

CS 61A Summer 2010 Week 7B Lab
Wednesday 8/4 Afternoon

Abelson and Sussman, exercises 4.55 and 4.62:

4.55: Give simple queries that retrieve the following information from the data base:

All people supervised by Ben Bitdiddle; The names and jobs of all people in the accounting division;
The names and addresses of all people who live in Slumerville.

4.62: Define rules to implement the last-pair operation of exercise 2.17, which returns a list containing the last element of a nonempty list. Check your rules on queries such as

```
(last-pair (3) ?x)
(last-pair (1 2 3) ?x)
(last-pair (2 ?x) (3))
```

Do your rules work correctly on queries such as `(last-pair ?x (3))`?

For the lab exercises and the homework problems that involve writing queries or rules, test your solutions using the query system. To run the query system and load in the sample data:

```
stk
(load "~cs61a/lib/query.scm")
(initialize-data-base microshaft-data-base)
(query-driver-loop)
```

You're now in the query systems interpreter. To add an assertion:

```
(assert! (foo bar))
```

To add a rule:

```
(assert! (rule (foo) (bar)))
```

Anything else is a query.

Once you're done, feel free to work on project, and ask your TA about the project 4 choices.