1 A Telephone Database

To get a feel for Ada, implement the following:

- A generic linked list module List. Just implement the minimum set of operations to support the Map module below. List should be implemented as a separately compiled generic package. List.T should be a private type.

- A generic module Map that can map strings to a variety of data types. Map should support the operations Create, Insert and Lookup. Map should be implemented as a separately compiled generic package. Map.T should be a private type. Use the List module as the basis for your implementation. Define some exceptions to deal with errors.

- A simple telephone database program Phone that reads instructions from standard input for inserting data or querying the database:

  ```
  $ phone
  > I Lisa 555-1212
  > I Bart 555-BART
  > L Lisa
  555-1212
  ```

  Here, I means insert and L lookup. Phone should be implemented as a separately compiled package. Use the Map module as the basis for your implementation.

2 Submission and Assessment

The deadline for this assignment is 10:30AM, Wednesday, March 5. You should submit the assignment electronically using the Unix command `turnin cs520.8 <files>`. This assignment is worth 2% of your final grade.

Don’t show your code to anyone, don’t read anyone else’s code, don’t discuss the details of your code with anyone. If you need help with the assignment see the instructor.