

Problem 1

```
#include<stdio.h>

void insertion_sorting(int arr[], int size)
{
    int i,j;

    for(i=1; i<size; i++){
        int temp=arr[i];
        for(j=i-1; j>=0 && arr[j]>temp; j--){
            arr[j+1]=arr[j];
        }
        arr[j+1]=temp;
    }

}

void print_array(int arr[], int size){
    int i;
    for(i=0; i<size; i++){
        printf("%d ",arr[i]);
    }
}

int main()
{
    int arr[10];
```

```
int i,size=10;
printf("Enter Your Array is :");
for(i=0; i<10; i++)
{

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

printf("\n\n\nThe Sorted Array is : ");
insertion_sorting(arr,size);
print_array(arr,size);

return 0;
}
```

Lab Final.c - Codes:Blocks 20.03

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```
1
2 #include<stdio.h>
3
4 int main()
5 {
6     int arr[10];
7     int i;
8     printf("Enter Your Array is :");
9     for(i=0; i<10; i++)
10     {
11         scanf("%d", &arr[i]);
12     }
13     printf("\n");
14     insertion_sorting(arr,10);
15 }
16
17
18 printf("The Sorted Array is : ");
19 Process returned 0 (0x0)   execution time : 15.172 s
20 Press any key to continue.
21
22
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33
34 printf("\n\nThe Sorted Array is : ");
35 insertion_sorting(arr,10);
36
```

C:\Users\DIU\Desktop\Lab Final\Lab Final.c C/C++ Windows (CR+LF) WINDOWS-1252 Line 1, Col 1, Pos 0 Insert Read/Write default 1:19 PM 5/16/2024

Problem 2

```
#include<stdio.h>

void print_array(int arr[],int size)
{
    int i;
    printf("\n\nYour Array is : ");
    for(i=0; i<size; i++)
    {

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

void delet_index(int* arr, int size, int position)
{
    int i;

    for(i=position; i<=size; i++)
    {

        arr[i]=arr[i+1];
    }
}

int main()
{
```

```

printf("Enter Your Roll : ");

int i,position;

int arr[10];

int size = sizeof(arr)/sizeof(arr[0]);

for(i=0; i<size; i++)
{
    scanf("%d",&arr[i]);
}

print_array(arr,size);

printf("\nWhich index element you want to remove : ");

scanf("%d",&position);

delet_index(arr,size,position);

size--;

print_array(arr,size);

return 0;

}

```

The screenshot shows the Code::Blocks IDE with a C program open. The program's source code is visible on the left, and the execution output is shown in a black console window on the right. The output displays the array elements, the index to be removed, and the array after removal.

```

#include<stdio.h>
void main()
{
    printf("Enter Your Roll : ");
    scanf("%d",&roll);
    printf("Your Array is : ");
    for(i=0; i<size; i++)
    {
        printf("%d ",arr[i]);
    }
    printf("\n");
    printf("Which index element you want to remove : ");
    scanf("%d",&position);
    delet_index(arr,size,position);
    size--;
    printf("Your Array is : ");
    for(i=0; i<size; i++)
    {
        printf("%d ",arr[i]);
    }
    printf("\n");
    printf("Process returned 0 (0x0)   execution time : 15.900 s\n");
    printf("Press any key to continue.");
}

```

Execution Output:

```

Enter Your Roll : 12
Your Array is : 12 13 14 15 16 17 18 19 20 21
Which index element you want to remove : 9
Your Array is : 12 13 14 15 16 17 18 19 20
Process returned 0 (0x0)   execution time : 15.900 s
Press any key to continue.

```

The IDE interface includes a menu bar (File, Edit, View, Search, Project, Build, Debug, Fortran, wxSmith, Tools, Tools+, Plugins, DoxyBlocks, Settings, Help), a toolbar, and a status bar at the bottom showing the file path, compiler, and window information.