

# THE UNIVERSITY OF AUCKLAND

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SECOND SEMESTER, 2008  
Campus: City

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COMPUTER SCIENCE 345

TEST

Human Computer Interaction

(Time Allowed: 50 Minutes)

Note: This test contributes 15% to your final grade.

Attempt all questions.

Write your answers **legibly** on this paper.

Overflow space is available at the end of the paper, note at end of original space if you have extended your answer into the overflow space

Name	<i>Answers</i>	UPI	ID Number
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Question	Out of	Marks
1 The Human	10	
2 Computer Interaction Devices	8	
3 Designing Interactions	12	

<b>Total</b>	<b>30</b>	
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*These are not definitive or  
only correct answers - just  
ideas of what was expected.*

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Surname: \_\_\_\_\_ First Name: \_\_\_\_\_ UPI: \_\_\_\_\_

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## 1. The Human

10 Marks

- a. Human errors can be classified into two main types of errors. Identify these two main classifications and briefly describe each (4 marks)

i. Slips

right intention, just did it  
wrong

ii. Mistakes

wrong intention

- b. Computer generated audio is widely used to enhance interaction. Identify three different types of audio that can be generated by computers and describe a case when each might be useful. (6 marks)

i. Carcon / Audio Icon

Alert - such as incoming message  
- error

ii. Music

mostly entertainment / games

iii. Speechfor visually impaired  
- eyes busy (eg car nav)

## 2. Computer Interaction Devices

8 Marks

- a) A standard mouse is the default pointing device for PCs; briefly describe the functionality provided by it. (4 marks)

- control / move the cursor
  - click
  - double click
  - hover
  - drag
  - right click
- } - all can be configured differently
- have default behaviour

- b) List two other pointing devices that are readily available and briefly describe how the interaction they offer differs from that of a standard mouse (4 marks)

i. touch screen

stylus screen

touch pad

joy stick

eye gaze

data glove

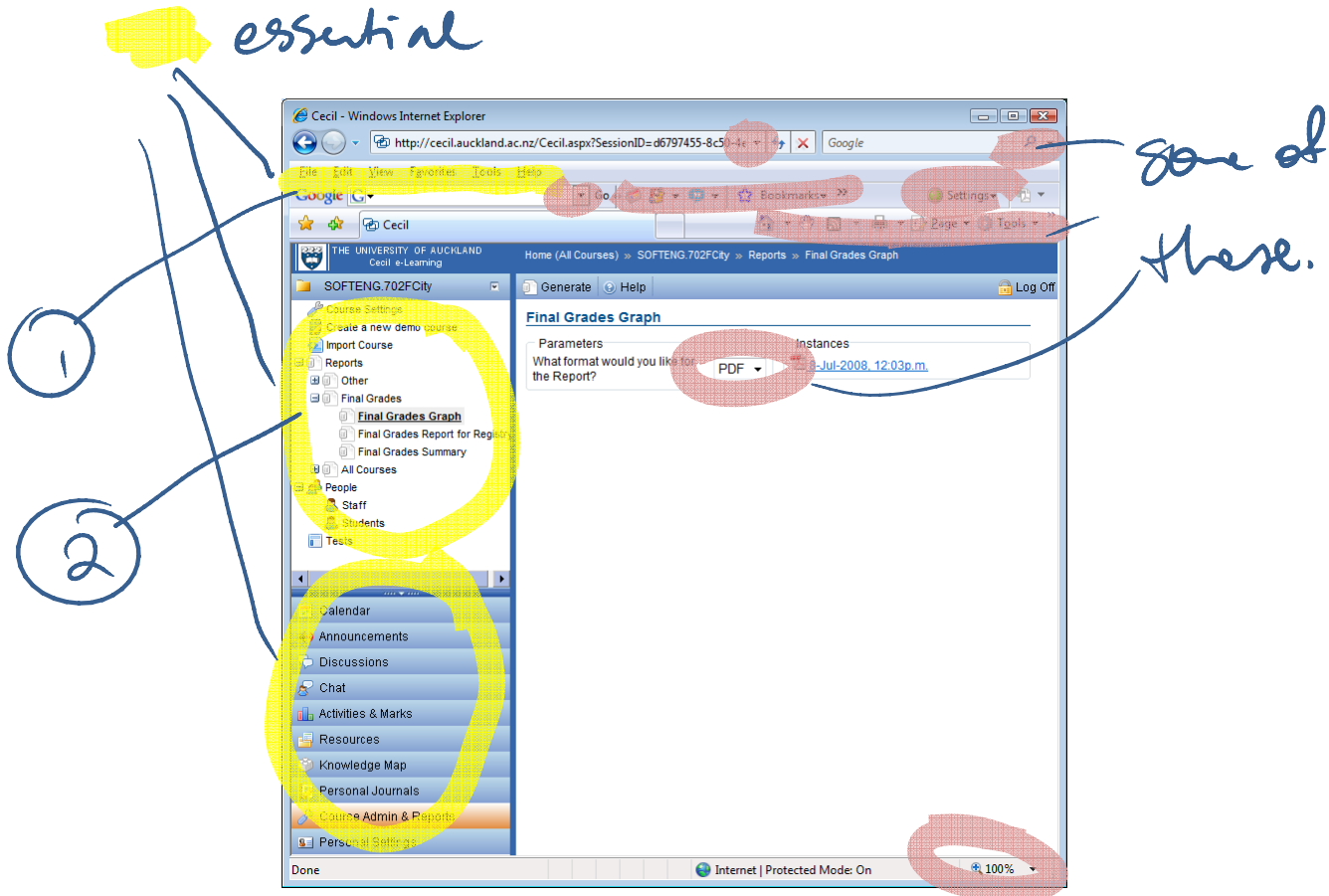
ii.

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—  
—  
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What is same as (a) what is not supported  
- eg many touch screens don't have  
3. hover

Designing Interactions

12 Marks



- a. This screenshot shows multiple sets of menus on the interface. Identify (by circling with a pen) each set of menus. (3 marks)
  
- b. There are several different styles of menus on this interface. Take two of these and discuss the advantages or disadvantages of these particular styles of menus (**hint** you can draw on both 'human capabilities' and design guidelines) (6 marks)

i. Menu style 1 windows menu bar.

- standard, predictable (sort of)
- little screen space
- things can be hard to find.
- deep in hierarchy.

ii. Menu style 2 tree with icons

- collapsable

- icons support words

- load time

-

c. Briefly describe a design methodology you could use to redesign the menus on this interface. (3marks)

you could observe that there are  
lots of menus and paper  
prototyping alone isn't going to work.

- usability test

- card sort.

- analyse structure/content

Surname: \_\_\_\_\_ First Name: \_\_\_\_\_ UPI: \_\_\_\_\_

d. Extra Space – number questions carefully

(Lined area for writing answers)

The End