA    | 90804 | 40    | 45.00  | 1800.00 |
| Rodney   | Hallett     | J | 100010 | CA    | 90808 | 43    | 25.25  | 1085.75 |
| Andrew   | Hegstrom    | K | 100011 | CA    | 90808 | 45    | 13.50  | 607.50  |
| Corey    | James       | L | 100012 | CA    | 90815 | 40    | 20.00  | 800.00  |
| Farsio   | Kottab      | M | 100013 | CA    | 90755 | 40    | 20.00  | 800.00  |
| Peter    | Lon         | N | 100014 | CA    | 90755 | 40    | 60.00  | 2400.00 |
| Joseph   | Lopes       | O | 100015 | CA    | 90808 | 50    | 100.00 | 5000.00 |
| Arley    | Lozada      | P | 100016 | CA    | 90280 | 50    | 30.40  | 1520.00 |
| Ana      | Moreno      | Q | 100017 | CA    | 90805 | 55    | 14.50  | 797.50  |
| Chris    | Myers       | R | 100018 | CA    | 90802 | 57    | 30.00  | 1710.00 |
| Thanakom | Paiboolsilp | S | 100019 | CA    | 90805 | 56    | 45.75  | 2562.00 |
| Leonardo | Priego      | T | 100020 | CA    | 90703 | 77    | 23.00  | 1771.00 |

The print option will create a desired named .txt file located in the ERS folder. It formats the current data as per Figure – Left

The print file prints the data similar to screen display from the display option. Any sorting prior to print will be stored for the user's requirements.