1. To find all users from Nebraska the program looks at all (n) records. For each record it then looks to see if the user is from Nebraska by retrieving the state using strtok function. Not sure what the complexity of that is off hand it then compares the user state to Nebraska so if the strcmp function looks at each character it would take 8 iterations as 8 is the length of Nebraska and would do this n times.   
   So the total complexity would be about n + 8n = 9n  
   The running time on average was around 0.84 seconds.
2. To find all users that have a message between 8am-9am you would once again need to look at all n records and for each record look at its corresponding m messages.  
   The complexity for this would be n+m as you look at each record and each message.  
   The running time on average was around 0.9 seconds.
3. To find all users from Nebraska that sent a message between 8am-9am, like the first problem you would look at all n records and match the location with Nebraska so 9n. Then for each user from Nebraska you would need to look at their messages.   
   The time complexity would be similar to problem 2 so n+m where the hidden constants would be slightly larger for n but smaller for m.  
   The running time on average was in a wider range between 0.85 – 0.96 seconds
4. This final search to find the user from Nebraska with the most messages between 8-9am is similar to the previous algorithm the only difference is keeping track of 2 new variables a current max messages and current user id those relate to.  
   So the complexity would still be n + m  
   The average run time was in the range 0.85-0.95seconds.

In conclusion the above algorithms all run in linear time generally just differencing in a constant factor. This was shown in the timings as they all ran in relatively the same amount of time. Since each record had 1 or more messages adding the search through the messages had the greatest weight on the differences rather than only having to look at each record.