Part one:

Running time Statistics:

Array Option:

1. .0002758s
   1. Zanesville, 5, 10
2. .0005234s
   1. Zanesville
3. .0007032s
   1. 5, 10
4. .0003152s
   1. Akron
5. .0041666
   1. 5, 10
6. .0173512s
   1. Canton, 45
7. .0084806s

Linked:

1. .0002453s
   1. Zanesville, 5, 10
2. .0007130s
   1. Zanesville
3. .0005822s
   1. 5, 10
4. .0042653s
   1. Akron
5. 0.0000023s
   1. 5, 10
6. 0.0018871s
   1. Canton, 45
7. 0.0100711s

Part 2:

Advantages of linked list implementation:

Dynamic memory usage; static arrays must be defined and take up lots of space, and could be filled up with too many entries.

Faster deletion; linked list does not have to move every item over in an array, just has to patch a hole.

Easier to code; arrays must keep track of how many items are inside so that they know when to stop searching and maintain a continuous memory.

Disadvantages include:

Arrays are better at appending items and accessing items because if given a location, can jump to said location instead of having to traverse the entire database.

Part 3:

Alphabetical order could speed up array implementation, but not linked list, as a linked list needs to be transversed linearly, no matter the organization. Array linked list would greatly benefit from alphabetical organization because it would be easier to find and delete entries as well as increase search speeds.

Part 4:

Alphabetical order would slow linked list and array implementation by a lot, causing both to have to organize and shift entries around for new entries. It would make loading a database much more difficult and slow.