# Bash:

```
michaelwu1@login-02 ~ $ ./phonebook.bash datebook.txt
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option: 1
Arthur Putie:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000
Barbara Kertz:385-573-8326:832 Ponce Drive, Gary, IN 83756:12/1/46:268500
Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500
Ephram Hardy:293-259-5395:235 CarltonLane, Joliet, IL 73858:8/12/20:56700
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Igor Chevsky:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:23400
James Ikeda:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000
Jennifer Cowan:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900
Jesse Neal:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3/36:25000
Jon DeLoach:408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100
Jose Santiago:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600
Karen Evich: 284-758-2857:23 Edgecliff Place, Lincoln, NB 92086:7/25/53:85100
Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Lesley Kirstin:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:52600
Lori Gortz:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200
Norma Corder:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:245700
Paco Gutierrez:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:123500
Popeye Sailor:156-454-3322:945 Bluto Street, Anywhere, USA 29358:3/19/35:22350
Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:24500
Steve Blenheim:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
Tommy Savage:408-724-0140:1222 Oxbow Court, Sunnyvale, CA 94087:5/19/66:34200
Vinh Tranh:438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68900
William Kopf:846-836-2837:6937 Ware Road, Milton, PA 93756:9/21/46:43500
Yukio Takeshida:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000
Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:89500
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- 1. List records alphabetically by first name
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- 4. List records in reverse alphabetical order by last name
- 5. Search for a record by last name
- 6. Search for records by birthday (month or year)
- 7. Exit

Choose an option: 2

Steve Blenheim: 238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300 Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500 Igor Chevsky:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:23400 Norma Corder:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:245700 Jennifer Cowan:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900 Jon DeLoach: 408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100 Karen Evich:284-758-2857:23 Edgecliff Place, Lincoln, NB 92086:7/25/53:85100 Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Lori Gortz:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200 Paco Gutierrez:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:123500 Ephram Hardy:293-259-5395:235 CarltonLane, Joliet, IL 73858:8/12/20:56700 James Ikeda:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000 Barbara Kertz:385-573-8326:832 Ponce Drive, Gary, IN 83756:12/1/46:268500 Lesley Kirstin:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:52600 William Kopf:846-836-2837:6937 Ware Road, Milton, PA 93756:9/21/46:43500 Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:24500 Jesse Neal:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3/36:25000 Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:89500 Arthur Putie:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000 Popeye Sailor:156-454-3322:945 Bluto Street, Anywhere, USA 29358:3/19/35:22350 Jose Santiago:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600 Tommy Savage: 408-724-0140:1222 Oxbow Court, Sunnyvale, CA 94087:5/19/66:34200 Yukio Takeshida:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000 Vinh Tranh: 438-910-7449: 8235 Maple Street, Wilmington, VM 29085: 9/23/63: 68900

Choose an option: 3

Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:89500 Yukio Takeshida:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000 William Kopf:846-836-2837:6937 Ware Road, Milton, PA 93756:9/21/46:43500 Vinh Tranh:438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68900 Tommy Savage:408-724-0140:1222 Oxbow Court, Sunnyvale, CA 94087:5/19/66:34200 Steve Blenheim:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300 Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:24500 Popeye Sailor:156-454-3322:945 Bluto Street, Anywhere, USA 29358:3/19/35:22350 Paco Gutierrez:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:123500 Norma Corder:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:245700 Lori Gortz:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200 Lesley Kirstin:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:52600 Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich: 284-758-2857:23 Edgecliff Place, Lincoln, NB 92086:7/25/53:85100 Jose Santiago:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600 Jon DeLoach: 408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100 Jesse Neal:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3/36:25000 Jennifer Cowan:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900 James Ikeda:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000 Igor Chevsky:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:23400 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Ephram Hardy:293-259-5395:235 CarltonLane, Joliet, IL 73858:8/12/20:56700 Betty Boop: 245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500 Barbara Kertz:385-573-8326:832 Ponce Drive, Gary, IN 83756:12/1/46:268500 Arthur Putie:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000

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- 2. List records alphabetically by last name
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- 4. List records in reverse alphabetical order by last name
- 5. Search for a record by last name
- 6. Search for records by birthday (month or year)
- 7. Exit

Choose an option: 4

Vinh Tranh:438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68900 Yukio Takeshida:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000 Tommy Savage:408-724-0140:1222 Oxbow Court, Sunnyvale, CA 94087:5/19/66:34200 Jose Santiago:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600 Popeye Sailor:156-454-3322:945 Bluto Street, Anywhere, USA 29358:3/19/35:22350 Arthur Putie:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000 Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:89500 Jesse Neal:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3/36:25000 Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:24500 William Kopf:846-836-2837:6937 Ware Road, Milton, PA 93756:9/21/46:43500 Lesley Kirstin:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:52600 Barbara Kertz:385-573-8326:832 Ponce Drive, Gary, IN 83756:12/1/46:268500 James Ikeda:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000 Ephram Hardy:293-259-5395:235 CarltonLane, Joliet, IL 73858:8/12/20:56700 Paco Gutierrez:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:123500 Lori Gortz:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich: 284-758-2857:23 Edgecliff Place, Lincoln, NB 92086:7/25/53:85100 Jon DeLoach:408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100 Jennifer Cowan:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900 Norma Corder:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:245700 Igor Chevsky:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:23400 Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500 Steve Blenheim: 238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300

```
Choose an option: 5
Enter last name: Evich
Karen Evich: 284-758-2857:23 Edgecliff Place, Lincoln, NB 92086:7/25/53:85100
Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Menu Options:
1. List records alphabetically by first name
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3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option: 6
Enter month or year to search for (e.g., MM or YYYY): 11
Steve Blenheim: 238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Menu Options:
1. List records alphabetically by first name
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3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option: 6
Enter month or year to search for (e.g., MM or YYYY): 1
Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:89500
Jose Santiago:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option: 6
Enter month or year to search for (e.g., MM or YYYY): 2023
Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option: -1
Invalid option. Please try again.
```

- 1. List records alphabetically by first name
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- 4. List records in reverse alphabetical order by last name
- 5. Search for a record by last name
- 6. Search for records by birthday (month or year)
- 7. Exit

Choose an option: 10

Invalid option. Please try again.

# Menu Options:

- 1. List records alphabetically by first name
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- 3. List records in reverse alphabetical order by first name
- 4. List records in reverse alphabetical order by last name
- 5. Search for a record by last name
- 6. Search for records by birthday (month or year)
- 7. Exit

Choose an option: 7

Exiting...

michaelwu1@login-02 ~ \$

# C-Shell:

```
michaelwu1@login-02 ~ $ ./phonebook.csh datebook.txt
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
Search for records by birthday (month or year)
7. Exit
Choose an option:
Arthur Putie:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000
Barbara Kertz:385-573-8326:832 Ponce Drive, Gary, IN 83756:12/1/46:268500
Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500
Ephram Hardy:293-259-5395:235 CarltonLane, Joliet, IL 73858:8/12/20:56700
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Igor Chevsky:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:23400
James Ikeda:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000
Jennifer Cowan:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900
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Jon DeLoach:408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100
Jose Santiago:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600
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Karen Evich:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Lesley Kirstin:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:52600
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Popeye Sailor:156-454-3322:945 Bluto Street, Anywhere, USA 29358:3/19/35:22350
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Vinh Tranh:438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68900
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- 7. Exit

# Choose an option:

2

Steve Blenheim: 238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300 Betty Boop: 245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500 Igor Chevsky:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:23400 Norma Corder:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:245700 Jennifer Cowan:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900 Jon DeLoach:408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100 Karen Evich:284-758-2857:23 Edgecliff Place, Lincoln, NB 92086:7/25/53:85100 Karen Evich:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Lori Gortz:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200 Paco Gutierrez:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:123500 Ephram Hardy: 293-259-5395: 235 CarltonLane, Joliet, IL 73858: 8/12/20: 56700 James Ikeda:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000 Barbara Kertz:385-573-8326:832 Ponce Drive, Gary, IN 83756:12/1/46:268500 Lesley Kirstin:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:52600 William Kopf:846-836-2837:6937 Ware Road, Milton, PA 93756:9/21/46:43500 Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:24500 Jesse Neal:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3/36:25000 Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:89500 Arthur Putie:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000 Popeye Sailor:156-454-3322:945 Bluto Street, Anywhere, USA 29358:3/19/35:22350 Jose Santiago:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600 Tommy Savage:408-724-0140:1222 Oxbow Court, Sunnyvale, CA 94087:5/19/66:34200 Vinh Tranh:438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68900

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- 7. Exit

# Choose an option:

3

Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:89500 Yukio Takeshida:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000 William Kopf:846-836-2837:6937 Ware Road, Milton, PA 93756:9/21/46:43500 Vinh Tranh:438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68900 Tommy Savage:408-724-0140:1222 Oxbow Court, Sunnyvale, CA 94087:5/19/66:34200 Steve Blenheim: 238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300 Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:24500 Popeye Sailor:156-454-3322:945 Bluto Street, Anywhere, USA 29358:3/19/35:22350 Paco Gutierrez:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:123500 Norma Corder:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:245700 Lori Gortz:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200 Lesley Kirstin:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:52600 Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich:284-758-2857:23 Edgecliff Place, Lincoln, NB 92086:7/25/53:85100 Jose Santiago:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600 Jon DeLoach:408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100 Jesse Neal:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3/36:25000 Jennifer Cowan:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900 James Ikeda:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000 Igor Chevsky:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:23400 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Ephram Hardy:293-259-5395:235 CarltonLane, Joliet, IL 73858:8/12/20:56700 Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500 Barbara Kertz:385-573-8326:832 Ponce Drive, Gary, IN 83756:12/1/46:268500 Arthur Putie:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000

- 1. List records alphabetically by first name
- 2. List records alphabetically by last name
- 3. List records in reverse alphabetical order by first name
- 4. List records in reverse alphabetical order by last name
- 5. Search for a record by last name
- 6. Search for records by birthday (month or year)
- 7. Exit

# Choose an option:

4

Vinh Tranh: 438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68900 Yukio Takeshida:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000 Tommy Savage:408-724-0140:1222 Oxbow Court, Sunnyvale, CA 94087:5/19/66:34200 Jose Santiago:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600 Popeye Sailor:156-454-3322:945 Bluto Street, Anywhere, USA 29358:3/19/35:22350 Arthur Putie:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000 Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:89500 Jesse Neal:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3/36:25000 Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:24500 William Kopf:846-836-2837:6937 Ware Road, Milton, PA 93756:9/21/46:43500 Lesley Kirstin:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:52600 Barbara Kertz:385-573-8326:832 Ponce Drive, Gary, IN 83756:12/1/46:268500 James Ikeda:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000 Ephram Hardy:293-259-5395:235 CarltonLane, Joliet, IL 73858:8/12/20:56700 Paco Gutierrez:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:123500 Lori Gortz:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900 Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200 Karen Evich: 284-758-2857:23 Edgecliff Place, Lincoln, NB 92086:7/25/53:85100 Jon DeLoach:408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100 Jennifer Cowan:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900 Norma Corder:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:245700 Igor Chevsky:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:23400 Betty Boop: 245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500 Steve Blenheim: 238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300

```
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option:
Enter last name:
Fardbarkle
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option:
Enter month or year to search for (e.g., MM or YYYY):
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Fred Fardbarkle:674-843-1385:20 Parak Lane, DeLuth, MN 23850:4/12/23:780900
Lesley Kirstin: 408-456-1234: 4 Harvard Square, Boston, MA 02133: 4/22/62:52600
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option:
Enter month or year to search for (e.g., MM or YYYY):
James Ikeda:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000
Barbara Kertz:385-573-8326:832 Ponce Drive, Gary, IN 83756:12/1/46:268500
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option:
Enter month or year to search for (e.g., MM or YYYY):
Jennifer Cowan: 548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900
Karen Evich: 284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Karen Evich:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Popeye Sailor:156-454-3322:945 Bluto Street, Anywhere, USA 29358:3/19/35:22350
```

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Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
Search for records by birthday (month or year)
Exit
Choose an option:
Invalid option. Please try again.
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
6. Search for records by birthday (month or year)
7. Exit
Choose an option:
Invalid option. Please try again.
Menu Options:
1. List records alphabetically by first name
2. List records alphabetically by last name
3. List records in reverse alphabetical order by first name
4. List records in reverse alphabetical order by last name
5. Search for a record by last name
Search for records by birthday (month or year)
7. Exit
Choose an option:
Exiting...
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michaelwu1@login-02 ~ \$