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## Unit 3 - Week 1

### Course outline

How does an NPTEL online course work?

#### Week 0

#### Week 1

- Module 1 :  
Recap of C  
(Lecture 01)  
(unit?  
unit=3&lesson=12)
- Module 1 :  
Recap of C  
(Lecture 02)  
(unit?  
unit=3&lesson=13)
- Module 1 :  
Recap of C  
(Lecture 03)  
(unit?  
unit=3&lesson=14)
- Module 2 :  
Programs with  
IO and Loop  
(Lecture 04)  
(unit?  
unit=3&lesson=15)
- Module 3 :  
Arrays and

## Week 1 Assignment 1

The due date for submitting this assignment has passed. **Due on 2020-02-12, 23:59 IST.**  
As per our records you have not submitted this assignment.

1)

2 points

Consider the following code segment.

```
#include <iostream>
#include <string>
#include <algorithm>
using namespace std;

bool smaller (string s1, string s2) {
    return (s1 < s2);
}

int main() {
    string data[] = {"orange", "apple", "banana", "pineapple"};
    ----- // LINE-1
    for (int i = 0; i < 4; i++)
        cout << data[i] << " ";
    return 0;
}
```

Fill in the blank at LINE-1 with appropriate option/s such that the output is

apple banana orange pineapple

- a) `sort(data, data+4, compare);`

Strings (Lecture 05) (unit? unit=3&lesson=16)

Module 4 :  
Sorting and Searching (Lecture 06) (unit? unit=3&lesson=17)

Module 5 :  
Stack and Its Applications (Lecture 07) (unit? unit=3&lesson=18)

Lecture Materials (unit? unit=3&lesson=19)

Quiz : Week 1 Assignment 1 (assessment? name=96)

W1\_programmingQs-1 (/noc20\_cs07/progassignment name=97)

W1\_programmingQs-2 (/noc20\_cs07/progassignment name=98)

W1\_programmingQs-3 (/noc20\_cs07/progassignment name=99) }

Feedback For Week 1 (unit? unit=3&lesson=100)

**Week 2**

**Week 3**

**Week 4**

**Week 5**

**Week 6**

**Week 7**

**Week 8**

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- b) `sort(data, data+4, smaller);`
- c) `sort(&data[0], &data[4], &smaller);`
- d) `sort(&data[0], &data[0] + 5, smaller);`

No, the answer is incorrect.  
Score: 0

Accepted Answers:

- b) `sort(data, data+4, smaller);`
- c) `sort(&data[0], &data[4], &smaller);`

2) Consider the following declaration (where `sizeof(int) = 4 bytes`). **2 points**

```
#include <iostream>
#include <algorithm>
using namespace std;

int main(){
    int data[] = {1,2,3,4,5,6,7,8,9};
    int n = sizeof(data) / sizeof(data[0]);
    int rotL = 3;

    rotate(data, data + rotL, data + n);

    for (int i = 0; i < n; i++)
        cout << data[i] << ' ';

    return 0;
}
```

What will be the output?

- a) 4 5 6 7 8 9 1 2 3
- b) 4 5 6 7 8 9
- c) 7 8 9 1 2 3 4 5 6
- d) 8 9 1 2 3 4 5 6 7

No, the answer is incorrect.  
Score: 0

Accepted Answers:

- a) 4 5 6 7 8 9 1 2 3

3)

**2 points**

Text Transcripts

Assignment  
Solution

Live Interactive  
Session

Books

Consider the following code segment.

```
#include <iostream>
#include <vector>
using namespace std;

int main() {
    vector<int> a;
    for (int i = 1; i <= 5; i++)
        a.push_back(i);

    vector<int> b(3, 0);
    b = a;
    a.resize(2);
    cout << a.size() << ", " << b.size() << endl;

    return 0;
}
```

What will be the output?

- a) 2, 3
- b) 2, 5
- c) 3, 5
- d) Error: vector a can not be resized

No, the answer is incorrect.

Score: 0

Accepted Answers:

b) 2, 5

4)

**2 points**

Consider the following code segment.

```
#include <iostream>
#include <string>
using namespace std;

int main(void) {
    string str1 = "C++ ";
    string str2 = "programming";
    string str3 = _____; //LINE-1

    cout << str3;

    return 0;
}
```

Fill in the blank at LINE-1 with appropriate option/s such that the output is:

C++ programming.

- a) `str1 + str2`
- b) `strcat(str1, str2);`
- c) `str1.append(str2);`
- d) `strcpy(strcat(str1, str2), str3);`

No, the answer is incorrect.  
Score: 0

Accepted Answers:

- a) `str1 + str2`
- c) `str1.append(str2);`

5)

**2 points**

Consider the following code segment.

```
#include <iostream>
using namespace std;

int main() {
    int *p, i;
    int arr[] = {10, 20, 30, 40, 50};

    for(p = &arr[0], i = 0; i < 5; i++)    // loop-1
        cout << p[i] << " ";
    cout << endl;

    for(p = arr + 4; p >= arr; p--)    // loop-2
        cout << arr[p - arr] << " ";

    return 0;
}
```

What will be the output

- a) 10 20 30 40 50  
10 20 30 40 50
- b) 10 20 30 40 50  
50 50 50 50 50
- c) 10 10 10 10 10  
50 40 30 20 10
- d) 10 20 30 40 50  
50 40 30 20 10

No, the answer is incorrect.

Score: 0

Accepted Answers:

d) 10 20 30 40 50  
50 40 30 20 10

6)

**2 points**

Consider the following code segment:

```
#include <iostream>
using namespace std;

int main() {
    int a[] = {10, 20, 30, 40, 50};
    int *p[] = {a, a + 1, a + 2, a + 3, a + 4};

    int **q = p;
    **q++;
    cout << *a << " " << **p << " " << **q << endl;

    q = p;
    +**q;
    cout << *a << " " << **p << " " << **q << endl;

    return 0;
}
```

What will be the output?

- a) 10 10 11  
11 11 11
- b) 10 10 20  
20 20 21
- c) 10 10 20  
11 11 11
- d) 11 11 11  
11 11 11

No, the answer is incorrect.

Score: 0

Accepted Answers:

- c) 10 10 20  
11 11 11

7)

**2 points**

Consider the following code

```
#include <iostream>
using namespace std;

int main() {
    int array3D[4][4][4] = {0};

    process(array3D, 4);

    return 0;
}
```

What should be the correct prototype/s of process() function?

- a) void process(int \*\*\*array3D, int size);
- b) void process(int array3D[] [] [], int size);
- c) void process(int (\*array3D)[4][4], int size);
- d) void process(int array3D[] [4] [4], int size);

No, the answer is incorrect.

Score: 0

Accepted Answers:

- c) void process(int (\*array3D)[4][4], int size);
- d) void process(int array3D[] [4] [4], int size);

8) Consider the following code segment.

2 points

```
#include <iostream>
using namespace std;

union myType{
    char c;
    unsigned int i;
} u;

int main() {
    u.c = 'X';
    u.i = 65;

    cout << u.c << " " << u.i << endl;

    return 0;
}
```

What will be the output?

- a) 65 65
- b) A 65
- c) X 65
- d) (garbage value) 65

No, the answer is incorrect.

Score: 0

Accepted Answers:

b) A 65



