***Assignment - 14 A Job Ready Bootcamp in C++, DSA and IOT MySirG***

***Array in C Language***

1. Write a program to calculate the sum of numbers stored in an array of size 10. Take

array values from the user.

#include<stdio.h>

int main()

{

int arr[10],sum=0;

printf("Enter a number: \n");

for(int i=0; i<10; i++)

{

scanf("%d",&arr[i]);

}

for(int i=0; i<10; i++)

{

sum=sum+arr[i];

}

printf("Sum is %d",sum);

return 0;

}

2. Write a program to calculate the average of numbers stored in an array of size 10.

Take array values from the user.

#include<stdio.h>

int main()

{

int arr[10], sum=0;

float avg;

printf("Enter a number: \n");

for(int i=0; i<10; i++)

{

scanf("%d",&arr[i]);

}

for(int i=0; i<10; i++)

{

sum=sum+arr[i];

avg=sum/10.0;

}

printf("Average is %.2f",avg);

return 0;

}

3. Write a program to calculate the sum of all even numbers and sum of all odd

numbers, which are stored in an array of size 10. Take array values from the user.

#include<stdio.h>

int main()

{

int arr[10], evenSum=0, oddSum=0;

printf("Enter a number: \n");

for(int i=0; i<10; i++)

{

scanf("%d",&arr[i]);

}

for(int i=0; i<10; i++)

{

if(arr[i]%2==0)

{

evenSum+=arr[i];

}

else{

oddSum+=arr[i];

}

}

printf("Sum of even number is %d\n",evenSum);

printf("Sum of odd number is %d",oddSum);

return 0;

}

4. Write a program to find the greatest number stored in an array of size 10. Take array

values from the user.

#include<stdio.h>

int main()

{

int arr[10], max=0;

printf("Enter a number: \n");

for(int i=0; i<10; i++)

{

scanf("%d",&arr[i]);

}

for(int i=0; i<10; i++)

{

if(max < arr[i])

{

max=arr[i];

}

}

printf("Maxmium number is %d",max);

return 0;

}

5. Write a program to find the smallest number stored in an array of size 10. Take array

values from the user.

#include<stdio.h>

int main()

{

int arr[10], min;

printf("Enter a number: \n");

scanf("%d",&arr[0]);

min = arr[0];

for(int i=1; i<10; i++)

{

scanf("%d",&arr[i]);

if(arr[i] < min)

{

min = arr[i];

}

}

printf("Minimum number is %d",min);

return 0;

}

6. Write a program to sort elements of an array of size 10. Take array values from the

user.

#include<stdio.h>

int main()

{

int arr[10], i,j,temp;

printf("Enter 10 number: \n");

for(int i=0; i<10; i++)

{

scanf("%d",&arr[i]);

}

for(i=0; i<9; i++)

{

for(j=i+1; j<10; j++)

{

if(arr[i] > arr[j])

{

temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

printf("Sorted number:\n");

for(int i=0; i<10; i++)

{

printf("%d ",arr[i]);

}

return 0;

}

7. Write a program to find second largest in an array.Take array values from the user.

#include<stdio.h>

int main()

{

int arr[10], i, max\_val, second\_max;

printf("Enter the array elements:\n");

for(i=0; i<10; i++)

{

scanf("%d",&arr[i]);

}

max\_val=arr[0];

second\_max=arr[0];

for(i=0; i<10; i++)

{

if(arr[i] > max\_val)

{

second\_max=max\_val;

max\_val=arr[i];

}

else if(arr[i]> second\_max && arr[i]!=max\_val)

{

second\_max=arr[i];

}

}

printf("second maximum value: %d",second\_max);

return 0;

}

8. Write a program to find the second smallest number in an array.Take array values

from the user.

#include<stdio.h>

int main()

{

int arr[10], i, max\_val, second\_max;

printf("Enter the array elements:\n");

for(i=0; i<10; i++)

{

scanf("%d",&arr[i]);

}

max\_val=arr[0];

second\_max=arr[0];

for(i=0; i<10; i++)

{

if(arr[i] > max\_val)

{

second\_max=max\_val;

max\_val=arr[i];

}

else if(arr[i]> second\_max && arr[i]!=max\_val)

{

second\_max=arr[i];

}

}

printf("second maximum value: %d",second\_max);

return 0;

}

9. Write a program in C to read n number of values in an array and display it in reverse

order. Take array values from the user.

#include <stdio.h>

int main() {

int n, i, arr[100];

printf("Enter the number of elements in the array: ");

scanf("%d", &n);

printf("Enter the array elements: ");

for (i = 0; i < n; i++) {

scanf("%d", &arr[i]);

}

printf("The array elements in reverse order are: ");

for (i = n - 1; i >= 0; i--) {

printf("%d ", arr[i]);

}

return 0;

}

10. Write a program in C to copy the elements of one array into another array.Take array

values from the user.

#include <stdio.h>

int main() {

int n, i, arr1[100], arr2[100];

printf("Enter the number of elements in the array: ");

scanf("%d", &n);

printf("Enter the array elements:\n");

for (i = 0; i < n; i++) {

scanf("%d", &arr1[i]);

}

for (i = 0; i < n; i++) {

arr2[i] = arr1[i]);

printf("The elements of the second array are: ");

for (i = 0; i < n; i++) {

printf("%d ", arr2[i]);

}

return 0;

}