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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Problem Solving Through Programming In C (course)



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## Course outline

How does an  
NPTEL  
online  
course  
work? ()

Week 0 : ()

Week 1 ()

Week 2 ()

Week 3 ()

Week 4 ()

Week 5 ()

# Week 6 : Assignment 6

The due date for submitting this assignment has passed.

Due on 2023-09-06, 23:59 IST.

Assignment submitted on 2023-08-28, 00:02 IST

1) What is an array in C?

1 point

- ☒ a) A collection of similar data elements with the same data type.
- ☐ b) A built-in function that performs mathematical calculations.
- ☐ c) A keyword used for declaring variables.
- ☐ d) A data type used to store characters only.

Yes, the answer is correct.

Score: 1

Accepted Answers:

a) A collection of similar data elements with the same data type.

2) What is the index of the first element in an array?

1 point

- ☒ a) 0
- ☐ b) 1
- ☐ c) -1
- ☐ d) The index can vary depending on the array size.

Yes, the answer is correct.

Score: 1

Accepted Answers:

a) 0

3) Which loop is commonly used to iterate through all elements of an array in C?

1 point

**Week 6 ()**

- Lecture 26:  
Introduction to  
Arrays (unit?  
unit=61&lesso  
n=62)

- Lecture 27:  
Arrays  
(Contd.) (unit?  
unit=61&lesso  
n=63)

- Lecture 28:  
Arrays  
(Contd.) (unit?  
unit=61&lesso  
n=64)

- Lecture 29:  
Program using  
Arrays (unit?  
unit=61&lesso  
n=65)

- Lecture 30:  
Array Problem  
(unit?  
unit=61&lesso  
n=66)

- Quiz: Week 6  
: Assignment  
6  
(assessment?  
name=242)**

- Week 6 :  
Programming  
Assignment 1  
(/noc23\_cs121  
/progassignme  
nt?name=243)

- Week 6 :  
Programming  
Assignment 2  
(/noc23\_cs121  
/progassignme  
nt?name=244)

- Week 6 :  
Programming  
Assignment 3  
(/noc23\_cs121  
/progassignme  
nt?name=245)

- ☒ a) for loop  
☐ b) while loop  
☐ c) do-while loop  
☐ d) switch loop

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
a) for loop

4) An integer array of 15 elements is declared in a C program. The memory location of **1 point** the first byte of the array is 2000. What will be the location of the 13th element of the array? Assume int takes 2 bytes of memory.

- ☐ a) 2013  
☒ b) 2024  
☐ c) 2026  
☐ d) 2030

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
b) 2024

5)

**1 point**

How can you find the sum of all elements in a 1D array "arr" with 5 elements using loop in C?

- a) `sum = arr[0] + arr[1] + arr[2] + arr[3] + arr[4];`  
b) `sum = arr[5];`  
c) `for (int i = 0; i <= 5; i++) { sum += arr[i]; }`  
d) `for (int i = 0; i < 5; i++) { sum += arr[i]; }`

- ☐ Option (a)  
☐ Option (b)  
☐ Option (c)  
☒ Option (d)

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
Option (d)

● Week 6 :  
Programming  
Assignment 4  
(/noc23\_cs121  
/progassignment?name=246)

○ Feedback  
Form of Week  
6 (unit?  
unit=61&lesson=247)

○ Assignment 6  
Solution (unit?  
unit=61&lesson=68)

**Week 7 ()**

**Week 8 ()**

**DOWNLOAD  
VIDEOS ()**

**Books ()**

**Text  
Transcripts ()**

**Problem  
Solving  
Session -  
July 2023 ()**

6) What is the output of the following code?

1 point

```
#include <stdio.h>
int main()
{
    int arr[] = {1, 2, 3, 4, 5};
    int i = 0;
    while (i < 5) {
        printf("%d ", arr[i]);
        i += 2;
    }
    return 0;
}
```

- ☒ a) 1 3 5  
☐ b) 1 2 3 4 5  
☐ c) 1 2 3  
☐ d) 1 4

Yes, the answer is correct.  
Score: 1

Accepted Answers:

a) 1 3 5

7) What will be the output?

1 point

```
#include <stdio.h>
int main()
{
    int arr[]={1,2,3,4,5,6};
    int i,j,k;
    j=++arr[2];
    k=arr[1]++;
    i=arr[j++];
    printf("i=%d, j=%d, k=%d", i, j, k);
    return 0;
}
```

- ☐ a) i=5, j=5, k=2  
☒ b) i=6, j=5, k=3  
☐ c) i=6, j=4, k=2  
☐ d) i=5, j=4, k=2

No, the answer is incorrect.  
Score: 0

Accepted Answers:

a) i=5, j=5, k=2

8) What will be the output after execution of the program?

1 point

```
#include <stdio.h>
int main()
{
    int i, a[4]={3,1,2,4}, result;
    result=a[0];
    for(i=1; i<4; i++)
    {
        if(result>a[i])
            continue;
        result=a[i];
    }
    printf("%d", result);
    return 0;
}
```

- ☐ a) 1  
☐ b) 2  
☐ c) 3  
☒ d) 4

Yes, the answer is correct.

Score: 1

Accepted Answers:

d) 4

9) What will be the output?

```
#include<stdio.h>
int main()
{
    int n = 2;
    int sum = 5;
    switch(n)
    {
        case 2: sum = sum-3;
        case 3: sum*=4;
        break;
        default:
            sum =0;
    }
    printf("%d", sum);
    return 0;
}
```

8

**Hint**

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Numeric) 8

**1 point**

10)

Find the output of the following C program

```
#include<stdio.h>
int main()
{
    int a;
    int arr[5] = {1, 2, 3, 4, 5};
    arr[1] = ++arr[1];
    a = arr[1]++;
    arr[1] = arr[a++];
    printf("%d, %d", a, arr[1]);
    return 0;
}
```

**1 point**

- ☐ a) 5, 4
- ☐ b) 5, 5
- ☒ c) 4, 4
- ☐ d) 3, 4

Yes, the answer is correct.

Score: 1

Accepted Answers:

c) 4, 4