CSC 104 mid-term test #1

17 February 2012, 9:10 AM

Name (underline surname):

CDF ID or student number:

No aids permitted.
Total: 20 marks.
Time allotted: 45 minutes.

Since time may be short, be careful not to get stuck on one question to the exclusion of others. The amount of marks or answer-space allotted does not indicate how long it will take you to complete the question, nor does the size of the answer-space indicate the size of the correct answer.

Answer *all* questions. Answer questions in the space provided.

Do not open this booklet until you are instructed to.

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1. [4 marks]
Suppose you are telling a fellow student how to use the CDF computers. You say, "Go to room 2210 and sit down at any free computer." This is a fine instruction to a person, but:

a) What disqualifies it from being called an "algorithm"?
(The definition of an algorithm presented in class was: A finite sequence of unambiguous, executable steps which ultimately terminates when followed.)

b) How could we modify the instruction to fix this problem?

2. [3 marks]
Programs can also be treated as data. Give an example of a program which can have another program as input, and give an example of using it in this manner.

3. [5 marks]
After successfully executing the command "`cd /u/eem/104`", a CDF computer user
successfully executes the command "`cat file1`" and then the command "`cat ../file2`".

a) What is an absolute path name for file1?

b) What is an absolute path name for file2?

c) Some time later, the user executes a cd command, and then "`cat test/files/greeting`".
The file which is displayed is also known by the absolute path name
"`/u/csc104h/winter/test/files/greeting`".

What was the cd command?

4. [4 marks]
In the URL `http://www.dgp.toronto.edu/~ajr/104/courseinfo.html` , what is the
function of each of the following components? (What does it tell the computer(s) to do?)

a) `http`

b) `www.dgp.toronto.edu`

c) `/~ajr/104/courseinfo.html`

5. [4 marks]
The following Python statement outputs 14:

```
print 2 + 3 * 4
```

However, the following two Python programs do *not* both output 14.

```
x = 3 * 4
print 2 + x
```
_____

```
x = 2 + 3
print x * 4
```

What does each one output, and why do they differ?

_____

Do not write anything in the following table:

	value	mark
1	4	
2	3	
3	5	
4	4	
5	4	
total	20	