

6.189 - Intro to Python
IAP 2008 - Class 4
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Lab 5: Working with Lists

Problem 1 - Sorting a List

Write a program that asks the user to enter 10 (positive) numbers. The program should then print the numbers in sorted order, from biggest to smallest.

To do this, first write a function that takes a list and finds the largest element. It then 1) deletes that element from the list and 2) returns that element.

Hint: You will need to store two variables in this function: the biggest number you've seen so far (remember to initially set this to 0), and its position. Then iterate over the list, and for each element, check if it's bigger than the biggest number you've seen so far. If it is, change both variables (remember to change BOTH!)

So in your main program, you'll have to keep calling this function (in a loop) until the list is empty and keep printing the number that is returned.

Problem 2 – Report card with GPA

Write a program where the user can enter each of his grades, after which the program prints out a report card with GPA. Remember to ask the user how many classes he took. Example output is below.

```
How many classes did you take? 4

What was the name of this class? English
What was your grade? 94

...

REPORT CARD:

English - 94
Math - 96
Science - 91
Social Studies - 88

Overall GPA - 92.25
```

Hints: You'll want to use a **for** loop, and you'll probably want to keep two lists, one for names and one for grades. Remember, add to lists with **append**.