**Computer Programming II — Final Exam**

2021/6/19

**Design an Object Oriented Evergreen Laurel Hotel Online Reservation System**

**Functions:**

1. Make Reservation

1.1 Insert a new record into the binary file **Reservations.dat**.

1.2 Modify the corresponding records in the binary file **Available Rooms.dat**.

1.3 Delete outdated records in the binary file **Available Rooms.dat**.

2. View Reservation

2.1 Display information of all reservations of the user from the binary file **Reservations.dat**.

The file record format of the file Reservations.dat is

char IDNumber[ 12 ]; // ID number

char name[ 12 ]; // Name

char mobile[ 12 ]; // Mobile phone number

unsigned int roomType; // Room type

unsigned int numRoom; // Number of rooms

Date checkInDate; // Check in date

Date checkOutDate; // Check out date

and the file record format of the file Available Rooms.dat is

Date date;

unsigned int availableRooms[ 6 ];

unsigned int totalNumRooms[ 6 ] = { 0, 9, 5, 3, 5, 4 };

// availableRooms[0]: Not used

// availableRooms[1]: The number of available Superior rooms

// availableRooms[2]: The number of available Deluxe rooms

// availableRooms[3]: The number of available Deluxe Twin Rooms

// availableRooms[4]: The number of available Superior Suites

// availableRooms[5]: The number of available Deluxe Suites

Grading rule

20 points 拍攝手部、臉部與電腦螢幕的清楚程度

Output correct:

20 points MakeReservation::inputCheckInDate

20 points MakeReservation::inputCheckOutDate

20 points AvailableRoomsDatabase::initilizeAvailableRooms

20 points AvailableRoomsDatabase::adjustAvailableRooms

Output not completely correct:

18 points MakeReservation::inputCheckInDate

18 points MakeReservation::inputCheckOutDate

18 points AvailableRoomsDatabase::initilizeAvailableRooms

18 points AvailableRoomsDatabase::adjustAvailableRooms

Executed on 2021-06-19, using file Available Rooms 1.dat

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| Evergreen Laurel Hotel Online Reservation System  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 1  Please Input Check In Date  Month：  1. 2021-06  2. 2021-07  3. 2021-08  4. 2021-09  5. 2021-10  6. 2021-11  ? 1  Day (19 ~ 30)：19  Please Input Check Out Date  Month：  1. 2021-06  2. 2021-07  3. 2021-08  4. 2021-09  5. 2021-10  6. 2021-11  ? 1  Day (20 ~ 30)：22  Check in date: 2021-06-19  Check out date: 2021-06-22  Available Rooms:  Date Superior Room Deluxe Room Deluxe Twin Room Superior Suite Deluxe Suite  2021-06-19 9 5 3 5 4  2021-06-20 9 5 3 5 4  2021-06-21 9 5 3 5 4  Select Room Type:  1. Superior Room  2. Deluxe Room  3. Deluxe Twin Room  4. Superior Suite  5. Deluxe Suite  ? 1  Enter the number of rooms (1 ~ 9, 0 to end): 2  ID Number: 111  Name: 111  Mobile Phone: 111  Name Fare Mobile Room type Number of rooms Check in date Check out date  111 32340 111 Superior Room 2 2021-06-19 2021-06-22  Reservation successfully!  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 3  Exiting the system...  請按任意鍵繼續 . . . |

Executed on 2021-06-19, using file Available Rooms 2.dat

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| Evergreen Laurel Hotel Online Reservation System  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 1  Please Input Check In Date  Month：  1. 2021-06  2. 2021-07  3. 2021-08  4. 2021-09  5. 2021-10  6. 2021-11  ? 1  Day (19 ~ 30)：30  Please Input Check Out Date  Month：  2. 2021-07  3. 2021-08  4. 2021-09  5. 2021-10  6. 2021-11  ? 2  Day (1 ~ 31)：4  Check in date: 2021-06-30  Check out date: 2021-07-04  Available Rooms:  Date Superior Room Deluxe Room Deluxe Twin Room Superior Suite Deluxe Suite  2021-06-30 6 5 2 0 3  2021-07-01 6 4 2 4 3  2021-07-02 6 3 2 3 0  2021-07-03 0 0 1 3 3  Select Room Type:  1. Superior Room  2. Deluxe Room  3. Deluxe Twin Room  4. Superior Suite  5. Deluxe Suite  ? 1  There are no rooms available!  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 1  Please Input Check In Date  Month：  1. 2021-06  2. 2021-07  3. 2021-08  4. 2021-09  5. 2021-10  6. 2021-11  ? 1  Day (19 ~ 30)：30  Please Input Check Out Date  Month：  2. 2021-07  3. 2021-08  4. 2021-09  5. 2021-10  6. 2021-11  ? 2  Day (1 ~ 31)：3  Check in date: 2021-06-30  Check out date: 2021-07-03  Available Rooms:  Date Superior Room Deluxe Room Deluxe Twin Room Superior Suite Deluxe Suite  2021-06-30 6 5 2 0 3  2021-07-01 6 4 2 4 3  2021-07-02 6 3 2 3 0  Select Room Type:  1. Superior Room  2. Deluxe Room  3. Deluxe Twin Room  4. Superior Suite  5. Deluxe Suite  ? 2  Enter the number of rooms (1 ~ 3, 0 to end): 2  ID Number: 111  Name: 111  Mobile Phone: 111  Name Fare Mobile Room type Number of rooms Check in date Check out date  111 37620 111 Deluxe Room 2 2021-06-30 2021-07-03  Reservation successfully!  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 1  Please Input Check In Date  Month：  1. 2021-06  2. 2021-07  3. 2021-08  4. 2021-09  5. 2021-10  6. 2021-11  ? 1  Day (19 ~ 30)：30  Please Input Check Out Date  Month：  2. 2021-07  3. 2021-08  4. 2021-09  5. 2021-10  6. 2021-11  ? 2  Day (1 ~ 31)：3  Check in date: 2021-06-30  Check out date: 2021-07-03  Available Rooms:  Date Superior Room Deluxe Room Deluxe Twin Room Superior Suite Deluxe Suite  2021-06-30 6 3 2 0 3  2021-07-01 6 2 2 4 3  2021-07-02 6 1 2 3 0  Select Room Type:  1. Superior Room  2. Deluxe Room  3. Deluxe Twin Room  4. Superior Suite  5. Deluxe Suite  ? 1  Enter the number of rooms (1 ~ 6, 0 to end): 1  ID Number: 111  Name: 111  Mobile Phone: 111  Name Fare Mobile Room type Number of rooms Check in date Check out date  111 16170 111 Superior Room 1 2021-06-30 2021-07-03  Reservation successfully!  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 2  Please enter your ID number: 111  Name Fare Mobile Room type Number of rooms Check in date Check out date  111 37620 111 Deluxe Room 2 2021-06-30 2021-07-03  111 16170 111 Superior Room 1 2021-06-30 2021-07-03  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 1  Please Input Check In Date  Month：  1. 2021-06  2. 2021-07  3. 2021-08  4. 2021-09  5. 2021-10  6. 2021-11  ? 6  Day (1 ~ 29)：30  Day (1 ~ 29)：29  Please Input Check Out Date  Month：  6. 2021-11  ? 6  Day (30 ~ 30)：30  Check in date: 2021-11-29  Check out date: 2021-11-30  Available Rooms:  Date Superior Room Deluxe Room Deluxe Twin Room Superior Suite Deluxe Suite  2021-11-29 5 5 1 4 4  Select Room Type:  1. Superior Room  2. Deluxe Room  3. Deluxe Twin Room  4. Superior Suite  5. Deluxe Suite  ? 4  Enter the number of rooms (1 ~ 4, 0 to end): 1  ID Number: 111  Name: 111  Mobile Phone: 111  Name Fare Mobile Room type Number of rooms Check in date Check out date  111 6820 111 Superior Suite 1 2021-11-29 2021-11-30  Reservation successfully!  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 3  Exiting the system...  請按任意鍵繼續 . . . |

Executed on 2021-11-30, using file Available Rooms 3.dat

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| Evergreen Laurel Hotel Online Reservation System  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 1  Please Input Check In Date  Month：  1. 2021-11  2. 2021-12  3. 2022-01  4. 2022-02  5. 2022-03  6. 2022-04  ? 1  Day (30 ~ 30)：30  Please Input Check Out Date  Month：  2. 2021-12  3. 2022-01  4. 2022-02  5. 2022-03  6. 2022-04  ? 2  Day (1 ~ 31)：2  Check in date: 2021-11-30  Check out date: 2021-12-02  Available Rooms:  Date Superior Room Deluxe Room Deluxe Twin Room Superior Suite Deluxe Suite  2021-11-30 6 3 2 3 0  2021-12-01 0 0 1 3 3  Select Room Type:  1. Superior Room  2. Deluxe Room  3. Deluxe Twin Room  4. Superior Suite  5. Deluxe Suite  ? 3  Enter the number of rooms (1 ~ 1, 0 to end): 1  ID Number: 111  Name: 111  Mobile Phone: 111  Name Fare Mobile Room type Number of rooms Check in date Check out date  111 12540 111 Deluxe Twin Room 1 2021-11-30 2021-12-02  Reservation successfully!  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 1  Please Input Check In Date  Month：  1. 2021-11  2. 2021-12  3. 2022-01  4. 2022-02  5. 2022-03  6. 2022-04  ? 2  Day (1 ~ 31)：31  Please Input Check Out Date  Month：  3. 2022-01  4. 2022-02  5. 2022-03  6. 2022-04  ? 3  Day (1 ~ 31)：3  Check in date: 2021-12-31  Check out date: 2022-01-03  Available Rooms:  Date Superior Room Deluxe Room Deluxe Twin Room Superior Suite Deluxe Suite  2021-12-31 0 0 2 0 1  2022-01-01 8 5 1 2 4  2022-01-02 7 0 2 4 2  Select Room Type:  1. Superior Room  2. Deluxe Room  3. Deluxe Twin Room  4. Superior Suite  5. Deluxe Suite  ? 3  Enter the number of rooms (1 ~ 1, 0 to end): 1  ID Number: 111  Name: 111  Mobile Phone: 111  Name Fare Mobile Room type Number of rooms Check in date Check out date  111 18810 111 Deluxe Twin Room 1 2021-12-31 2022-01-03  Reservation successfully!  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 3  Exiting the system...  請按任意鍵繼續 . . . |

Executed on 2021-12-01, using file Available Rooms 3.dat

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| Evergreen Laurel Hotel Online Reservation System  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 1  Please Input Check In Date  Month：  1. 2021-12  2. 2022-01  3. 2022-02  4. 2022-03  5. 2022-04  6. 2022-05  ? 1  Day (1 ~ 31)：1  Please Input Check Out Date  Month：  1. 2021-12  2. 2022-01  3. 2022-02  4. 2022-03  5. 2022-04  6. 2022-05  ? 1  Day (2 ~ 31)：2  Check in date: 2021-12-01  Check out date: 2021-12-02  Available Rooms:  Date Superior Room Deluxe Room Deluxe Twin Room Superior Suite Deluxe Suite  2021-12-01 0 0 1 3 3  Select Room Type:  1. Superior Room  2. Deluxe Room  3. Deluxe Twin Room  4. Superior Suite  5. Deluxe Suite  ? 1  There are no rooms available!  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 1  Please Input Check In Date  Month：  1. 2021-12  2. 2022-01  3. 2022-02  4. 2022-03  5. 2022-04  6. 2022-05  ? 6  Day (1 ~ 30)：1  Please Input Check Out Date  Month：  6. 2022-05  ? 6  Day (2 ~ 31)：3  Check in date: 2022-05-01  Check out date: 2022-05-03  Available Rooms:  Date Superior Room Deluxe Room Deluxe Twin Room Superior Suite Deluxe Suite  2022-05-01 9 5 3 5 4  2022-05-02 9 5 3 5 4  Select Room Type:  1. Superior Room  2. Deluxe Room  3. Deluxe Twin Room  4. Superior Suite  5. Deluxe Suite  ? 1  Enter the number of rooms (1 ~ 9, 0 to end): 2  ID Number: 111  Name: 111  Mobile Phone: 111  Name Fare Mobile Room type Number of rooms Check in date Check out date  111 21560 111 Superior Room 2 2022-05-01 2022-05-03  Reservation successfully!  Main menu:  1 - Make Reservation  2 - View/Cancel Reservation  3 - Exit  Enter a choice: 3  Exiting the system...  請按任意鍵繼續 . . . |