SIMATS ENGINEERING

Engineer to Excel

C Programming

KAVALI SAI KUMAR KUMAR
192110215 ▼

Questions
261.

```
Given an array of integers, find the maximum difference between any two elements in the
```

maximum difference subarray

common elements more than n/2

rearrange majority element

largest sum. rotate the array

rearrange the array equal number of 0s

smallest missing maximum product

Run Save

SIMATS ENGINEERING

Engineer to Excel

C Programming

KAVALI SAI KUMAR KUMAR
192110215

```c
  int max_diff=array[1]-array[0];
  int i,j;
  for(i=0;i<arr_size;i++);
  {
    for(j=i+1;j<arr_size;j++);
    {
      if(array[j]-array[i]>max_diff)
        max_diff=array[j]-array[i];
    }
  }
  return max_diff;
}
int main()
{
  int array[]={10,15,90,200,110};
  printf("maximum difference is %d",max_diff(array, 5));
  getchar();
  return 0;
}
```

```
maximum difference is 5
```

SIMATS ENGINEERING

Engineer to Excel

C Programming

KAVALI SAI KUMAR KUMAR
192110215

Questions
274.

```
Given an array of integers, find the longest subarray with the given sum.
```

rearrange the array
equal number of 0s
smallest missing
maximum product
subarray max product
Sum
saddle point
swap the values
find the length
reverse a string
occurrences
maximum and

Run Save

SIMATS ENGINEERING

C Programming

KAVALI SAI KUMAR KUMAR
192110215

```
  int maxLength = 0;
  int startIndex = -1;
  int currentSum = 0;
  for (int i = 0; i<n; i++)
  {
    currentSum = 0;
    for (int j = 1; j<n; j++)
    {
      currentSum += arr[j];
      if (currentSum == targestSum && (j-i+1) > maxLength)
      {
        maxLength = j-i+1;
        startIndex = i;
      }
    }
  }
  if (startIndex != -1)
  {
    printf ("Longest subarray with sum %d is from index %d to %c
  }
  else
  {
    print ("No subarray found with sum %d\n", targetSum);
  }
}
int main()
{
  int arr[] = {1,-2,3,4,-1,0,6};
  int n = sizeof(arr) / sizeof(arr[0]);
```

```
192110215.c: In function
'findLongestSubarray':
192110215.c:22:70: error:
'targetSum' undeclared (first use
in this function); did you mean
'targestSum'?
   22 |      printf ("Longest
subarray with sum %d is from
index %d to %d\n", targetSum,
startIndex, startIndex +
maxLength - 1);
      |
^~~~~~~~~
      |
targestSum
192110215.c:22:70: note: each
```

SIMATS ENGINEERING
Engineer to Excel

C Programming

KAVALI SAI KUMAR KUMAR
192110215

Questions
264.

```
Given an array of integers, find the element that appears more than n/2 times (where n
```

maximum difference	subarray
common elements	more than n/2
rearrange	majority element
largest sum.	rotate the array
rearrange the array	equal number of 0s
smallest missing	maximum product

Run Save

```
    int count=1;
    for(int i=1; i<n; i++); {
       if(arr[i]==majorityElement) {
         count++;
       } else {
         count--;
       }
       if(count==0) {
         majorityElement=arr[i];
         count=1;
       }
    }
    count=0;
    for(int i=0; i<n; i++) {
      if(arr[i]==majorityElement) {
        count++;
      }
    }
  if(count>n/2) {
    return majorityElement;
  } else {
    return -1;
  }
}
int main() {
  int arr[]={3,3,4,2,4,4,2,4,4};
  int n=sizeof(arr)/sizeof(arr[0]);
  int majorityElement=findMajorityElement(arr,n);
  if(majorityElement !=-1) {
    printf("Majority element is: %d\n", majorityElement);
```

```
Your OUTPUT go's here!
```

C Programming - IDE
Online C Compiler
C Online Compiler - GeeksforGee
https://ide.geeksforgeeks.org/online-c-compiler
C Online Compiler
IDE
Sign In
C
C++
C++14
C#
Java
Perl
PHP
Python 3
Scala
Swift
Rust
Golang
R
Node JS
HTML & JS
Input Goes Here..
Copy
Run
Run+URL (Generates URL as well)
Copy
27°C
Mostly sunny
Search
ENG
IN
10:26
21-02-2024

```c
#include <stdio.h>

int findMajorityElement(int arr[], int n) {
    int majorityElement = arr[0];
    int count = 1;
    for (int i = 1; i < n; i++) {
        if (arr[i] == majorityElement) {
            count++;
        } else {
            count--;
        }
        if (count == 0) {
            majorityElement = arr[i];
            count = 1;
        }
    }
    count = 0;
    for (int i = 0; i < n; i++) {
        if (arr[i] == majorityElement) {
            count++;
        }
    }
        if (count > n / 2) {
        return majorityElement;
    } else {
        return -1;
    }
```

Time(sec) : 0.003

Memory(MB) : 2.95703125

Output:

```
Majority element is: 4
```

c compiler - Search
Online C Compiler
https://www.programiz.com/c-programming/online-compiler/
Programiz C Online Compiler
C Certification ›
main.c
Save
Run
Output
Clear
27°C
Partly cloudy
Search
ENG
IN
22:32
21-02-2024

```c
#include <stdio.h>
void findLongestIncreasingSubarray(int arr[], int n) {
    int maxLength = 1;
    int currentLength = 1;
    int endIndex = 0;
    int currentEndIndex = 0;

    for (int i = 1; i < n; i++) {
        if (arr[i] > arr[i - 1]) {
            currentLength++;
            currentEndIndex = i;
        } else {
            if (currentLength > maxLength) {
                maxLength = currentLength;
                endIndex = currentEndIndex;
            }
            currentLength = 1;
        }
    }
    if (currentLength > maxLength) {
```

```
/tmp/yIlj8vAwIi.o
Longest increasing subarray is from index 3 to 9
```

c compiler - Search
Online C Compiler
https://www.programiz.com/c-programming/online-compiler/
Programiz C Online Compiler
C Certification ›
main.c
Save
Run
Output
Clear
27°C
Partly cloudy
Search
ENG
IN
22:24
21-02-2024

```c
#include <stdio.h>
struct Student {
    char name[50];
    int rollNumber;
    float marks[3];
};
int main() {
    struct Student student;
    printf("Enter student name: ");
    scanf("%49s", student.name);
    printf("Enter student roll number: ");
    scanf("%d", &student.rollNumber);
    printf("Enter marks for three subjects:\n");
    for (int i = 0; i < 3; i++) {
        printf("Subject %d: ", i + 1);
        scanf("%f", &student.marks[i]);
    }
    float totalMarks = 0;
    for (int i = 0; i < 3; i++) {
        totalMarks += student.marks[i];
```

```
/tmp/yIlj8vAwIi.o
Enter student name: sai
Enter student roll number: 08
Enter marks for three subjects:
Subject 1: 80
Subject 2: 70
Subject 3: 85

Average marks of sai with roll number 8: 78.33
```