Computer Programming I — Homework Assignment **#**10

**Problem:** Design a simplified Taiwan High Speed Rail Booking System

**Function:**

1. Booking: Add a new record into the end of the binary file Reservation details.dat (randomly generate a reservation number).
2. Booking History: Enter the contact person's identification and reservation number to retrieve an existing reservation.

**Requirements:**

1. Each function (include the main function) contains at most 70 instructions.

2. Global variables, except adultTicketPrice and departureTimes are not allowed.

// top-right: ticket fares for business car, bottom-left: ticket fares for standard car

int adultTicketPrice[ 13 ][ 13 ] = {

0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,

0, 0, 260, 310, 400, 560, 735, 1060, 1205, 1325, 1500, 1830, 2000,

0, 40, 0, 260, 350, 510, 680, 1000, 1140, 1280, 1455, 1780, 1950,

0, 70, 40, 0, 320, 470, 640, 965, 1110, 1240, 1420, 1740, 1910,

0, 200, 160, 130, 0, 320, 495, 805, 965, 1095, 1260, 1590, 1760,

0, 330, 290, 260, 130, 0, 325, 655, 805, 925, 1110, 1430, 1600,

0, 480, 430, 400, 280, 140, 0, 485, 630, 760, 925, 1260, 1430,

0, 750, 700, 670, 540, 410, 270, 0, 320, 440, 615, 940, 1110,

0, 870, 820, 790, 670, 540, 390, 130, 0, 295, 460, 800, 965,

0, 970, 930, 900, 780, 640, 500, 230, 110, 0, 340, 660, 830,

0, 1120, 1080, 1050, 920, 790, 640, 380, 250, 150, 0, 495, 655,

0, 1390, 1350, 1320, 1190, 1060, 920, 650, 530, 420, 280, 0, 325,

0, 1530, 1490, 1460, 1330, 1200, 1060, 790, 670, 560, 410, 140, 0 };

char southboundStations[ 13 ][ 12 ] = { "",

"Nangang", "Taipei", "Banqiao", "Taoyuan", "Hsinchu", "Miaoli",

"Taichung", "Changhua", "Yunlin", "Chiayi", "Tainan", "Zuoying" };

char northboundStations[ 13 ][ 12 ] = { "",

"Zuoying", "Tainan", "Chiayi", "Yunlin", "Changhua", "Taichung",

"Miaoli", "Hsinchu", "Taoyuan", "Banqiao", "Taipei", "Nangang" };

The format of the file Reservation details.dat is as follows:

struct ReservationDetails

{

char reservationNumber[ 12 ]; // used to identify a reservation 訂位代號

char trainNumber[ 8 ]; // used to identify a train 車次號碼

char idNumber[ 12 ]; // the id number of the contact person 取票人的身分證字號

char phone[ 12 ]; // the (local or mobile) phone number of the contact person 取票人的聯絡電話

char date[ 12 ]; // outbound date 搭乘日期

int originStation; // the origin station code 起程站代碼

int destinationStation; // the destination station code 到達站代碼

int carClass; // the car class code; 1:standard car, 2:business car 車廂種類; 1:標準車廂, 2:商務車廂

int adultTickets; // the number of adult tickets 全票張數

int concessionTickets; // the number of concession tickets 優待票張數

};

struct Train

{

char trainNumber[ 8 ]; // used to identify a train 車次號碼

char departureTimes[ 13 ][ 8 ]; // the departure time of a train for each station 火車在各站的離站時間

}; // departureTimes[ 0 ] is not used departureTimes[ 0 ]未使用

// departureTimes[ i ] is the departure time of a train for station #i

Sample screen dialog **#**1

|  |
| --- |
| Taiwan High Speed Rail Booking System  Enter Your Choice  1. Booking  2. Booking History  3. End Program  ? a  ? 0  ? 4  ? 1  Origin Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? a  ? 0  ? 13  ? 2  Destination Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? a  ? 0  ? 13  ? 7  Train Number: 133  Departure Date: 999  Car Class  1. Standard Car  2. Business Car  ? a  ? 0  ? 3  ? 1  How many adult tickets? 3  How many concession tickets? 2  Trip Details  Date Train No. From To Departure Arrival Adult Concession Fare Class  999 133 Taipei Taichung 13:31 14:20 700\*3 350\*2 2800 Standard  Contact Person Information  Identification: 999  Phone No: 999  Reservation Number: 41412331  Reservation Completed!  Enter Your Choice  1. Booking  2. Booking History  3. End Program  ? 2  Identification: 999  Reservation Number: 999  Reservation record does not exist or cannot be found in this system.  Identification: 888  Reservation Number: 41412331  Reservation record does not exist or cannot be found in this system.  Identification: 999  Reservation Number: 41412331  Trip Details  Date Train No. From To Departure Arrival Adult Concession Fare Class  999 133 Taipei Taichung 13:31 14:20 700\*3 350\*2 2800 Standard  Enter Your Choice  1. Booking  2. Booking History  3. End Program  ? 3  Thank you. Goodbye. |

Sample screen dialog **#**2

|  |
| --- |
| Taiwan High Speed Rail Booking System  Enter Your Choice  1. Booking  2. Booking History  3. End Program  ? 1  Origin Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 7  Destination Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 2  Train Number: 132  Departure Date: 999  Car Class  1. Standard Car  2. Business Car  ? 2  How many adult tickets? 1  How many concession tickets? 1  Trip Details  Date Train No. From To Departure Arrival Adult Concession Fare Class  999 132 Taichung Taipei 14:39 15:32 1580\*1 790\*1 2370 Business  Contact Person Information  Identification: 999  Phone No: 999  Reservation Number: 12085187  Reservation Completed!  Enter Your Choice  1. Booking  2. Booking History  3. End Program  ? 2  Identification: 999  Reservation Number: 12085187  Trip Details  Date Train No. From To Departure Arrival Adult Concession Fare Class  999 132 Taichung Taipei 14:39 15:32 1580\*1 790\*1 2370 Business  Enter Your Choice  1. Booking  2. Booking History  3. End Program  ? 3  Thank you. Goodbye. |

Sample screen dialog **#**3

|  |
| --- |
| Taiwan High Speed Rail Booking System  Enter Your Choice  1. Booking  2. Booking History  3. End Program  ? 1  Origin Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 6  Destination Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 2  Train Number: 132  Sorry, there is no suitable train for outbound time.  Origin Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 7  Destination Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 4  Train Number: 132  Sorry, there is no suitable train for outbound time.  Origin Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 4  Destination Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 9  Train Number: 133  Sorry, there is no suitable train for outbound time.  Origin Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 2  Destination Station  1. Nangang  2. Taipei  3. Banqiao  4. Taoyuan  5. Hsinchu  6. Miaoli  7. Taichung  8. Changhua  9. Yunlin  10. Chiayi  11. Tainan  12. Zuoying  ? 7  Train Number: 133  Departure Date: 999  Car Class  1. Standard Car  2. Business Car  ? 2  How many adult tickets? 2  How many concession tickets? 1  Trip Details  Date Train No. From To Departure Arrival Adult Concession Fare Class  999 133 Taipei Taichung 13:31 14:20 1250\*2 625\*1 3125 Business  Contact Person Information  Identification: 999  Phone No: 999  Reservation Number: 82173577  Reservation Completed!  Enter Your Choice  1. Booking  2. Booking History  3. End Program  ? 3  Thank you. Goodbye. |

Station Code

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nangang | Taipei | Banqiao | Taoyuan | Hsinchu | Miaoli | Taichung | Changhua | Yunlin | Chiayi | Tainan | Zuoying |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

Regular Full Fare Tickets

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Station | Nangang | Taipei | Banqiao | Taoyuan | Hsinchu | Miaoli | Taichung | Changhua | Yunlin | Chiayi | Tainan | Zuoying | Business Car tickets |
| Nangang | 0 | 260 | 310 | 500 | 700 | 920 | 1330 | 1510 | 1660 | 1880 | 2290 | 2500 |
| Taipei | 40 | 0 | 260 | 440 | 640 | 850 | 1250 | 1430 | 1600 | 1820 | 2230 | 2440 |
| Banqiao | 70 | 40 | 0 | 400 | 590 | 800 | 1210 | 1390 | 1550 | 1780 | 2180 | 2390 |
| Taoyuan | 200 | 160 | 130 | 0 | 400 | 620 | 1010 | 1210 | 1370 | 1580 | 1990 | 2200 |
| Hsinchu | 330 | 290 | 260 | 130 | 0 | 410 | 820 | 1010 | 1160 | 1390 | 1790 | 2000 |
| Miaoli | 480 | 430 | 400 | 280 | 140 | 0 | 610 | 790 | 950 | 1160 | 1580 | 1790 |
| Taichung | 750 | 700 | 670 | 540 | 410 | 270 | 0 | 400 | 550 | 770 | 1180 | 1390 |
| Changhua | 870 | 820 | 790 | 670 | 540 | 390 | 130 | 0 | 370 | 580 | 1000 | 1210 |
| Yunlin | 970 | 930 | 900 | 780 | 640 | 500 | 230 | 110 | 0 | 430 | 830 | 1040 |
| Chiayi | 1120 | 1080 | 1050 | 920 | 790 | 640 | 380 | 250 | 150 | 0 | 620 | 820 |
| Tainan | 1390 | 1350 | 1320 | 1190 | 1060 | 920 | 650 | 530 | 420 | 280 | 0 | 410 |
| Zuoying | 1530 | 1490 | 1460 | 1330 | 1200 | 1060 | 790 | 670 | 560 | 410 | 140 | 0 |
| Standard Car tickets | | | |

Timetable - Southbound

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Train No. | Nangang | Taipei | Banqiao | Taoyuan | Hsinchu | Miaoli | Taichung | Changhua | Yunlin | Chiayi | Tainan | Zuoying |
| 583 | - | - | - | - | - | - | 06:25 | 06:37 | 06:47 | 06:59 | 07:17 | 07:30 |
| 803 | 06:15 | 06:26 | 06:34 | 06:49 | 07:02 | 07:13 | 07:32 | 07:45 | 07:56 | 08:10 | 08:28 | 08:40 |
| 203 | - | 06:30 | 06:38 | - | - | - | 07:20 | - | - | 07:45 | 08:03 | 08:15 |
| 603 | 06:40 | 06:51 | 07:00 | 07:15 | 07:27 | - | 07:53 | - | - | 08:19 | 08:38 | 08:50 |
| 805 | 07:00 | 07:11 | 07:19 | 07:34 | 07:47 | 07:58 | 08:17 | 08:30 | 08:41 | 08:55 | 09:13 | 09:25 |
| 1607 | 07:10 | 07:21 | 07:29 | 07:43 | 07:56 | - | 08:25 | - | - | 08:50 | 09:07 | 09:20 |
| 109 | 07:20 | 07:31 | 07:39 | - | - | - | 08:20 | - | - | - | - | 09:05 |
| 1505 | 07:25 | 07:36 | 07:46 | 08:01 | 08:12 | 08:25 | 08:42 | - | - | - | - | - |
| 609 | 07:35 | 07:46 | 07:55 | 08:10 | 08:22 | - | 08:48 | - | - | 09:14 | 09:33 | 09:45 |
| 205 | 07:40 | 07:51 | 07:59 | - | - | - | 08:40 | - | - | - | 09:18 | 09:30 |
| 1305 | 07:50 | 08:01 | - | 08:20 | - | - | 08:54 | 09:06 | 09:17 | 09:29 | 09:47 | 10:00 |
| 809 | 08:00 | 08:11 | 08:19 | 08:34 | 08:47 | 08:58 | 09:17 | 09:30 | 09:41 | 09:55 | 10:13 | 10:25 |
| 613 | 08:10 | 08:21 | 08:29 | 08:43 | 08:56 | - | 09:25 | - | - | 09:50 | 10:07 | 10:20 |
| 207 | 08:20 | 08:31 | 08:39 | - | - | - | 09:20 | - | - | - | 09:58 | 10:10 |
| 1509 | 08:25 | 08:36 | 08:46 | 09:01 | 09:12 | 09:25 | 09:42 | - | - | - | - | - |
| 615 | 08:35 | 08:46 | 08:55 | 09:10 | 09:22 | - | 09:48 | - | - | 10:14 | 10:33 | 10:45 |
| 1209 | 08:40 | 08:51 | 08:59 | - | - | - | 09:40 | - | - | - | 10:18 | 10:30 |
| 1307 | 08:50 | 09:01 | - | 09:20 | - | - | 09:54 | 10:06 | 10:17 | 10:29 | 10:47 | 11:00 |
| 813 | 09:00 | 09:11 | 09:19 | 09:34 | 09:47 | 09:58 | 10:17 | 10:30 | 10:41 | 10:55 | 11:13 | 11:25 |
| 619 | 09:10 | 09:21 | 09:29 | 09:43 | 09:56 | - | 10:25 | - | - | 10:50 | 11:07 | 11:20 |
| 117 | 09:20 | 09:31 | 09:39 | - | - | - | 10:20 | - | - | - | - | 11:05 |
| 1513 | 09:25 | 09:36 | 09:46 | 10:01 | 10:12 | 10:25 | 10:42 | - | - | - | - | - |
| 621 | 09:35 | 09:46 | 09:55 | 10:10 | 10:22 | - | 10:48 | - | - | 11:14 | 11:33 | 11:45 |
| 1213 | 09:40 | 09:51 | 09:59 | - | - | - | 10:40 | - | - | - | 11:18 | 11:30 |
| 1309 | 09:50 | 10:01 | - | 10:20 | - | - | 10:54 | 11:06 | 11:17 | 11:29 | 11:47 | 12:00 |
| 817 | 10:00 | 10:11 | 10:19 | 10:34 | 10:47 | 10:58 | 11:17 | 11:30 | 11:41 | 11:55 | 12:13 | 12:25 |
| 625 | 10:10 | 10:21 | 10:29 | 10:43 | 10:56 | - | 11:25 | - | - | 11:50 | 12:07 | 12:20 |
| 121 | 10:20 | 10:31 | 10:39 | - | - | - | 11:20 | - | - | - | - | 12:05 |
| 627 | 10:35 | 10:46 | 10:55 | 11:10 | 11:22 | - | 11:48 | - | - | 12:14 | 12:33 | 12:45 |
| 1217 | 10:40 | 10:51 | 10:59 | - | - | - | 11:40 | - | - | - | 12:18 | 12:30 |
| 821 | 11:00 | 11:11 | 11:19 | 11:34 | 11:47 | 11:58 | 12:17 | 12:30 | 12:41 | 12:55 | 13:13 | 13:25 |
| 1631 | 11:10 | 11:21 | 11:29 | 11:43 | 11:56 | - | 12:25 | - | - | 12:50 | 13:07 | 13:20 |
| 125 | 11:20 | 11:31 | 11:39 | - | - | - | 12:20 | - | - | - | - | 13:05 |
| 633 | 11:35 | 11:46 | 11:55 | 12:10 | 12:22 | - | 12:48 | - | - | 13:14 | 13:33 | 13:45 |
| 825 | 12:00 | 12:11 | 12:19 | 12:34 | 12:47 | 12:58 | 13:17 | 13:30 | 13:41 | 13:55 | 14:13 | 14:25 |
| 1637 | 12:10 | 12:21 | 12:29 | 12:43 | 12:56 | - | 13:25 | - | - | 13:50 | 14:07 | 14:20 |
| 129 | 12:20 | 12:31 | 12:39 | - | - | - | 13:20 | - | - | - | - | 14:05 |
| 639 | 12:35 | 12:46 | 12:55 | 13:10 | 13:22 | - | 13:48 | - | - | 14:14 | 14:33 | 14:45 |
| 829 | 13:00 | 13:11 | 13:19 | 13:34 | 13:47 | 13:58 | 14:17 | 14:30 | 14:41 | 14:55 | 15:13 | 15:25 |
| 1643 | 13:10 | 13:21 | 13:29 | 13:43 | 13:56 | - | 14:25 | - | - | 14:50 | 15:07 | 15:20 |
| 133 | 13:20 | 13:31 | 13:39 | - | - | - | 14:20 | - | - | - | - | 15:05 |
| 645 | 13:35 | 13:46 | 13:55 | 14:10 | 14:22 | - | 14:48 | - | - | 15:14 | 15:33 | 15:45 |
| 833 | 14:00 | 14:11 | 14:19 | 14:34 | 14:47 | 14:58 | 15:17 | 15:30 | 15:41 | 15:55 | 16:13 | 16:25 |
| 1649 | 14:10 | 14:21 | 14:29 | 14:43 | 14:56 | - | 15:25 | - | - | 15:50 | 16:07 | 16:20 |
| 137 | 14:20 | 14:31 | 14:39 | - | - | - | 15:20 | - | - | - | - | 16:05 |
| 651 | 14:35 | 14:46 | 14:55 | 15:10 | 15:22 | - | 15:48 | - | - | 16:14 | 16:33 | 16:45 |
| 1233 | 14:40 | 14:51 | 14:59 | - | - | - | 15:40 | - | - | - | 16:18 | 16:30 |
| 837 | 15:00 | 15:11 | 15:19 | 15:34 | 15:47 | 15:58 | 16:17 | 16:30 | 16:41 | 16:55 | 17:13 | 17:25 |
| 1655 | 15:10 | 15:21 | 15:29 | 15:43 | 15:56 | - | 16:25 | - | - | 16:50 | 17:07 | 17:20 |
| 141 | 15:20 | 15:31 | 15:39 | - | - | - | 16:20 | - | - | - | - | 17:05 |
| 1537 | 15:25 | 15:36 | 15:46 | 16:01 | 16:12 | 16:25 | 16:42 | - | - | - | - | - |
| 657 | 15:35 | 15:46 | 15:55 | 16:10 | 16:22 | - | 16:48 | - | - | 17:14 | 17:33 | 17:45 |
| 1237 | 15:40 | 15:51 | 15:59 | - | - | - | 16:40 | - | - | - | 17:18 | 17:30 |
| 1321 | 15:50 | 16:01 | - | 16:20 | - | - | 16:54 | 17:06 | 17:17 | 17:29 | 17:47 | 18:00 |
| 841 | 16:00 | 16:11 | 16:19 | 16:34 | 16:47 | 16:58 | 17:17 | 17:30 | 17:41 | 17:55 | 18:13 | 18:25 |
| 661 | 16:10 | 16:21 | 16:29 | 16:43 | 16:56 | - | 17:25 | - | - | 17:50 | 18:07 | 18:20 |
| 145 | 16:20 | 16:31 | 16:39 | - | - | - | 17:20 | - | - | - | - | 18:05 |
| 1541 | 16:25 | 16:36 | 16:46 | 17:01 | 17:12 | 17:25 | 17:42 | - | - | - | - | - |
| 663 | 16:35 | 16:46 | 16:55 | 17:10 | 17:22 | - | 17:48 | - | - | 18:14 | 18:33 | 18:45 |
| 1241 | 16:40 | 16:51 | 16:59 | - | - | - | 17:40 | - | - | - | 18:18 | 18:30 |
| 845 | 17:00 | 17:11 | 17:19 | 17:34 | 17:47 | 17:58 | 18:17 | 18:30 | 18:41 | 18:55 | 19:13 | 19:25 |
| 667 | 17:10 | 17:21 | 17:29 | 17:43 | 17:56 | - | 18:25 | - | - | 18:50 | 19:07 | 19:20 |
| 149 | 17:20 | 17:31 | 17:39 | - | - | - | 18:20 | - | - | - | - | 19:05 |
| 1545 | 17:25 | 17:36 | 17:46 | 18:01 | 18:12 | 18:25 | 18:42 | - | - | - | - | - |
| 669 | 17:35 | 17:46 | 17:55 | 18:10 | 18:22 | - | 18:48 | - | - | 19:14 | 19:33 | 19:45 |
| 1245 | 17:40 | 17:51 | 17:59 | - | - | - | 18:40 | - | - | - | 19:18 | 19:30 |
| 1547 | 17:45 | 17:56 | 18:04 | 18:17 | 18:28 | 18:40 | 18:56 | - | - | - | - | - |
| 849 | 18:00 | 18:11 | 18:19 | 18:34 | 18:47 | 18:58 | 19:17 | 19:30 | 19:41 | 19:55 | 20:13 | 20:25 |
| 673 | 18:10 | 18:21 | 18:29 | 18:43 | 18:56 | - | 19:25 | - | - | 19:50 | 20:07 | 20:20 |
| 153 | 18:20 | 18:31 | 18:39 | - | - | - | 19:20 | - | - | - | - | 20:05 |
| 1549 | 18:25 | 18:36 | 18:46 | 19:01 | 19:12 | 19:25 | 19:42 | - | - | - | - | - |
| 675 | 18:35 | 18:46 | 18:55 | 19:10 | 19:22 | - | 19:48 | - | - | 20:14 | 20:33 | 20:45 |
| 249 | 18:40 | 18:51 | 18:59 | - | - | - | 19:40 | - | - | - | 20:18 | 20:30 |
| 1327 | 18:50 | 19:01 | - | 19:20 | - | - | 19:54 | 20:06 | 20:17 | 20:29 | 20:47 | 21:00 |
| 853 | 19:00 | 19:11 | 19:19 | 19:34 | 19:47 | 19:58 | 20:17 | 20:30 | 20:41 | 20:55 | 21:13 | 21:25 |
| 1679 | 19:10 | 19:21 | 19:29 | 19:43 | 19:56 | - | 20:25 | - | - | 20:50 | 21:07 | 21:20 |
| 157 | 19:20 | 19:31 | 19:39 | - | - | - | 20:20 | - | - | - | - | 21:05 |
| 1553 | 19:25 | 19:36 | 19:46 | 20:01 | 20:12 | 20:25 | 20:42 | - | - | - | - | - |
| 681 | 19:35 | 19:46 | 19:55 | 20:10 | 20:22 | - | 20:48 | - | - | 21:14 | 21:33 | 21:45 |
| 1253 | 19:40 | 19:51 | 19:59 | - | - | - | 20:40 | - | - | - | 21:18 | 21:30 |
| 857 | 20:00 | 20:11 | 20:19 | 20:34 | 20:47 | 20:58 | 21:17 | 21:30 | 21:41 | 21:55 | 22:13 | 22:25 |
| 1685 | 20:10 | 20:21 | 20:29 | 20:43 | 20:56 | - | 21:25 | - | - | 21:50 | 22:07 | 22:20 |
| 161 | 20:20 | 20:31 | 20:39 | - | - | - | 21:20 | - | - | - | - | 22:05 |
| 1557 | 20:25 | 20:36 | 20:46 | 21:01 | 21:12 | 21:25 | 21:42 | - | - | - | - | - |
| 687 | 20:35 | 20:46 | 20:55 | 21:10 | 21:22 | - | 21:48 | - | - | 22:14 | 22:33 | 22:45 |
| 1257 | 20:40 | 20:51 | 20:59 | - | - | - | 21:40 | - | - | - | 22:18 | 22:30 |
| 861 | 21:00 | 21:11 | 21:19 | 21:34 | 21:47 | 21:58 | 22:17 | 22:30 | 22:41 | 22:55 | 23:13 | 23:25 |
| 1691 | 21:10 | 21:21 | 21:29 | 21:43 | 21:56 | - | 22:25 | - | - | 22:50 | 23:07 | 23:20 |
| 165 | 21:20 | 21:31 | 21:39 | - | - | - | 22:20 | - | - | - | - | 23:05 |
| 693 | 21:30 | 21:41 | 21:50 | 22:05 | 22:17 | - | 22:43 | - | - | 23:09 | 23:28 | 23:40 |
| 333 | 21:45 | 21:56 | - | 22:15 | - | - | 22:49 | 23:01 | 23:12 | 23:24 | 23:42 | 23:55 |
| 1563 | 21:55 | 22:05 | 22:14 | 22:27 | 22:38 | 22:52 | 23:10 | - | - | - | - | - |
| 295 | 22:05 | 22:16 | - | 22:35 | - | - | 23:07 | - | - | 23:30 | 23:48 | 23:59 |
| 565 | 22:15 | 22:26 | 22:35 | 22:48 | 23:00 | 23:12 | 23:29 | - | - | - | - | - |
| 567 | 22:50 | 23:00 | 23:08 | 23:21 | 23:32 | 23:43 | 23:59 | - | - | - | - | - |

Timetable - Northbound

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Train No. | Zuoying | Tainan | Chiayi | Yunlin | Changhua | Taichung | Miaoli | Hsinchu | Taoyuan | Banqiao | Taipei | Nangang |
| 502 | - | - | - | - | - | 06:05 | 06:24 | 06:37 | 06:49 | 07:02 | 07:12 | 07:20 |
| 1504 | - | - | - | - | - | 06:30 | 06:49 | 07:02 | 07:14 | 07:27 | 07:37 | 07:45 |
| 508 | - | - | - | - | - | 06:52 | 07:12 | 07:25 | 07:38 | 07:50 | 08:01 | 08:10 |
| 300 | 05:50 | 06:03 | 06:21 | 06:34 | 06:44 | 06:56 | - | - | 07:28 | - | 07:47 | 07:55 |
| 1510 | - | - | - | - | - | 07:12 | 07:31 | 07:45 | 07:58 | 08:10 | 08:21 | 08:30 |
| 802 | 06:15 | 06:29 | 06:48 | 07:00 | 07:13 | 07:25 | 07:45 | 07:58 | 08:10 | 08:22 | 08:32 | 08:40 |
| 1202 | 06:25 | 06:38 | 06:57 | - | - | 07:21 | - | - | - | - | 08:07 | 08:15 |
| 1602 | 06:40 | 06:53 | 07:12 | - | - | 07:40 | - | 08:05 | 08:18 | 08:31 | 08:42 | 08:50 |
| 1302 | 06:45 | 06:59 | 07:19 | 07:32 | 07:42 | 07:53 | - | - | 08:27 | - | 08:47 | 08:55 |
| 204 | 06:55 | 07:07 | - | - | - | 07:48 | - | - | - | 08:27 | 08:37 | 08:45 |
| 606 | 07:00 | 07:13 | 07:32 | - | - | 08:00 | - | 08:25 | 08:38 | 08:51 | 09:02 | 09:10 |
| 1514 | - | - | - | - | - | 08:04 | 08:24 | 08:39 | 08:51 | 09:05 | 09:16 | 09:25 |
| 206 | 07:15 | 07:28 | - | - | - | 08:08 | - | - | - | 08:47 | 08:57 | 09:05 |
| 806 | 07:25 | 07:41 | 08:00 | 08:12 | 08:24 | 08:36 | 08:56 | 09:08 | 09:20 | 09:32 | 09:42 | 09:50 |
| 610 | 07:35 | 07:48 | 08:08 | - | - | 08:32 | - | 08:57 | 09:11 | 09:25 | 09:36 | 09:45 |
| 108 | 07:55 | - | - | - | - | 08:39 | - | - | - | 09:21 | 09:32 | 09:40 |
| 612 | 08:00 | 08:13 | 08:32 | - | - | 09:00 | - | 09:25 | 09:38 | 09:51 | 10:02 | 10:10 |
| 1210 | 08:15 | 08:28 | - | - | - | 09:08 | - | - | - | 09:47 | 09:57 | 10:05 |
| 810 | 08:25 | 08:41 | 09:00 | 09:12 | 09:24 | 09:36 | 09:56 | 10:08 | 10:20 | 10:32 | 10:42 | 10:50 |
| 616 | 08:35 | 08:48 | 09:08 | - | - | 09:32 | - | 09:57 | 10:11 | 10:25 | 10:36 | 10:45 |
| 112 | 08:55 | - | - | - | - | 09:39 | - | - | - | 10:21 | 10:32 | 10:40 |
| 618 | 09:00 | 09:13 | 09:32 | - | - | 10:00 | - | 10:25 | 10:38 | 10:51 | 11:02 | 11:10 |
| 1522 | - | - | - | - | - | 10:04 | 10:24 | 10:39 | 10:51 | 11:05 | 11:16 | 11:25 |
| 1214 | 09:15 | 09:28 | - | - | - | 10:08 | - | - | - | 10:47 | 10:57 | 11:05 |
| 814 | 09:25 | 09:41 | 10:00 | 10:12 | 10:24 | 10:36 | 10:56 | 11:08 | 11:20 | 11:32 | 11:42 | 11:50 |
| 1622 | 09:35 | 09:48 | 10:08 | - | - | 10:32 | - | 10:57 | 11:11 | 11:25 | 11:36 | 11:45 |
| 116 | 09:55 | - | - | - | - | 10:39 | - | - | - | 11:21 | 11:32 | 11:40 |
| 624 | 10:00 | 10:13 | 10:32 | - | - | 11:00 | - | 11:25 | 11:38 | 11:51 | 12:02 | 12:10 |
| 1218 | 10:15 | 10:28 | - | - | - | 11:08 | - | - | - | 11:47 | 11:57 | 12:05 |
| 818 | 10:25 | 10:41 | 11:00 | 11:12 | 11:24 | 11:36 | 11:56 | 12:08 | 12:20 | 12:32 | 12:42 | 12:50 |
| 628 | 10:35 | 10:48 | 11:08 | - | - | 11:32 | - | 11:57 | 12:11 | 12:25 | 12:36 | 12:45 |
| 120 | 10:55 | - | - | - | - | 11:39 | - | - | - | 12:21 | 12:32 | 12:40 |
| 630 | 11:00 | 11:13 | 11:32 | - | - | 12:00 | - | 12:25 | 12:38 | 12:51 | 13:02 | 13:10 |
| 822 | 11:25 | 11:41 | 12:00 | 12:12 | 12:24 | 12:36 | 12:56 | 13:08 | 13:20 | 13:32 | 13:42 | 13:50 |
| 1634 | 11:35 | 11:48 | 12:08 | - | - | 12:32 | - | 12:57 | 13:11 | 13:25 | 13:36 | 13:45 |
| 124 | 11:55 | - | - | - | - | 12:39 | - | - | - | 13:21 | 13:32 | 13:40 |
| 636 | 12:00 | 12:13 | 12:32 | - | - | 13:00 | - | 13:25 | 13:38 | 13:51 | 14:02 | 14:10 |
| 826 | 12:25 | 12:41 | 13:00 | 13:12 | 13:24 | 13:36 | 13:56 | 14:08 | 14:20 | 14:32 | 14:42 | 14:50 |
| 1640 | 12:35 | 12:48 | 13:08 | - | - | 13:32 | - | 13:57 | 14:11 | 14:25 | 14:36 | 14:45 |
| 128 | 12:55 | - | - | - | - | 13:39 | - | - | - | 14:21 | 14:32 | 14:40 |
| 642 | 13:00 | 13:13 | 13:32 | - | - | 14:00 | - | 14:25 | 14:38 | 14:51 | 15:02 | 15:10 |
| 1538 | - | - | - | - | - | 114:04 | 14:24 | 14:39 | 14:51 | 15:05 | 15:16 | 15:25 |
| 1230 | 13:15 | 13:28 | - | - | - | 14:08 | - | - | - | 14:47 | 14:57 | 15:05 |
| 830 | 13:25 | 13:41 | 14:00 | 14:12 | 14:24 | 14:36 | 14:56 | 15:08 | 15:20 | 15:32 | 15:42 | 15:50 |
| 1646 | 13:35 | 13:48 | 14:08 | - | - | 14:32 | - | 14:57 | 15:11 | 15:25 | 15:36 | 15:45 |
| 132 | 13:55 | - | - | - | - | 14:39 | - | - | - | 15:21 | 15:32 | 15:40 |
| 648 | 14:00 | 14:13 | 14:32 | - | - | 15:00 | - | 15:25 | 15:38 | 15:51 | 16:02 | 16:10 |
| 1542 | - | - | - | - | - | 15:04 | 15:24 | 15:39 | 15:51 | 16:05 | 16:16 | 16:25 |
| 1234 | 14:15 | 14:28 | - | - | - | 15:08 | - | - | - | 15:47 | 15:57 | 16:05 |
| 834 | 14:25 | 14:41 | 15:00 | 15:12 | 15:24 | 15:36 | 15:56 | 16:08 | 16:20 | 16:32 | 16:42 | 16:50 |
| 652 | 14:35 | 14:48 | 15:08 | - | - | 15:32 | - | 15:57 | 16:11 | 16:25 | 16:36 | 16:45 |
| 1318 | 14:45 | 14:57 | 15:19 | 15:31 | 15:41 | 15:53 | - | - | 16:27 | - | 16:47 | 16:55 |
| 136 | 14:55 | - | - | - | - | 15:39 | - | - | - | 16:21 | 16:32 | 16:40 |
| 654 | 15:00 | 15:13 | 15:32 | - | - | 16:00 | - | 16:25 | 16:38 | 16:51 | 17:02 | 17:10 |
| 1546 | - | - | - | - | - | 16:04 | 16:24 | 16:39 | 16:51 | 17:05 | 17:16 | 17:25 |
| 1238 | 15:15 | 15:28 | - | - | - | 16:08 | - | - | - | 16:47 | 16:57 | 17:05 |
| 838 | 15:25 | 15:41 | 16:00 | 16:12 | 16:24 | 16:36 | 16:56 | 17:08 | 17:20 | 17:32 | 17:42 | 17:50 |
| 658 | 15:35 | 15:48 | 16:08 | - | - | 16:32 | - | 16:57 | 17:11 | 17:25 | 17:36 | 17:45 |
| 1320 | 15:45 | 15:57 | 16:19 | 16:31 | 16:41 | 16:53 | - | - | 17:27 | - | 17:47 | 17:55 |
| 140 | 15:55 | - | - | - | - | 16:39 | - | - | - | 17:21 | 17:32 | 17:40 |
| 660 | 16:00 | 16:13 | 16:32 | - | - | 17:00 | - | 17:25 | 17:38 | 17:51 | 18:02 | 18:10 |
| 1550 | - | - | - | - | - | 17:04 | 17:24 | 17:39 | 17:51 | 18:05 | 18:16 | 18:25 |
| 242 | 16:15 | 16:28 | - | - | - | 17:08 | - | - | - | 17:47 | 17:57 | 18:05 |
| 842 | 16:25 | 16:41 | 17:00 | 17:12 | 17:24 | 17:36 | 17:56 | 18:08 | 18:20 | 18:32 | 18:42 | 18:50 |
| 664 | 16:35 | 16:48 | 17:08 | - | - | 17:32 | - | 17:57 | 18:11 | 18:25 | 18:36 | 18:45 |
| 144 | 16:55 | - | - | - | - | 17:39 | - | - | - | 18:21 | 18:32 | 18:40 |
| 666 | 17:00 | 17:13 | 17:32 | - | - | 18:00 | - | 18:25 | 18:38 | 18:51 | 19:02 | 19:10 |
| 1554 | - | - | - | - | - | 18:04 | 18:24 | 18:39 | 18:51 | 19:05 | 19:16 | 19:25 |
| 1246 | 17:15 | 17:28 | - | - | - | 18:08 | - | - | - | 18:47 | 18:57 | 19:05 |
| 846 | 17:25 | 17:41 | 18:00 | 18:12 | 18:24 | 18:36 | 18:56 | 19:08 | 19:20 | 19:32 | 19:42 | 19:50 |
| 670 | 17:35 | 17:48 | 18:08 | - | - | 18:32 | - | 18:57 | 19:11 | 19:25 | 19:36 | 19:45 |
| 1324 | 17:45 | 17:57 | 18:19 | 18:31 | 18:41 | 18:53 | - | - | 19:27 | - | 19:47 | 19:55 |
| 148 | 17:55 | - | - | - | - | 18:39 | - | - | - | 19:21 | 19:32 | 19:40 |
| 672 | 18:00 | 18:13 | 18:32 | - | - | 19:00 | - | 19:25 | 19:38 | 19:51 | 20:02 | 20:10 |
| 1558 | - | - | - | - | - | 19:04 | 19:24 | 19:39 | 19:51 | 20:05 | 20:16 | 20:25 |
| 1250 | 18:15 | 18:28 | - | - | - | 19:08 | - | - | - | 19:47 | 19:57 | 20:05 |
| 850 | 18:25 | 18:41 | 19:00 | 19:12 | 19:24 | 19:36 | 19:56 | 20:08 | 20:20 | 20:32 | 20:42 | 20:50 |
| 676 | 18:35 | 18:48 | 19:08 | - | - | 19:32 | - | 19:57 | 20:11 | 20:25 | 20:36 | 20:45 |
| 1326 | 18:45 | 18:57 | 19:19 | 19:31 | 19:41 | 19:53 | - | - | 20:27 | - | 20:47 | 20:55 |
| 152 | 18:55 | - | - | - | - | 19:39 | - | - | - | 20:21 | 20:32 | 20:40 |
| 678 | 19:00 | 19:13 | 19:32 | - | - | 20:00 | - | 20:25 | 20:38 | 20:51 | 21:02 | 21:10 |
| 1562 | - | - | - | - | - | 20:04 | 20:24 | 20:39 | 20:51 | 21:05 | 21:16 | 21:25 |
| 1254 | 19:15 | 19:28 | - | - | - | 20:08 | - | - | - | 20:47 | 20:57 | 21:05 |
| 854 | 19:25 | 19:41 | 20:00 | 20:12 | 20:24 | 20:36 | 20:56 | 21:08 | 21:20 | 21:32 | 21:42 | 21:50 |
| 1682 | 19:35 | 19:48 | 20:08 | - | - | 20:32 | - | 20:57 | 21:11 | 21:25 | 21:36 | 21:45 |
| 1328 | 19:45 | 19:57 | 20:19 | 20:31 | 20:41 | 20:53 | - | - | 21:27 | - | 21:47 | 21:55 |
| 156 | 19:55 | - | - | - | - | 20:39 | - | - | - | 21:21 | 21:32 | 21:40 |
| 684 | 20:00 | 20:13 | 20:32 | - | - | 21:00 | - | 21:25 | 21:38 | 21:51 | 22:02 | 22:10 |
| 1566 | - | - | - | - | - | 21:04 | 21:24 | 21:39 | 21:51 | 22:05 | 22:16 | 22:25 |
| 1258 | 20:15 | 20:28 | - | - | - | 21:08 | - | - | - | 21:47 | 21:57 | 22:05 |
| 858 | 20:25 | 20:41 | 21:00 | 21:12 | 21:24 | 21:36 | 21:56 | 22:08 | 22:20 | 22:32 | 22:42 | 22:50 |
| 1688 | 20:35 | 20:48 | 21:08 | - | - | 21:32 | - | 21:57 | 22:11 | 22:25 | 22:36 | 22:45 |
| 1330 | 20:45 | 20:57 | 21:19 | 21:31 | 21:42 | 21:54 | - | - | 22:27 | - | 22:47 | 22:55 |
| 160 | 20:55 | - | - | - | - | 21:39 | - | - | - | 22:21 | 22:32 | 22:40 |
| 1570 | - | - | - | - | - | 21:51 | 22:10 | 22:23 | 22:36 | 22:49 | 23:01 | 23:10 |
| 690 | 21:05 | 21:18 | 21:37 | - | - | 22:05 | - | 22:30 | 22:43 | 22:56 | 23:07 | 23:15 |
| 862 | 21:30 | 21:44 | 22:03 | 22:16 | 22:28 | 22:40 | 23:00 | 23:12 | 23:25 | 23:37 | 23:47 | 23:55 |
| 1264 | 21:40 | 21:53 | - | - | - | 22:30 | - | - | - | 23:11 | 23:21 | 23:30 |
| 1336 | 21:50 | 22:03 | 22:21 | 22:33 | 22:43 | 22:55 | - | - | 23:33 | - | 23:56 | 00:05 |
| 696 | 21:55 | 22:11 | 22:32 | - | - | 22:59 | - | 23:27 | 23:40 | 23:52 | 23:59 | - |
| 294 | 22:10 | 22:23 | - | - | - | 23:03 | - | - | - | 23:42 | 23:52 | 23:59 |
| 598 | 22:55 | 23:08 | 23:27 | 23:39 | 23:49 | 23:59 | - | - | - | - | - | - |