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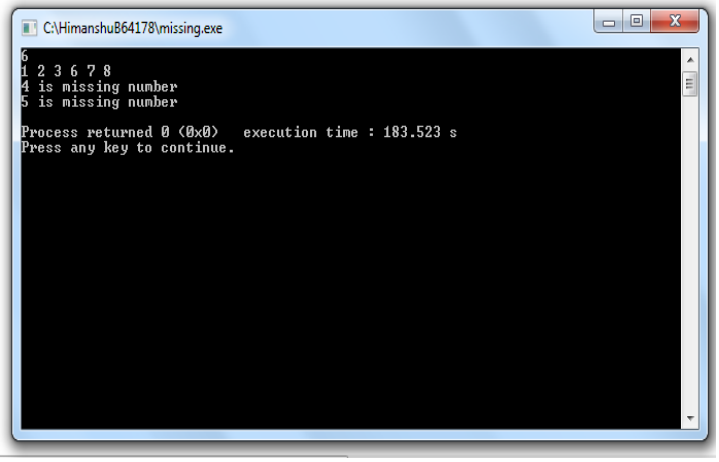
SOFTWARE DEVELOPMENT FUNDAMENTAL LAB-I(15B17CI171)
Assignment Sheet (WEEK-7 PHASE-2)
Lab A

1. *Write a function in c to find the missing value in an array. For example:*
If array A= { 1, 2, 4, 6, 3, 7, 8} Missing value is 5
If A={1,2,4,5} Missing value is 3.

Solution:

```
#include<stdio.h>
void missing(int a[100],int n)
{
   int k=0;
   for(int i=a[0];i<=a[n-1];i++)
   {
      if(i!=a[k])
      {
         printf("%d is missing number\n",i);
         k--;
      }
         k++;
   }
}
int main()
{
   int a[100],n;
   scanf("%d",&n);
   for(int i=0;i<n;i++)
   {
      scanf("%d",&a[i]);
   }
   missing(a,n);
return 0;
}
```

```c
#include<stdio.h>
void missing(int a[100],int n)
{
    int k=0;
    for(int i=a[0];i<=a[n-1];i++)
    {
        if(i!=a[k])
        {
            printf("%d is missing number\n",i);
            k--;
        }
            k++;
    }
}
int main()
{
    int a[100],n;
    scanf("%d",&n);
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
```

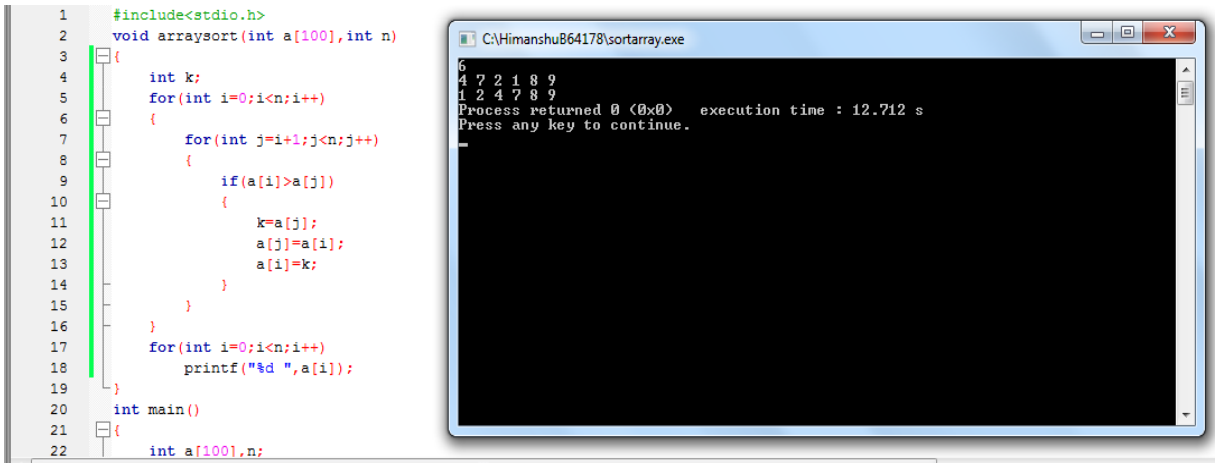


2. *Write a C/C++ function "array_sort" which arranges the numbers of an array in ascending order. Consider that the user will enter the number randomly for array in the main function.*

Solution:

```c
#include<stdio.h>
void arraysort(int a[100],int n)
{
   int k;
   for(int i=0;i<n;i++)
   {
      for(int j=i+1;j<n;j++)
      {
         if(a[i]>a[j])
         {
            k=a[j];
            a[j]=a[i];
            a[i]=k;
         }
      }
   }
   for(int i=0;i<n;i++)
      printf("%d ",a[i]);
}
int main()
{
   int a[100],n;
```

```
    scanf("%d",&n);
    for(int i=0;i<n;i++)
    {
       scanf("%d",&a[i]);
    }
    arraysort(a,n);
return 0;
}
```

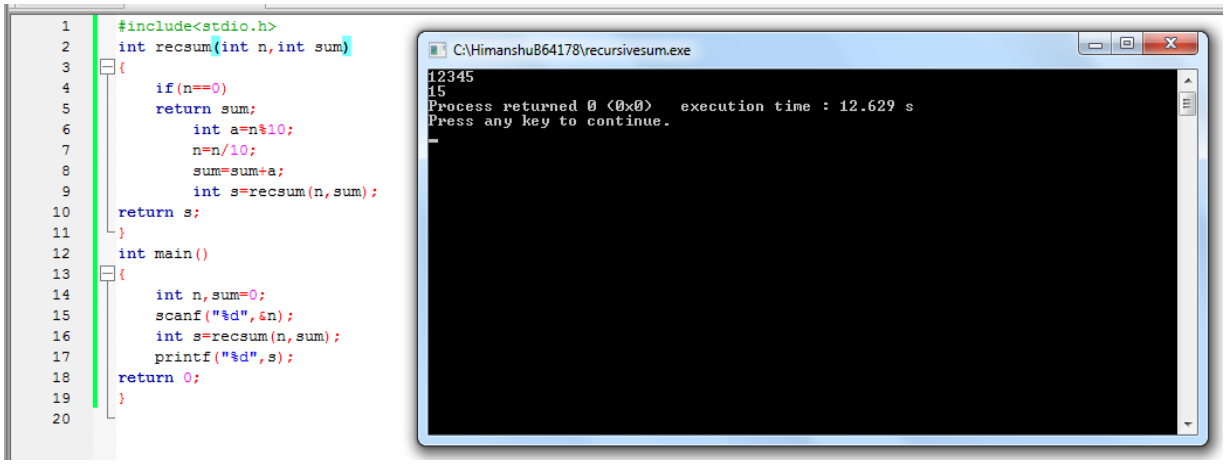


3. *Write a program to find sum of digits of the number using Recursive Function.*

Solution:

```
#include<stdio.h>
int recsum(int n,int sum)
{
   if(n==0)
   return sum;
      int a=n%10;
      n=n/10;
      sum=sum+a;
      int s=recsum(n,sum);
return s;
}
int main()
{
   int n,sum=0;
   scanf("%d",&n);
```

```
    int s=recsum(n,sum);
    printf("%d",s);
return 0;
}
```



```
#include<stdio.h>
int recsum(int n,int sum)
{
    if(n==0)
    return sum;
        int a=n%10;
        n=n/10;
        sum=sum+a;
        int s=recsum(n,sum);
return s;
}
int main()
{
    int n,sum=0;
    scanf("%d",&n);
    int s=recsum(n,sum);
    printf("%d",s);
return 0;
}
```

```
C:\HimanshuB64178\recursivesum.exe
12345
15
Process returned 0 (0x0)   execution time : 12.629 s
Press any key to continue.
```

4. *Write a program to read an integer number and print the reverse of that number using recursion.*

Solution:

```
#include<stdio.h>
int recrev(int n,int rev)
{
    if(n==0)
    return rev;
        int a=n%10;
        n=n/10;
        rev=rev*10+a;
        int r=recrev(n,rev);
return r;
}
int main()
{
    int n,rev=0;
    scanf("%d",&n);
    int r=recrev(n,rev);
    printf("%d",r);
return 0;
}
```

```c
#include<stdio.h>
int recrev(int n,int rev)
{
    if(n==0)
    return rev;
        int a=n%10;
        n=n/10;
        rev=rev*10+a;
        int r=recrev(n,rev);
return r;
}
int main()
{
    int n,rev=0;
    scanf("%d",&n);
    int r=recrev(n,rev);
    printf("%d",r);
return 0;
}
```