

Sample Multiple Choice Questions!

Type in this code, what does it output?

A sample:

Here are some if statements, will line 20 be executed if this function is given 5 as an input

If $x < 5$

Do something

Else

Do something else

A stack is a data structure that follows the rule of “last in first out”. If I run the following sequence, what is the output?

Push 20

Push 50

Pop

Push 30

Pop

Looping

Here's a variable, that gets used in a loop

What are the different values this variable will have?

How many times does this variable change?

Linked Lists

I would like to find the last element of a linked list. Here's some code . . .

There's a line missing in the code . . . type it in?

Practical Exam Questions

1. You get an array, fill the array with increasing numbers, starting at 0.

Solution:

```
i = 0;
```

```
loop through, increasing i
```

```
each time, array[i] = i;
```

2. Return 1 if all the elements of a linked list are the same. You will never receive an empty list

Set up a target value by reading the first element of the list.

Loop through the list

Look at the current element and see if it's different from the target value

3. Scan in 10 numbers. Scan in another 10 numbers and then return 1 if all the second set of numbers were in the first set.

First read in 10, store them in an array

Then read in 10 more . . . for each of these:

Loop through the original 10 and see if the new number is one of them

4. Here's a linked list, delete the first zero in the list.

Loop through the list, looking for zero.
Track both the node and the previous node.

Special case: what if 0 was the first node?

0->next is the new head

Free the 0 node

Use pointers to skip the 0 node.

Free the 0 node.

5. Strings question (most likely)

Take multiple strings as a command line argument (argv, all the same length). Print

out the letter that appears in the same position in all of these strings:

Eg:

Cat

Rat

Bar

Sad

Answer = a

Solution:

Loop through using $i=0$ up to word length

Then loop through using $j=1$ up to argc

Check the letter that's in `argv[j][i]` against all the other values of j .

6. Here's a number and a linked list.
Reverse everything in the list that's
after that number.

What to do next?

Try solving these

Try the questions in the revision stuff on
the course website

Try the Weekly Revision Test for week 10

Past lab questions will help you remember
specific topics