CS101 Final Exam

Fall quarter, 2007

December 7, 2007

Please write your name and W number on your test
Closed book, closed notes

Multiple Choice

(2 points each. Circle your answer)

Which of the following would be a reasonable amount of Main Memory (RAM) for a new laptop?

    A. 1 MB
    B. 1 GB
    C. 100 Gigabytes
    D. 1 Kilobyte
    E. None of the above

Which of the following will produce red text in HTML?

    A. `<font color="red">`
    B. `<color="red">`
    C. `<red>`
    D. `<color.changeto("red")>`
    E. `<"font color=red">`

What component of the computer used to fit in an AGP slot, but more recently is designed for a PCI Express x16 slot?

    A. Network Card
    B. Hard Drive
    C. CPU
    D. RAID controller
    E. Video Card

What unit is processor frequency normally measured in?

    A. Gigabytes
    B. Gigahertz
    C. Kilohertz
    D. Kilobytes
    E. Megabytes

What a field in a database table which is used to uniquely identify each record called?

    A. A public key
    B. A primary key
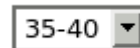   C. A private key
    D. A unique key
    E. A table key

Which interface is used to connect hard drives inside the computer?

    A. PCI
    B. SATA
    C. AGP
    D. IDE
    E. More than one of the above

Which of the following is a reasonable size for a new hard drive?

    A. 250 GB
    B. 10 K
    C. 1 GB
    D. 100 MB
    E. None of the above

Which GUI component is the following:

`35-40 ▾`

    A. Textbox
    B. Checkbox
    C. Button
    D. Drop-down menu
    E. Radio Button

(3 points) How does an IP address differ from a MAC address?

(3 points) You have a CD encoded in MP3 format at 320 $\frac{kb}{s}$ which currently takes up 100 mb of space. How much space could you save by converting it to a 160 $\frac{kb}{s}$ ogg file?

(3 points) Would you store a document in Main Memory (RAM)? Why or why not?

(3 points) What is a phishing scam?

(4 points) Give two examples of web browsers.

(4 points) Name two common computing activities which multiple processor cores **WILL NOT** help.

(4 points) How can public key encryption be used to establish secure communication with someone you cannot secretly exchange keys with?

(4 points) Why does using wireless networks decrease your privacy, and what can be done about this?

(4 points) Why does increasing the length of an encryption key increase security against brute-force attacks?

Consider the following spreadsheet:

	A	B	C	D	E	F
1		Test 1	Test 2	Test 3	Average	Student has C?
2	Student 1	88	90	81		
3	Student 2	64	80	63		
4	Student 3	83	99	90		
5	Student 4	70	85	90		

(6 points) What formula should be used for the "average" column? (Just give the formula for row 2, and assume it will be cut and paste to the other rows as well)

(6 points) How would you change the formula given above to make sure that the column references remain correct if you decide to paste the formula into column F instead of column E?

(6 points) The "Student has C?" column should have a "Yes" or "No" for each student depending on whether or not they have an average above 70. What formula should be used for this column? As Before, just give a formula for row 2 and assume it will be cut and paste to the other rows.

(7 points) What is a cookie, what were cookies intended to be used for, and what are they used for now?

(7 points) Suppose you have two tables in a database. One contains a list of students, and another contains a list of classes. How could you expand this database to track which students have taken which classes?

(20 points) Suppose you have the following HTML form, which will convert between mph and kph (1 kph = 0.621 mph, and 1 mph = 1.609 kph). The user can select mph or kph with both sets of radio buttons. The behaviour in this situation should be to make the correct number appear in the output box, even though this is the same number specified in the input box. A screenshot is provided in figure 1. Fill in the onclick.

```
<form name="Converter">
<table>
  <tr>
    <td> Input: <input type=text name=txtInput> </td>
    <td> Output: <input type=text name=txtOutput> </td>
  </tr>
  <tr>
    <td> Input is in: <br> <input type=radio name=radInputType> mph <br>
      <input type=radio name=radInputType> kph </td>
    <td> Output is in: <br> <input type=radio name=radOutputType> mph <br>
      <input type=radio name=radOutputType> kph </td>
  </tr>
</table>
<input type=button value="Convert!" onclick='
```
```
'>
</form>
```