MASSACHVSETTS INSTITVTE OF TECHNOLOGY
Department of Electrical Engineering and Computer Science
6.01—Introduction to EECS I
Spring Semester, 2008

Pset Addendeum for Week 2, Issued: Thursday, Feb. 14

On page 10, the definition of `selectAction` is missing its last line. It should be:

```
def selectAction(actionSet, default):
    actionList = [a for a in actionSet]
    if len(actionList) > 0:
        return actionList[0]
    else:
        print "No legal action!!"
        return default
```

Question 22 (Revised):
Write `prioritizedAndNDB`. Test it outside of soar, on the example above, and other examples of your construction. Here's how you might go about testing:

```
def b1(sensors):
    return set([1, 2, 3])
def b2(sensors):
    return set([2, 3, 4])
def b3(sensors):
    return set([1, 2])
def b4(sensors):
    return set([1, 4])
prioritizedAndNDB([b1, b2, b3, b4])
```

Hint: In thinking about how to write `prioritizedAndNDB` remember that in this week's tutor problems you wrote a procedure `fullintersection`. That doesn't solve the problem, but it could be a useful building block. Note that you can't just copy that code wholesale because it used a different representation of sets.

Python set type

There are some things to know and watch out for in Python's `set` type.

- To make a set from a list of items, do `set([1, 2, 3])`.
- The intersection of sets `a` and `b` is `a & b`.
- The union of sets `a` and `b` is `a | b`.
- The set difference between sets `a` and `b` is `a - b`.
- The number of elements in a set `a` is `len(a)`.
- To add an element `x` to set `s`, you can do `s.add(x)`. Be careful, though, because this changes `s`. To make a whole new set you can do `s | set([x])`.
- **Don't use `and` and `or` to operate on sets!!**. These are Boolean operators, and they treat 0, False, and None all as false values and everything else as true values. For clarity, you shouldn't apply them to anything but Booleans.