CSE 216: Recitation 2:

1. Consider the following Java code (with line numbers):

```
1. String[] strings = {"foo"};
2. Object[] objects = strings;
3. objects[0] = new Integer(5);
```

Will this code compile? Will it run?

2. Going off of the above: Consider the following code:

```
List<Dog> dogs = new LinkedList<Dog>();
List<Animal> animals = dogs;
animals.add(new Bird());
Dog d = dogs.get(0);
```

Will this code compile? Will it run?

3. How do classes, such as in Java, help out with respect to data abstraction and modularity?

4. In lambda calculus, the boolean “true” is encoded as $\lambda x.\lambda y.x$, and “false” is encoded as $\lambda x.\lambda y.y$. Going off of these, plus the basic ideas of abstraction and applications, how can we write out “&&” in lambda calculus? How about “or?” Feel free to use “true” and “false” as placeholders for their corresponding lambda terms.

5. What is variable shadowing? Give an example of it.