There are three parts to Lab 4. In the first part, you'll create the materials for a new sentence comprehension experiment. In the second part, you'll help recruit participants for this experiment, and in the third part you'll analyze the data that the class collects.

Our experiment will investigate the memory operations that build syntactic structure in comprehension. The case used is to examine this is subject-verb agreement. Previous work shows that comprehenders make errors in non-local subject-verb agreement. Comprehenders usually slow down when they read an agreement error (singular subject – plural verb):

(1a) The slogan about the husband were designed to get attention.

but if there is a plural non-subject in an embedded PP, they slow down less:

(1b) The slogan about the husbands were designed to get attention.

Wagers, Lau & Phillips (2009) show that this even happens when the subject and the verb are right next to each other and the plural non-subject is far away:

(2) The musicians that the reviewer praise were fantastic.

These errors give us insight into the memory system for syntactic parsing. They suggest that comprehenders use a parallel cue-based memory search (so it doesn’t matter if the non-subject is linearly close to the verb or not) with cues like ‘plural’ and ‘subject’, so that a partially-matching plural non-subject is sometimes erroneously retrieved.

However, some people have argued that the non-intervening relative clause case in (2) has a different cause than the intervening prepositional phrase case in (1). Specifically, Adrian Staub has suggested that in (2), what is happening is that the embedding is making people confused about what is actually the subject of praise, and that is why they are making errors in number agreement. In other words there are two hypotheses on the table: a single-mechanism hypothesis, which says both (1) and (2) result from confusion about the number of the subject, or a dual-mechanism hypothesis, which says that (1) results from confusion about the number of the subject and (2) results from confusion about the identity of the subject.

The class this year decided to use second language learners to try to test some predictions of these hypotheses. Zoe Schlueter has shown that L1-Mandarin/L2-English speakers are sensitive to basic agreement violations, but they don’t show agreement attraction illusions for cases like (1) because they don’t use number as a retrieval cue. The idea of the class experiment is that the single-mechanism hypothesis should predict that L1-Mandarin/L2-English speakers should show the same pattern for cases like (2): no agreement attraction. However, the dual-mechanism hypothesis suggests that the problem with (2) is subject confusion, not number confusion. Therefore, this hypothesis might predict that the L2 speakers show agreement attraction in (2), but not in (1).
Our experiment will have four key conditions:

1a SgAttGr: The musician that the reviewer was praising so highly seemed fantastic.
1b SgAttUngr: The musician that the reviewer were praising so highly seemed fantastic.
1c PlAttGr: The musicians that the reviewer was praising so highly seemed fantastic.
1d PlAttUngr: The musicians that the reviewer were praising so highly seemed fantastic.

These four conditions will let us determine whether our population is showing the standard agreement pattern from previous literature: the slowdown between SgAttGr and SgAttUngr should be larger than the comparison between PlAttGr and PlAttUngr, because people should erroneously retrieve the non-subject plural from memory.

Your task in Lab 4a is to make 2 sets of 4 items for the new experiment.

Just as in the above we have 1a-1d, I want you to write 2 sets each ranging from a-d. So for each set, you need to write a sentence which can be modified such that it works in each of the conditions a-d. To make it easy to combine them, please put them into an Excel-like table with a format like this (note the sentences in the picture are not the right structure though):

<table>
<thead>
<tr>
<th>Set</th>
<th>Condition</th>
<th>Name</th>
<th>Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 a</td>
<td>SgAttGr</td>
<td></td>
<td>The smell of the cheese was ruining their dinner date.</td>
</tr>
<tr>
<td>1 b</td>
<td>SgAttUngr</td>
<td></td>
<td>The smell of the cheese were ruining their dinner date.</td>
</tr>
<tr>
<td>1 c</td>
<td>PlAttGr</td>
<td></td>
<td>The smell of the cheeses was ruining their dinner date.</td>
</tr>
<tr>
<td>1 d</td>
<td>PlAttUngr</td>
<td></td>
<td>The smell of the cheeses were ruining their dinner date.</td>
</tr>
</tbody>
</table>

Constraints on materials:

- Keep the structures constant prior to the critical auxiliary verb; don’t add any extra modifiers that aren’t needed. So you should always start out with Det-N-that-Det-N-was/were-V, and then the next part can vary more across items.

- Within each set, the words in the items should be matched as tightly as possible, especially up to the word following the critical auxiliary verb (note how in the example above, this word is always the same: designed).

- Try to make the embedded predicate be something that would be consistent with either noun as the subject (e.g. in (2) both a musician or a reviewer can praise something highly). That’s because if the dual-mechanism hypothesis is correct, agreement attraction in (2) is caused by confusing who the subject is, so we want to make sure this is possible in our items.

- Try to make the items interesting, but you don’t want anything extremely surprising or unusual because that will add variability to the reaction times.

- Use pretty easy vocabulary that an L2 speaker will be familiar with.