

## OASYS: Menu

**Menu for Mr A Protogerellis (csuqw) on Mon Feb 28 19:44:00 2000**

### The Process...

- You can only take a test at the end of a lab session when supervised
- You should attempt to mark 3 other scripts *before* your next lab
- Full course credit will only be awarded by participation in both testing and viewing and grading other people's work

When three of your colleagues have marked your script, you will receive your marks and be able to browse their comments and suggestions.

The success of this testing approach is in your hands...

[Tell me more about OASYS...](#)

**Only one lab session remains - this is your only chance to catch up on missed sessions (28th Feb)**

### The Menu

Do a test	<a href="#">lab1</a>	<a href="#">lab2</a>	<a href="#">lab3</a>	<a href="#">lab4</a>
Mark a test	<a href="#">lab1</a>	<a href="#">lab2</a>	<a href="#">lab3</a>	<a href="#">lab4</a>
Revise marks	<a href="#">lab1</a>	<a href="#">lab2</a>	<a href="#">lab3</a>	<a href="#">lab4</a>
See my marks	<a href="#">lab1</a>	<a href="#">lab2</a>	<a href="#">lab3</a>	<a href="#">lab4</a>
Browse <i>all</i> marks	<a href="#">lab1</a>	<a href="#">lab2</a>	<a href="#">lab3</a>	<a href="#">lab4</a>

[Current system stats... Users: 207, Scripts: 644, Graded: 5732, MCQs: 2200, PFCQs: 4 and 496 answers], Free answer marks: 4217]

### Comments?

Comments about this system are welcome: post to the newsgroup, [uwarwick.dcs.course.cs126](#) or email [ashleyweb@dcs.warwick.ac.uk](mailto:ashleyweb@dcs.warwick.ac.uk) with less public issues.

### News

- 23rd Feb 10:07pm: I have mailed the people from the aborted lab session on the 21st (see below) to suggest a solution. If you are one of these people but have not received a message, please contact us ASAP. [ashley]
- 22nd Feb 8:38pm: I've fixed the problem with the "mark a test" allocation that I mention below. Demonstrators will shortly be starting work on marking scripts, so the marking shortfall should be resolved soon. Also, just for the record: there were minor problems in the lab sessions earlier today, caused by the temporary DCS web server outage. [ashley]
- 22nd Feb 13:15pm: There are only two lab sessions remaining. Please could you therefore make a

The *main menu* of OASYS (on-line assessment system) highlights the available options for this learner. Unavailable options can still be selected, and result in an explanation as to why they are not a valid option at present.

**OASYS: Test**

**Test lab1 for Mr A Ward (cssbz) on Mon Feb 28 19:17:08 2000**

1 2 3 4 5 6 7 8 9 10 11 12 End test

---

**Question 1:**

Which of the following statements declare an integer array to hold 10 values?

---

**My answer:**

?	Potential answer
<input checked="" type="radio"/>	Unanswered
<input type="radio"/>	int a = new int[10];
<input type="radio"/>	int[] a = new int[10];
<input type="radio"/>	int[10] a;
<input type="radio"/>	int a=10;

The first question in the first test is a *Multiple Choice Question* (MCQ). The background colour (which can easily be seen at a distance by invigilators!) for this test is light blue and is used to represent this test consistently throughout the system.

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1 2 3 4 5 6 7 8 9 10 11 12 End test

**Question 7:**

Assuming an inorder traversal, which of the following is the correct diagram for a binary tree that represents the expression:

$a + b * c$

**My answer:**

?	Potential answer
<input checked="" type="radio"/>	Unanswered
<input type="radio"/>	

The question navigator is shown at the top – green buttons represent answered questions, red unanswered, and a larger button for the current question. The test need not be done in linear sequence – this learner has only answered questions 1, 3 and 4.

**Question 2:**

The nodes labelled on this binary tree are:

Node 1

Node 2

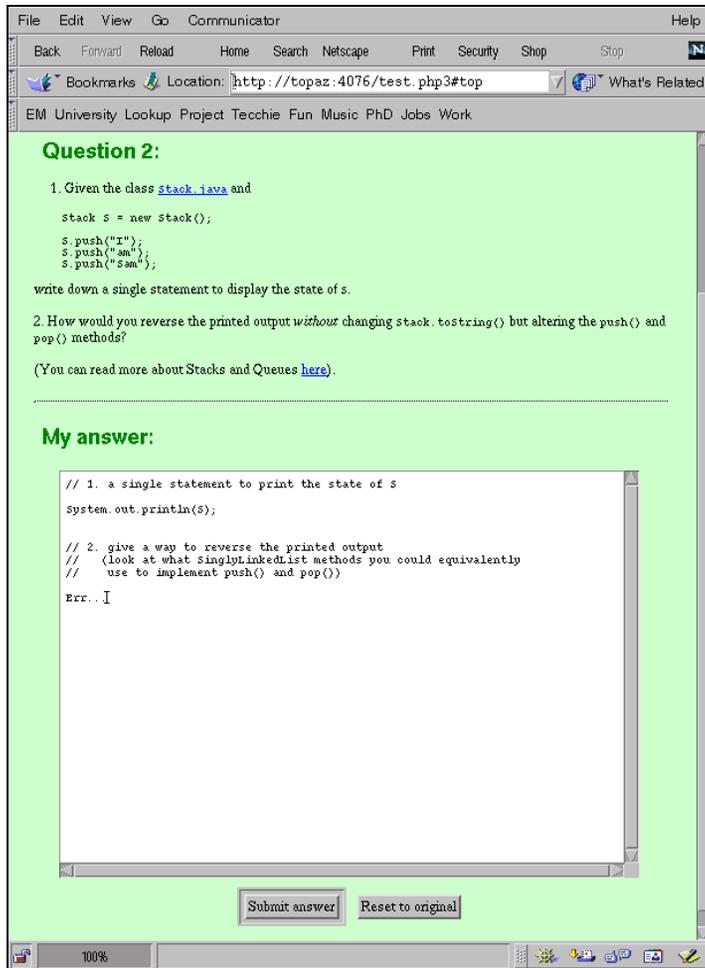
A. Node 1 is a  
B. Node 2 is a

**My answers:**

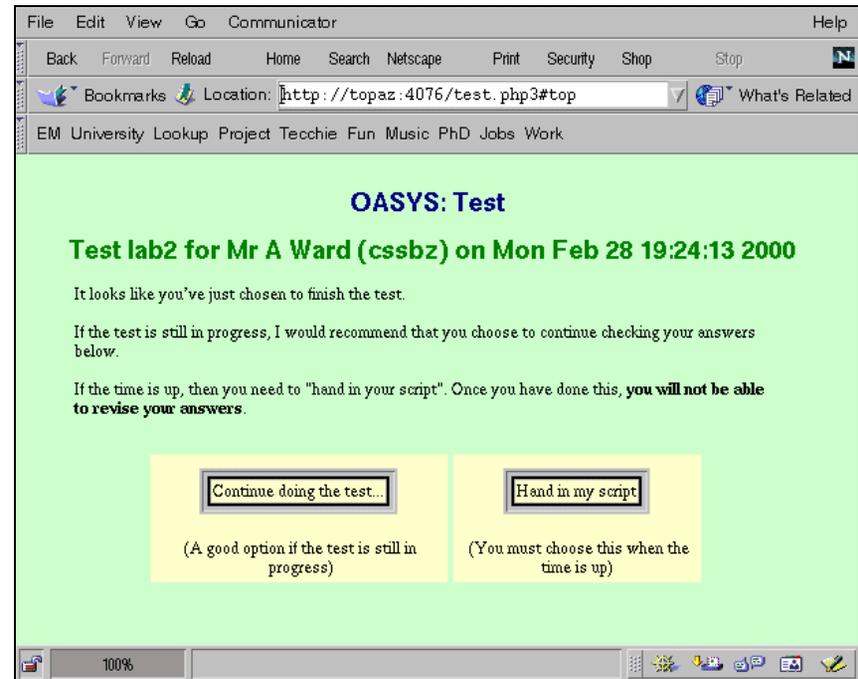
A	B	Potential answer
<input checked="" type="radio"/>	<input checked="" type="radio"/>	Unanswered
<input type="radio"/>	<input type="radio"/>	leaf and child of P
<input type="radio"/>	<input type="radio"/>	root and parent of Q
<input type="radio"/>	<input type="radio"/>	root
<input type="radio"/>	<input type="radio"/>	internal node and parent of S
<input type="radio"/>	<input type="radio"/>	leaf and child of Q
<input type="radio"/>	<input type="radio"/>	child of S

Submit answer

Permutational Multiple Choice Questions (PMCQs) are another question type. Potential answers are *jumbled up* “randomly” (actually, not quite – this learner will always see this question this way) so that answers cannot be copied from a nearby learner.



Entirely *free response answers* are a major feature of OASYS - free responses are marked by other learners. Also note here the use of HTML *links* to supporting material, and the use of *images* in the question and potential answers on the previous page.



When the *End Test* button is been pressed, the learner is asked to confirm their choice with this screen. After they do, the test is "handed in" and the learner can proceed with marking.

OASYS: Mark

Mr A Ward (cssbz) is marking lab1 script on Mon Feb 28  
19:31:29 2000

1 2 3 4 5 6 7 **8** 9 10 11 12

### Question 8 was:

Given the following (incomplete) class declaration for `StringVector`, complete the implementation of the methods:

1. `size()`
2. `setElementAt()`
3. `addElement()`

### Things to consider:

1. One line statement to complete the `size()` method is:

```
return numElements;
```

2. Method `setElementAt` requires the checking of the pre-condition and access to the `elements` array member. The body could be a single `if` statement.

```
if ((i>=0)&&(i<size()))  
    elements[i] = s;
```

3. This is the hardest of the three methods to complete. Some things to look out for in the answers are:
  - if the capacity of the `Vector` has been reached then it needs to be extended
  - if the `Vector` is extended then all its elements must be copied to the newly allocated array
  - the new element must be added to the end (at position `numElements`)
  - the `numElements` counter must be incremented

Here is a answers:

```
if (numElements==capacity)  
{  
    String[] temp = new String[2*capacity]; // n=2 strategy  
    for (i=0; i<numElements; i++)  
        temp[i] = elements[i];  
    temp[numElements] = s;  
    elements = temp; // this statement was missing - sorry AB  
}  
elements[numElements] = s;  
numElements++;
```

### Script to mark (Id: 900121, lab1):

```
// fill in the methods marked "...to be completed"  
public class StringVector  
{  
    String[] elements;  
    int numElements;
```

```
public StringVector(int capacity)  
// pre: capacity>=0  
// post: construct an empty vector of Strings with size capacity  
{  
    elements = new String[capacity];  
    numElements = 0;  
}  
  
public int size()  
{  
    return (numElements);  
}  
  
public void setElementAt(String s, int i)  
// pre: ...this is referred to in another question...  
// post: replaces element at i with s  
{  
    if ((i>=0) & (i<numElements))  
        elements[i] = s;  
}  
  
public void addElement(String s)  
// post: append element to end of vector extending it if necessary  
{  
    if (numElements==elements.length)  
    {  
        String oldElements[] = elements;  
        elements = new String[elements.length*2];  
        for(int i=0; i<oldElements.length; i++)  
        {  
            elements[i]=oldElements[i];  
        }  
    }  
    elements[numElements] = s;  
    numElements++; // keep track of vector size  
}
```

### My marks:

<a href="#">Readability</a>	Excellent <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor ( <input type="radio"/> unmarked)
<a href="#">Correctness</a>	Excellent <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor ( <input type="radio"/> unmarked)
<a href="#">Style</a>	Excellent <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor ( <input type="radio"/> unmarked)
<a href="#">Suggestions</a>	<div style="border: 1px solid gray; padding: 5px; width: fit-content;">Excellent! I like your use of 'oldElements': makes what you are doing very clear. Unfortunately, I think ((i&gt;=0) &amp; (i&lt;numElements)) is incorrect: &amp; is a bit-wise operator - in this case &amp;&amp; is required</div>

Learners are required to mark three scripts to gain full credit. The *marking page* shows the original question; advice on the correct use of the mark scheme for this question; the answer to be marked (which was previously entered by another learner) and finally the *marking interface*. Notice that answers to the multiple choice questions (in this test, questions 1-7) are *automatically marked* and so cannot be selected in the question navigator – feedback on MCQ answers is given in the “see my marks” interface, described next.

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**OASYS: See my marks**

Marks for Mr A Protogerellis (csuqw), test lab1 on Mon Feb 28 19:45:06 2000

1 2 3 4 5 6 7 8 9 10 11 12 Summary sheet Return to menu

**Question 1 was:**

Which of the following statements declare an integer array to hold 10 values?

**Answer:**

Correct answer	You said	Potential answer
	<input type="radio"/>	Unanswered
	<input type="radio"/>	int a = new int[10];
→	<input checked="" type="radio"/>	int[] a = new int[10];
	<input type="radio"/>	int a=10;
	<input type="radio"/>	int[10] a;

**Your mark for this question:**

1 out of 1

[More information about marking calculations](#)

Next question

“See my marks” is where learners obtain feedback on their own scripts, and can be viewed at *any time* from *anywhere* on the Internet. Marking can also be done in learners’ own time. The MCQ is “jumbled” the same way as the learner originally saw it.

Diagram:

```

    graph TD
      P((P)) --- Q((Q))
      P --- R((R))
      Q --- S((S))
      Q --- T((T))
  
```

Node 2 points to node T.

A. Node 1 is a  
B. Node 2 is a

**Answer:**

A		B		Potential answer
Correct answer	You said	Correct answer	You said	
	<input type="radio"/>		<input type="radio"/>	Unanswered
	<input type="radio"/>		<input type="radio"/>	child of P
	<input type="radio"/>	→	<input checked="" type="radio"/>	leaf
	<input type="radio"/>		<input type="radio"/>	parent of T
→	<input checked="" type="radio"/>		<input type="radio"/>	root
	<input type="radio"/>		<input type="radio"/>	internal node

**Your mark for this question:**

1 out of 1

[More information about marking calculations](#)

Next question

PMCQs attempt to minimise the probability of a correct response from a simple guess, and so the learner receives all the points available (as set in a *mark scheme*) if they are correct in both answers, and no points if either or both answers are incorrect.

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## OASYS: See my marks

### Marks for Mr P Shah (eswj), test lab3 on Mon Feb 28 20:01:55 2000

1 2 3 4 5 6 7 8 9 10 11 12
Summary sheet Return to menu

---

**Question 5 was:**

What algorithm would you use to decode a Morse code string using a binary tree representation?

---

**Things to consider were:**

A decoding algorithm might look something like:

1. Start from root: ptr = root;
2. Scan Morse string from left to right
  - if (s.charAt(0)=='.')
  - ptr = ptr.getLeft();
  - else
  - if (s.charAt(0)=='-')
  - ptr = ptr.getRight();
  - print out ptr.getValue();

---

**Your answer was:**

```
// Give some Java/pseudo-code for a Morse code decoding algorithm
for number of characters in word do
look at the character in the string
if it is a . then traverse tree to left
if it is a - then traverse tree to the right
store the result
end loop
display result
correspond it to a letter from the look up table
```

---

**You have been given these marks:**

<b>Readability</b>	Excellent <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor <input type="radio"/> (unmarked)
--------------------	--

<b>Correctness</b>	Excellent <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor <input type="radio"/> (unmarked)
<b>Style</b>	Excellent <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor <input type="radio"/> (unmarked)
<b>Suggestions</b>	You don't need to look up the value in a table as they are already given in the binary tree

<b>Readability</b>	Excellent <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor <input type="radio"/> (unmarked)
<b>Correctness</b>	Excellent <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor <input type="radio"/> (unmarked)
<b>Style</b>	Excellent <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor <input type="radio"/> (unmarked)
<b>Suggestions</b>	

<b>Readability</b>	Excellent <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor <input type="radio"/> (unmarked)
<b>Correctness</b>	Excellent <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Poor <input type="radio"/> (unmarked)
<b>Style</b>	Excellent <input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> Poor <input type="radio"/> (unmarked)
<b>Suggestions</b>	

**Your mark for this question:**

2.4888888888889 out of 4

[More information about marking calculations](#)

Next question

100%

Colours are used to provide cues throughout OASYS: here, colours are used to represent the *anonymous* markers of a script. The three learners who performed this marking seem to have given similar opinions, and one has entered a *feedback comment*. The final mark for the question is derived from the marks given, the maximum possible being set (by the administrator) in the mark scheme.

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**OASYS: See my marks**

**Marks for Mr P Shah (eswsj), test lab3 on Mon Feb 28  
20:03:05 2000**

1 2 3 4 5 6 7 8 9 10 11 12

Summary sheet    Return to menu

**Script mark summary table**

Question number	Your mark	Max possible mark
1	1	1
2	1	1
3	1	1
4	2.46666666666667	3
5	2.48888888888889	4
6	2	2
7	1	1
8	3	3
9	3	5
10	3.06666666666667	6
11	2	2
12	0	7
Totals	22.0222222222222	36

**Your current overall mark for test lab3**

61.2%

[More information about marking calculations](#)

**Broken down by criteria:**

Excellent (5 circles)    Poor (1 circle unmarked)

Readability

4	3	5	10	9
10	3	5		9
4				

Correctness

4	5	10
9	9	10
4		
5		

Style

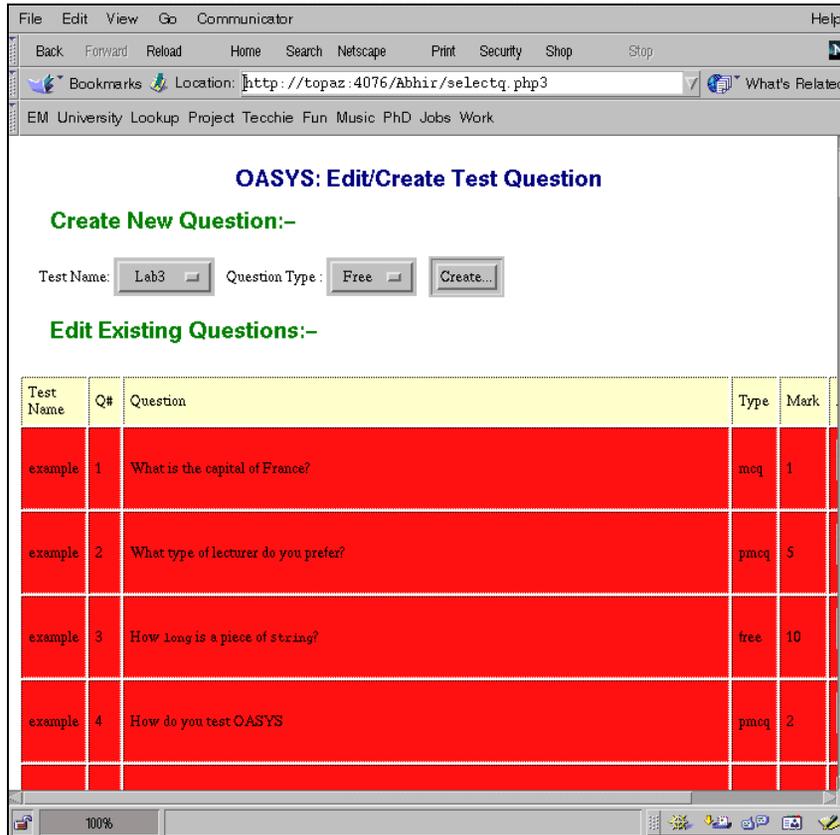
4	10	5	10	9
4		5		9

The above table is intended to give you some idea of any agreement between markers and how you rate in each criteria - the data in each row could be thought of as an upside-down bar chart. The numbers are the question numbers. The colours represent the person who marked you. MCQ marks do not appear.

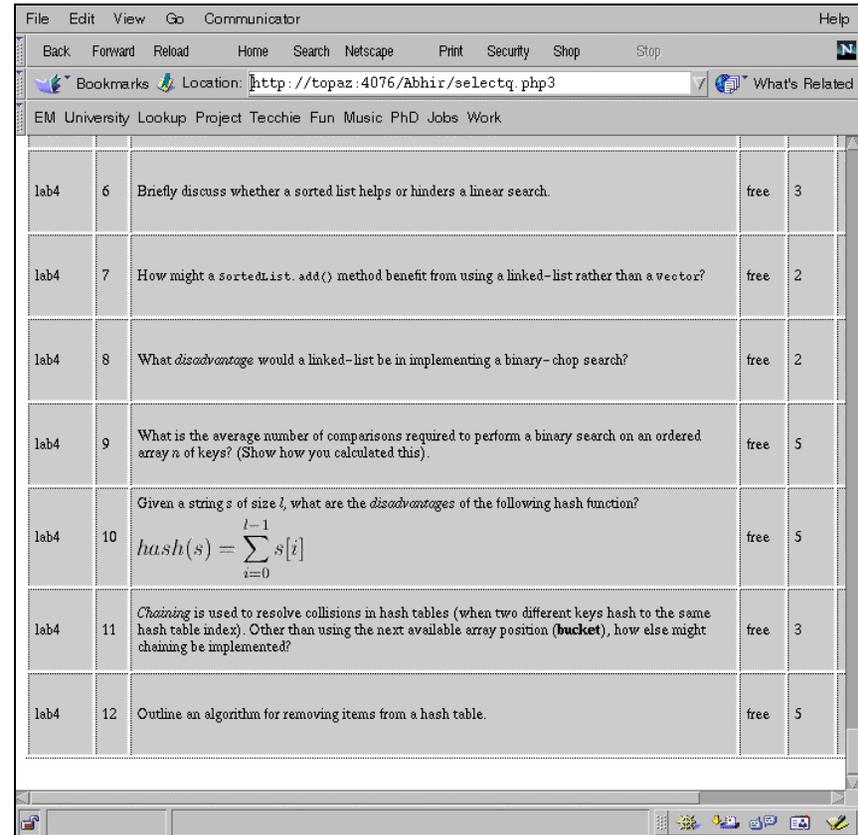
Return to menu

100%

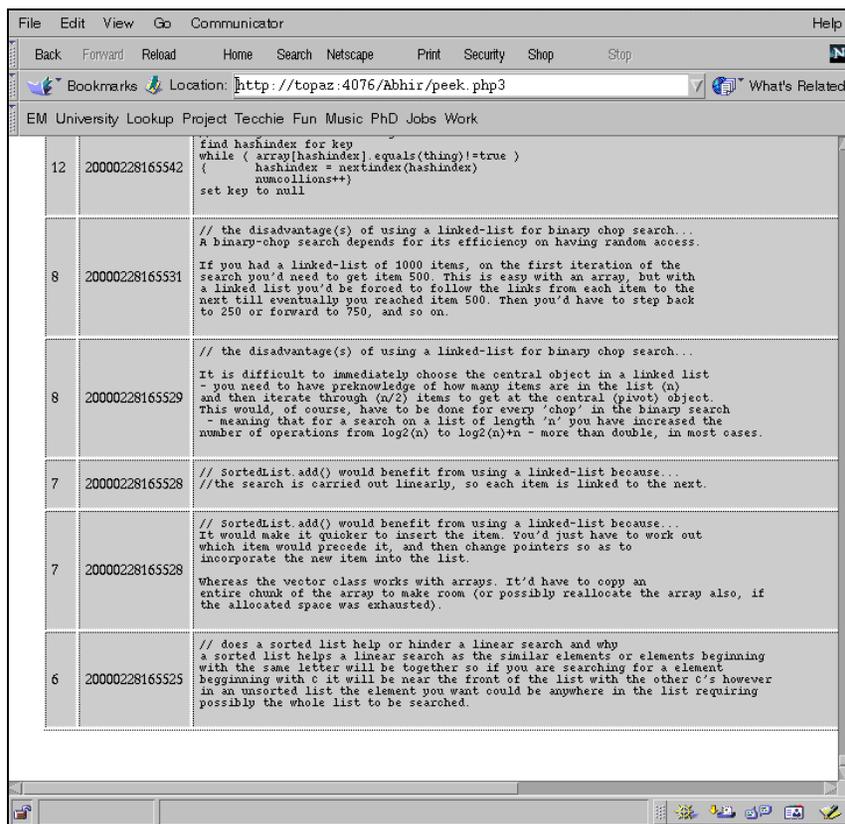
All the marking information about a script is collated for the learner in the “*summary sheet*”. This particular learner has quite a good overall result, but the overall spread of marks given by other learners (shown in the “*break down table*”) seems to be fairly wide, despite the lack of variance in marking by the learner represented in mauve.



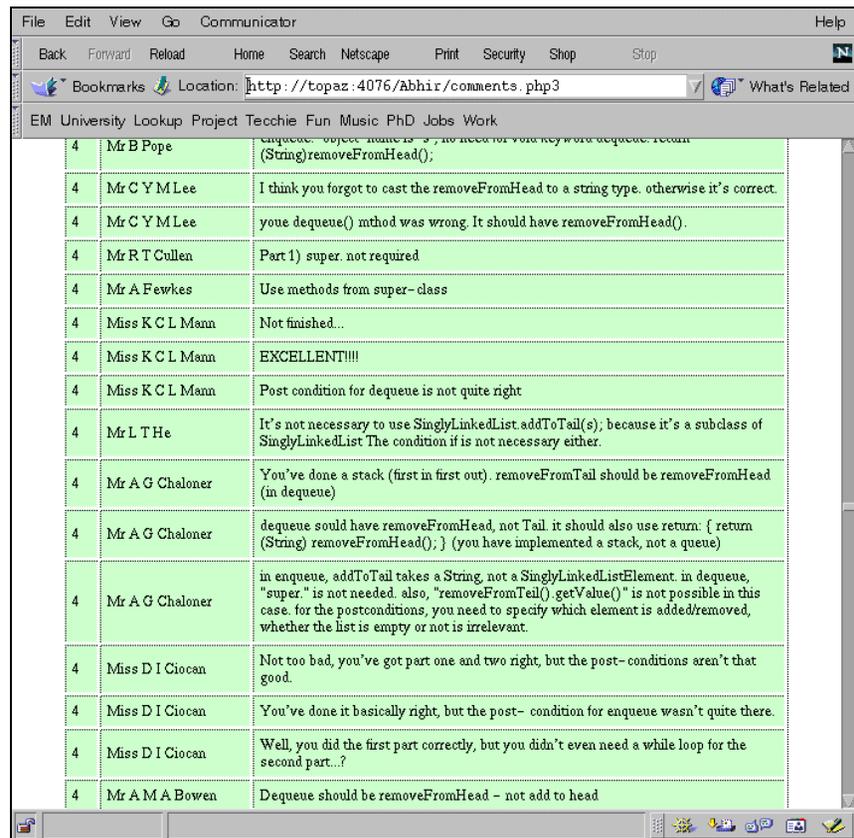
At the *administration* end, some common tasks, such as *creating and editing questions*, are eased by the provision of a web based interface. The stark red background here distinguishes the *example test*, which is not seen by normal learners.



Questions can use mathematical symbols, but these must be created as images as current web browsers do not support these symbols directly.



Administrators can browse learners' responses to questions...



... and also their feedback comments entered whilst marking.

**Test lab4 MCQ marks:**

Q#	Count	Ave. Mark (/100)	Weight
1	106	0.0000	1
2	101	0.0000	3
3	111	94.5946	1
4	110	36.3636	2
5	110	66.3636	2
6	110	0.0000	3
7	99	0.0000	2
8	99	0.0000	2
9	97	0.0000	5
10	89	0.0000	5
11	71	0.0000	3
12	71	0.0000	5

**Test lab4 Free Response Grades:**

Q#	Count	Grade 1 (/5)	Grade 2 (/5)	Grade 3 (/5)	Weight
1	55	1.3455	3.9818	1.3455	1
2	56	2.8929	3.6786	2.6071	3
6	58	1.0862	4.3103	1.0862	3
7	52	0.8846	3.6538	0.9231	2
8	52	0.6923	3.7308	0.6154	2
9	51	0.6275	3.1373	0.6471	5
10	43	0.5116	2.9767	0.5116	5

Statistics can be generated in real time from the database. Question 4 (an MCQ) seems to have misled the majority of learners who have done the test so far (there are approximately another 80 learners still to complete this test at this point in time).

**OASYS: Moderate Test Scripts**

Internal UID	Name	Usercode	Lab 1	Lab 2	Lab 3	Lab 4
000001	Load test 01	ltest01	mark	mark	mark	mark
000003	Tester 03 [Ash]	test03	mark	mark	mark	mark
008790	Mr A Protopgerellis	csuqw	068752 (2) 723206 (1) 749227 (1)	303951 (3) 476220 (2) 999356 (3)	mark	mark
009630	Mr A de B Clarkson	eswuk	138542 (4) 633474 (2)	064521 (2) 114035 (4) 229988 (3) 554546 (1)	mark	mark
010255	Mr F Jimenez Coelho	csupa	011577 (3) 506396 (2)	101641 (1) 413785 (3) 868142 (3)	038509 (3) 129932 (1) 856666 (3)	mark
011577	Miss M K Randhawa	csuwb	604397 (1) 615788 (2) 948150 (14)	111451 (1) 520586 (6) 615994 (2)	229988 (3) 520869 (11) 588641 (3)	725648 (2)
022011	Mr N P Patel	csval	123595 (3) 640856 (1) 720339 (1)	415339 (3) 726501 (1) 827240 (3)	mark	mark
032506	Mr J P R Dupont	csvag	293915 (1) 948150 (3)	595244 (2) 732227 (3) 774712 (2) 813662 (7)	111451 (5) 774712 (3)	304222 (3)
034825	Mr M R Hornshv	eswnw	044525 (6) 364768 (1)	520869 (19)	038509 (2)	mark

Lastly, an interface allowing moderation is currently under development (this screen shot is of a prototype).

Thank you for browsing this document.