University of Hull
Department of Computer Science

Wrestling with Python – Week 05
Data Processing

Vsn. 1.0 Rob Miles 2013

Introduction

Welcome to our Python sessions.

Please follow the instructions carefully. You need to enter your programs exactly as they are written, otherwise they will do the wrong thing, or nothing at all.

In this session you will create a useful program that makes decisions based on the input it is given.

This indicates an activity you should perform in at this point in the text. You may be given precise instructions, or you may have to work something out for yourself.

Data Processing

```
# Exam Score Data Processing

scoreList = []
while(True):
    scoreString = input("Enter value (empty string to stop):")
    if scoreString == "":
        break
    scoreValue = int(scoreString)
    scoreList.append(scoreValue)

# Sort the list
scoreList.sort()

# Print out the sorted list
for score in scoreList:
    print(score)

# How many zeros?
zeroCount = 0
for score in scoreList:
    if score == 0:
        zeroCount = zeroCount + 1
print("The number of people who scored zero was: ", zeroCount)
```

Above you can see the program that we wrote in the lecture. It reads in a number of values and stores them in a list. Then it sorts the list into ascending order and prints it out in order. Finally it counts how many scores of zero were entered.

Before you go any further; perform the following:

1. Enter the program above (cut it out of this document or download `scores.py`)

> 2.   Run the program with some test data and make sure that it works.

Changing the sort order

At the moment the program sorts from low to high.

> 3.   Change the program to sort the number from high to low. Hint: You should be able to find out how to do this in the presentation.

Finding all the scores greater than fifty

In the lecture we discussed a need to count how many scores were higher than fifty. You should be able to achieve this by changing just one line in the program.

> 4.   Change the program to display how many scores greater than fifty were attained by the students.

Further Work

If you get all this finished you can return to the Cinema problem from last week. If you want even more to do, ask me about calculating a distribution of the scores.

Rob Miles
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