Consider the following code fragment:

```cpp
struct T { T* pt; };  
T t; 
t.pt = new T; 
t.pt->pt = new T; 
delete t.pt;
```

Which of the following are true?

- The code contains a memory leak. 
- The variable `t` is allocated on the heap. 
- The code will produce a runtime error. 
- The variable `*(t.pt)` is allocated on the heap.

No, the answer is incorrect. 
Score: 0

Accepted Answers: 
The code contains a memory leak.
The variable `*(t.pt)` is allocated on the heap.

Consider the code below:

```cpp
int main(){
    int* x;
    { int y=5;
```
variable length entities: Part 1:
Introduction
(unit? unit=95&lesson=133)

Lecture 22:
Representing variable length entities: Part 2:
Heap memory basics (unit? unit=95&lesson=134)

Lecture 22:
Representing variable length entities: Part 3:
Pitfalls of using heap memory (unit? unit=95&lesson=135)

Lecture 22:
Representing variable length entities: Part 4:
Automating memory management (unit? unit=95&lesson=136)

Lecture 22:
Representing variable length entities: Part 5:
Implementing a class with automated memory management 1 (unit? unit=95&lesson=137)

Lecture 22:
Representing variable length entities: Part 6:
Implementing a class with automated memory management 2 (unit? unit=95&lesson=138)

Lecture 22:
Representing variable length entities: Part 7:
Using the implemented class and conclusion

```
x = &y;
}
{ int z = 10;
cout<< *x;
}
```

Which of the following are true?

- The code will give a compilation error.
- The code has a dangling pointer.
- The code has a memory leak.
- The code will print 5.

No, the answer is incorrect.
Score: 0
Accepted Answers:
The code has a dangling pointer.

3) Consider the following code that uses the String class defined in the lecture.

```cpp
String names[100];
char buffer[80];
cin >> buffer;
names[0] = buffer;
```

Which of the following is true?

- The statement "names[0] = buffer;" will cause memory of size about 80 bytes to be allocated.
- The statement "names[0] = buffer;" will cause memory about as large as the size of the typed name to be allocated.
- The statement "names[0] = buffer;" will cause no memory allocation; all allocation will have happened when the statement "String names[100];" was executed.
- The statement "names[0] = buffer;" will cause no memory to be allocated, names[i] will share memory already allocated for buffer.

No, the answer is incorrect.
Score: 0
Accepted Answers:
The statement "names[0] = buffer;" will cause memory about as large as the size of the typed name to be allocated.

4) In our String class, we implemented the + operator to mean concatenation. We might likewise define the product between a String s and an integer n to mean a String obtained by concatenating n copies of s.

Which member function would you define for this? Note that for implementing + we defined the member function operator+.

No, the answer is incorrect.
Score: 0
Accepted Answers:
5) What would be the return type for this definition? Remember the return type for + was String.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: String) String

6) What would be the parameter type? Remember the parameter for + was const String&

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: String) const int
(Type: String) const int&
(Type: String) int
(Type: String) int&

7) I have a file containing some words. The last word in the file is "end". I want to read the words and process them somehow. Which of the following will be most convenient to store the words?

- two dimensional array of char.
- SL (standard library) vector of array of char
- array of SL string.
- SL vector of SL string

No, the answer is incorrect.
Score: 0
Accepted Answers:
SL vector of SL string

8) What does the following code print?

```cpp
string s = "abc";
s = s + s;
int i = s.find("bc");
i = s.find("bc",i+1)
cout << i;
```

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 4

9) What does the following code fragment print?

```cpp
vector<int> v={1,2,3};
v.push_back(10);
v.push_back(15);
```

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 4
Week 11

Week 12

Text Transcripts

Assignment 3
(/noc20_cs53/progassignment?name=227)

vector<int> w = v;
for(0 <= w.size();)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 5

I wish to write a program in which I need to keep track of the children of different people. Suppose I call this data structure Children. For example I might use Children to record the information that Samudragupta had children Ramagupta and Chandragupta, and similarly for children of other persons. Furthermore, assume that all persons are to be represented by their names, i.e. strings. Thus Children will be declared as

map<string,vector<string> > children;

How do I refer to the 0th child of "Vikramaditya" stored in children? Fill in the blanks without using any unnecessary characters.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: String) children["Vikramaditya"][0]

The statement below checks whether the children of "Samudragupta" are stored in Children, and if so, print the number of children.

if(blank1 > 0) cout << blank2 << endl;

What should blank1 be? Do not include unnecessary blanks.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: String) children.count("Samudragupta")

What should blank2 be? Do not include unnecessary blanks.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: String) children["Samudragupta"].size()