Computer Programming I — Homework Assignment #10

Design a Simplified Cashbox KTV Reservation System

**Functions:**

1 Login: Input an ID number and password. If the ID number does not exist in the file Members.dat or the password is wrong, then login fails.

1.1 Make Reservation: Insert a new record into the binary file ReservationInfo.dat.

1.2 Reservation Enquiry/Canceling: Display all records in the file ReservationInfo.dat for the current user, then let the user choose one of them to delete.

2 Registration: Insert a new record into the binary file Members.dat. Input an ID number, name and password. If the ID number already exists in the file Members.dat, then registration fails.

**Requirements:** Global variables, except brancheNames, are not allowed.

Note that a year is a *leap year* if it is divisible by 4 but not divisible by 100, or is divisible by 400.

The file record format of the file Members.dat is

char IDNumber[ 12 ]; // account number

char password[ 24 ]; // password

char name[ 8 ]; // name

The file record format of the file ReservationInfo.dat is

char IDNumber[ 12 ]; // account number

int branchCode; // branch code

Date date; // reservation date

int numCustomers; // number of customers

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| branchCode | Branch names |
| 1 | Taipei Dunhua South |
| 2 | Taipei SOGO |
| 3 | Taipei Songjiang |
| 4 | Taipei Nanjing |
| 5 | Taipei Linsen |
| 6 | Taipei Zhonghua New |
| 7 | Banqiao Guanqian |
| 8 | Yonghe Lehua |
| 9 | Taoyuan Zhonghua |
| 10 | Taoyuan Nankan |
| 11 | Zhongli Zhongyang |
| 12 | Hsinchu Beida |
| 13 | Taichung Ziyou |
| 14 | Chiayi Ren'ai |
| 15 | Tainan Ximen |
| 16 | Kaohsiung Zhonghua New |

The screen dialog should appear as follows:

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| Welcome to the Cashbox Party World!  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): g  Enter your choice (1~3): 0  Enter your choice (1~3): 4  Enter your choice (1~3): 2  Input your ID Number: 555  The ID number 555 is illegal.  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 2  Input your ID Number: ggg  The ID number ggg is illegal.  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 2  Input your ID Number: g66  The ID number g66 is illegal.  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 2  Input your ID Number: c120057214  The ID number c120057214 is illegal.  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 2  Input your ID Number: c120057213  Input your Name: james  Choose a password: 111  Registration Completed!  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 2  Input your ID Number: c120057213  You are already a member!  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 1  Please enter your ID number: c120057222  Enter your password: 111  Invalid account number or password. Please try again.  Please enter your ID number: c120057213  Enter your password: 222  Invalid account number or password. Please try again.  Please enter your ID number: c120057213  Enter your password: 111  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): a  Enter your choice (1~3): 0  Enter your choice (1~3): 4  Enter your choice (1~3): 1  1. Taipei Dunhua South  2. Taipei SOGO  3. Taipei Songjiang  4. Taipei Nanjing  5. Taipei Linsen  6. Taipei Zhonghua New  7. Banqiao Guanqian  8. Yonghe Lehua  9. Taoyuan Zhonghua  10. Taoyuan Nankan  11. Zhongli Zhongyang  12. Hsinchu Beida  13. Taichung Ziyou  14. Chiayi Ren'ai  15. Tainan Ximen  16. Kaohsiung Zhonghua New  Enter your choice (0 to end): a  Enter your choice (0 to end): 17  Enter your choice (0 to end): 9  The current hour is 2019/11/24:14  Available days:  1. 2019/11/24  2. 2019/11/25  3. 2019/11/26  4. 2019/11/27  5. 2019/11/28  6. 2019/11/29  7. 2019/11/30  Enter your choice (0 to end): a  Enter your choice (0 to end): 8  Enter your choice (0 to end): 1  Enter hour (15~23): a  Enter hour (15~23): 14  Enter hour (15~23): 24  Enter hour (15~23): 15  Enter the number of customers (1~30, 0 to end): a  Enter the number of customers (1~30, 0 to end): 31  Enter the number of customers (1~30, 0 to end): 5  Branch Date Hour No of Customers  Taoyuan Zhonghua 2019-11-24 15 5  Reservation Completed!  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 2  Branch Date Hour No of Customers  1. Taoyuan Zhonghua 2019-11-24 15 5  Choose a reservation to cancel (0: keep all reservations): a  Choose a reservation to cancel (0: keep all reservations): 2  Choose a reservation to cancel (0: keep all reservations): 0  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 3  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 3  Thank you! Goodbye!  請按任意鍵繼續 . . . |

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| Welcome to the Cashbox Party World!  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 1  Please enter your ID number: c120057213  Enter your password: 111  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 1  1. Taipei Dunhua South  2. Taipei SOGO  3. Taipei Songjiang  4. Taipei Nanjing  5. Taipei Linsen  6. Taipei Zhonghua New  7. Banqiao Guanqian  8. Yonghe Lehua  9. Taoyuan Zhonghua  10. Taoyuan Nankan  11. Zhongli Zhongyang  12. Hsinchu Beida  13. Taichung Ziyou  14. Chiayi Ren'ai  15. Tainan Ximen  16. Kaohsiung Zhonghua New  Enter your choice (0 to end): 0  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 1  1. Taipei Dunhua South  2. Taipei SOGO  3. Taipei Songjiang  4. Taipei Nanjing  5. Taipei Linsen  6. Taipei Zhonghua New  7. Banqiao Guanqian  8. Yonghe Lehua  9. Taoyuan Zhonghua  10. Taoyuan Nankan  11. Zhongli Zhongyang  12. Hsinchu Beida  13. Taichung Ziyou  14. Chiayi Ren'ai  15. Tainan Ximen  16. Kaohsiung Zhonghua New  Enter your choice (0 to end): 1  The current hour is 2019/11/24:15  Available days:  1. 2019/11/24  2. 2019/11/25  3. 2019/11/26  4. 2019/11/27  5. 2019/11/28  6. 2019/11/29  7. 2019/11/30  Enter your choice (0 to end): 0  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 1  1. Taipei Dunhua South  2. Taipei SOGO  3. Taipei Songjiang  4. Taipei Nanjing  5. Taipei Linsen  6. Taipei Zhonghua New  7. Banqiao Guanqian  8. Yonghe Lehua  9. Taoyuan Zhonghua  10. Taoyuan Nankan  11. Zhongli Zhongyang  12. Hsinchu Beida  13. Taichung Ziyou  14. Chiayi Ren'ai  15. Tainan Ximen  16. Kaohsiung Zhonghua New  Enter your choice (0 to end): 1  The current hour is 2019/11/24:15  Available days:  1. 2019/11/24  2. 2019/11/25  3. 2019/11/26  4. 2019/11/27  5. 2019/11/28  6. 2019/11/29  7. 2019/11/30  Enter your choice (0 to end): 1  Enter hour (16~23): 16  Enter the number of customers (1~30, 0 to end): 0  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 1  1. Taipei Dunhua South  2. Taipei SOGO  3. Taipei Songjiang  4. Taipei Nanjing  5. Taipei Linsen  6. Taipei Zhonghua New  7. Banqiao Guanqian  8. Yonghe Lehua  9. Taoyuan Zhonghua  10. Taoyuan Nankan  11. Zhongli Zhongyang  12. Hsinchu Beida  13. Taichung Ziyou  14. Chiayi Ren'ai  15. Tainan Ximen  16. Kaohsiung Zhonghua New  Enter your choice (0 to end): 1  The current hour is 2019/11/24:15  Available days:  1. 2019/11/24  2. 2019/11/25  3. 2019/11/26  4. 2019/11/27  5. 2019/11/28  6. 2019/11/29  7. 2019/11/30  Enter your choice (0 to end): 1  Enter hour (16~23): 16  Enter the number of customers (1~30, 0 to end): 5  Branch Date Hour No of Customers  Taipei Dunhua South 2019-11-24 16 5  Reservation Completed!  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 2  Branch Date Hour No of Customers  1. Taoyuan Zhonghua 2019-11-24 16 5  2. Taipei Dunhua South 2019-11-24 16 5  Choose a reservation to cancel (0: keep all reservations): 0  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 3  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 3  Thank you! Goodbye!  請按任意鍵繼續 . . . |

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| Welcome to the Cashbox Party World!  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 1  Please enter your ID number: c120057213  Enter your password: 111  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 1  1. Taipei Dunhua South  2. Taipei SOGO  3. Taipei Songjiang  4. Taipei Nanjing  5. Taipei Linsen  6. Taipei Zhonghua New  7. Banqiao Guanqian  8. Yonghe Lehua  9. Taoyuan Zhonghua  10. Taoyuan Nankan  11. Zhongli Zhongyang  12. Hsinchu Beida  13. Taichung Ziyou  14. Chiayi Ren'ai  15. Tainan Ximen  16. Kaohsiung Zhonghua New  Enter your choice (0 to end): 11  The current hour is 2019/11/24:15  Available days:  1. 2019/11/24  2. 2019/11/25  3. 2019/11/26  4. 2019/11/27  5. 2019/11/28  6. 2019/11/29  7. 2019/11/30  Enter your choice (0 to end): 5  Enter hour (0~23): 11  Enter the number of customers (1~30, 0 to end): 3  Branch Date Hour No of Customers  Zhongli Zhongyang 2019-11-28 11 3  Reservation Completed!  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 2  Branch Date Hour No of Customers  1. Taoyuan Zhonghua 2019-11-24 16 5  2. Taipei Dunhua South 2019-11-24 16 5  3. Zhongli Zhongyang 2019-11-28 11 3  Choose a reservation to cancel (0: keep all reservations): a  Choose a reservation to cancel (0: keep all reservations): 4  Choose a reservation to cancel (0: keep all reservations): 2  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 2  Branch Date Hour No of Customers  1. Taoyuan Zhonghua 2019-11-24 16 5  2. Zhongli Zhongyang 2019-11-28 11 3  Choose a reservation to cancel (0: keep all reservations): 0  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 3  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 3  Thank you! Goodbye!  請按任意鍵繼續 . . . |

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| Welcome to the Cashbox Party World!  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 1  Please enter your ID number: c120057213  Enter your password: 111  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 1  1. Taipei Dunhua South  2. Taipei SOGO  3. Taipei Songjiang  4. Taipei Nanjing  5. Taipei Linsen  6. Taipei Zhonghua New  7. Banqiao Guanqian  8. Yonghe Lehua  9. Taoyuan Zhonghua  10. Taoyuan Nankan  11. Zhongli Zhongyang  12. Hsinchu Beida  13. Taichung Ziyou  14. Chiayi Ren'ai  15. Tainan Ximen  16. Kaohsiung Zhonghua New  Enter your choice (0 to end): 16  The current hour is 2019/11/24:23  Available days:  1. 2019/11/25  2. 2019/11/26  3. 2019/11/27  4. 2019/11/28  5. 2019/11/29  6. 2019/11/30  7. 2019/12/1  Enter your choice (0 to end): 1  Enter hour (0~23): 12  Enter the number of customers (1~30, 0 to end): 7  Branch Date Hour No of Customers  Kaohsiung Zhonghua New 2019-11-25 12 7  Reservation Completed!  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 2  Branch Date Hour No of Customers  1. Taoyuan Zhonghua 2019-11-24 16 5  2. Zhongli Zhongyang 2019-11-28 11 3  3. Kaohsiung Zhonghua New 2019-11-25 12 7  Choose a reservation to cancel (0: keep all reservations): 0  1 - Make Reservation  2 - Reservation Enquiry/Canceling  3 - End  Enter your choice (1~3): 3  1 - Login  2 - Registration  3 - End  Enter your choice (1~3): 3  Thank you! Goodbye!  請按任意鍵繼續 . . . |