



ULAB

UNIVERSITY OF LIBERAL ARTS
BANGLADESH

ASSIGNMENT-1

Submitted To:

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Course : CSE1201

Section: 2

Problem on Array 1

You're given an array that contains $N - 1$ number of elements from 1 to N . Only one distinct integer is missing. Your task is to find out the missing integer and then print it.

Sample Input 1

$N=3$

$N-1$ Integers \rightarrow 1 3

Output: 2

Sample Input 2

$N= 5$

$N-1$ Integers \rightarrow 5 2 1 4

Output: 3

Problem on Array 2

Write a program in C to print all unique elements of an unsorted array.

Expected Output:

The given array is : 1 5 8 5 7 3 2 4 1 6 2

Unique Elements in the given array are:

1 5 8 7 3 2 4 6

Problem on Functions

Find all factors of a number by using a single function:

- Call the function from main()
- Store the factors in an array then print it
- Reversely print the factors of array elements
- Return the sum of all factors to the main

[Problem on Array -1]

```
#include <stdio.h>
#include <string.h>

int main()
{
    int n, sum = 0;

    printf("Enter size of array:");

    for(int i = 0; i < n - 1; i++)
    {
        scanf("%d", &arr[i]);
        sum = sum + arr[i];
    }

    int total = (n * (n + 1)) / 2;
    int missum;
    missum = total - sum;

    printf("The sum is: %d", missum);

    return 0;
}
```

[Problem On Array-2]

```

#include <stdio.h>
#include <string.h>

int main ()
{
    int arr1[] = {1,5,8,5,7,3,2,4,1,6,2};
    int n;
    n = sizeof(arr1) / sizeof(int);
    int i, j;

    printf("The given array is: ");
    for(i=0; i<n; i++)
    {
        printf("%d ", arr1[i]);
    }
    printf("\n");
    printf("Unique Elements in the given\narray are: \n");

    for(i=0; i<n; i++)
    {
        for(j=0; j<i; j++)
        {
            if(arr1[i] == arr1[j])
                break;
        }
        if(i == j) {
            printf("%d ", arr1[i]);
        }
    }

    return 0;
}

```

[Problem on Function]

```
#include <stdio.h>

int faet(int n)

int main()
{
    int n;
    printf("Enter a Number");
    scanf("%d", &n);
    faet(n);
    return 0;
}

int faet(int n)
{
    int i, arr[100];
    int count = 0;
    printf("The factors of %d are: \n", n);
    for(i = 1; i <= n; i++)
    {
        if(n % i == 0)
        {
            arr[count] = i;
            printf("%d\n", i);
            count++;
        }
    }
}
```

```
printf("The factors of %d in reverse  
order are:\n");
```

```
for(i = count; i >= 0; i--)  
{  
    printf("%d\n", arr[i]);  
}
```

```
int sum = 0;
```

```
for(i = 0; i < count; i++)
```

```
{  
    sum += arr[i];
```

```
    printf("The sum of factors of  
%d is: %d\n", n, sum);
```

```
}  
}
```

```
return sum;
```

```
}
```