

CS 111 Final Review Guide

Topics covered:

- Variables
- Expressions
- Conditionals (“if” statements)
- Loops (while and for)
- Lists including list comprehensions
- Strings
- Functions
- Classes and objects
- Pygame
- Visual Python
- Recursion
- Dictionaries

There are no questions which are purely from the book. Closed book. A page or two of notes will be allowed. For the notes, it is advisable to make a list of keywords used in class demos and labs with a brief reminder on what each of them does. The class demos and labs are the most relevant study material for the test. Length is comperable to the midterms, but you have two hours instead of 75 minutes.

OpenGL and TKinter are not specifically covered on the final.

A quick overview of the test from last time:

Page	Question Format	Total Points	Topics
1	None	0	Cover Page
2	8 Multiple Choice	24	General
3	3 Short Answer	21	Strings, nested loops, writing functions
4	3 Short Answer	21	Loops, characters (strings of length 1 in Python), returning values from functions
5	3 Short Answer	24	Code tracing, recursive functions
6	1 Short Answer	10	Iterative version of a recursive function

Sample Questions

Question 1: (7 points) Suppose you have a list of strings called `list_of_cat_names`. Give a loop which prints out each item in turn.

Question 2: (7 points) What is the output of the following Python program?

```
x = 22
y = 4
print x + y
y = y + 20
if x > y:
    print "Beep"
else:
    if y > x and x > 23:
        print "Click"
    else:
        print "Whirr"
```

Question 3: (7 points) What is the difference between the following lines of code? Why would you prefer one or the other?

```
import math
from math import *
```