**Sample exam: 120 minutes**

1. (3 points) Write a program that repeatedly prompts a user for integer numbers until the user enters 'done'. Once 'done' is entered, print out the count, and the maximum of the numbers. If the user enters anything other than a valid number catch it with a try/except and put out an appropriate message and ignore the number. Enter 1, 2, and 3 and match the output below.

Num count: 3

Max: 6

2. (3 points) Write a program to read through the mail.txt and figure out who has sent the greatest number of mail messages. The program looks for 'From ' lines and takes the second word of those lines as the person who sent the mail. The program creates a Python dictionary that maps the sender's mail address to a count of the number of times they appear in the file. After the dictionary is produced, the program reads through the dictionary using a maximum loop to find the most prolific committer.

mail.txt

From stephen.marquard@uct.ac.za Sat Jan 5 09:14:16 2008

Return-Path: <postmaster@collab.sakaiproject.org>

Received: from murder (mail.umich.edu [141.211.14.90])

by frankenstein.mail.umich.edu (Cyrus v2.3.8) with LMTPA;

Sat, 05 Jan 2008 09:14:16 -0500

X-Sieve: CMU Sieve 2.3

Received: from murder ([unix socket])

by mail.umich.edu (Cyrus v2.2.12) with LMTPA;

Sat, 05 Jan 2008 09:14:16 -0500

Received: from holes.mr.itd.umich.edu (holes.mr.itd.umich.edu [141.211.14.79])

by flawless.mail.umich.edu () with ESMTP id m05EEFR1013674;

Sat, 5 Jan 2008 09:14:15 -0500

From jonh.pt@uct.ac.za Sat Jan 5 09:14:16 2008

Return-Path: <postmaster@collab.sakaiproject.org>

Received: from murder (mail.umich.edu [141.211.14.90])

by frankenstein.mail.umich.edu (Cyrus v2.3.8) with LMTPA;

Sat, 05 Jan 2008 09:14:16 -0500

X-Sieve: CMU Sieve 2.3

Received: from murder ([unix socket])

by mail.umich.edu (Cyrus v2.2.12) with LMTPA;

Sat, 05 Jan 2008 09:14:16 -0500

Received: from holes.mr.itd.umich.edu (holes.mr.itd.umich.edu [141.211.14.79])

by flawless.mail.umich.edu () with ESMTP id m05EEFR1013674;

Sat, 5 Jan 2008 09:14:15 -0500

3. (4 points) Write a program to read data from file and save data to the database file dbSCList.sqlite using data from the Course.txt. If the avg > 5, write "PASSl" to SDes column.

Create the table with information:

CREATE TABLE StudentCourse (SCode TEXT, CCode TEXT, avg REAL, SDes TEXT)

The program prints the number of processed records, the first 5 rows of the table when sorted in descending order by avg.

Course.txt:

SCode CCode AVG

SE1501 PRF201 6.5

SE1502 CSD201 8.4

SE1503 PRF192 9.1

SE1504 JAV101 7.3

SE1505 ENG001 6.2

SE1506 ENG002 7.8

SE1507 MAT001 7.4