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Section B Roll Number: 10

WEEK 15

Makefile for all programs:

```
a.out:Client.o Server.o Server.h
	gcc Client.o Server.o
Client.o:Client.c Server.h
	gcc -c Client.c
Server.o:Server.c Server.h
	gcc -c Server.c
```

1) Write a program to sort positive integers in the ascending order using multiple files.

Server.h

```
int sort(int *, int);
int display(int *, int);
```

Server.c

```
#include<stdio.h>
int sort(int *a, int n)
{
   int i,j,t;
   for(i=0;i<n;i++)
```

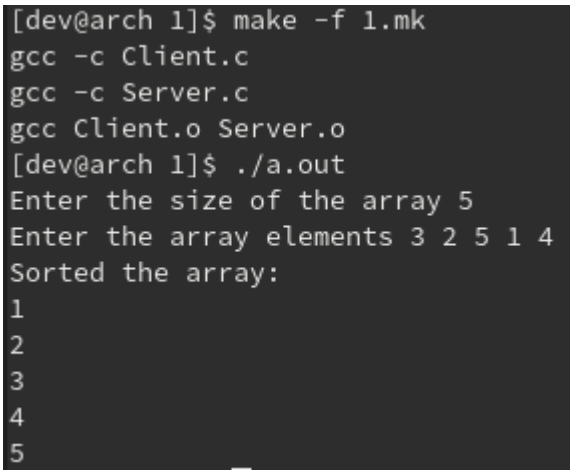
```
    {
        for(j=0;j<n-i-1;j++)
        {
            if((*(a+j))>(*(a+j+1)))
            {
                t=*(a+j);
                *(a+j)=*(a+j+1);
                *(a+j+1)=t;
            }
        }
    }
}
int display(int *a, int n)
{
    printf("Sorted the array:\n");
    for(int i=0;i<n;i++)
    {
        printf("%d\n",*(a+i));
    }
}
```

Client.c

```
#include<stdio.h>
#include "Server.h"
```

```
int main()
{
   int n,a[100];
   printf("Enter the size of the array");
   scanf("%d",&n);
   printf("Enter the array elements");
   for(int i=0;i<n;i++)
   {
      scanf("%d",(a+i));
   }
   sort(a,n);
   display(a,n);
   return 0;
}
```

Output



2) Write a C program to merge contents of two files into a third file.

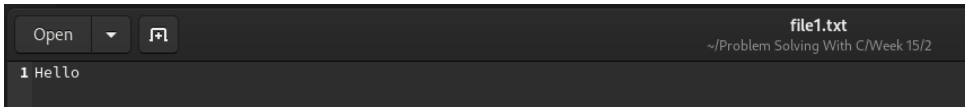
Code:

```
#include<stdio.h>
#include<stdlib.h>
int merge()
{
   char c;
   FILE *fp,*f,*w;
   fp=fopen("file1.txt","r");
   f=fopen("file2.txt","r");
   w=fopen("file3.txt","w");
   if(fp==NULL || f==NULL || w==NULL)
   {
      printf("Cannot open files");
      exit(0);
   }
   printf("Contents of first file:");
   while((c=fgetc(fp))!=EOF)
   {
      fputc(c,w);
      putchar(c);
   }
   printf("\n");
   printf("Contents of second file:");
```

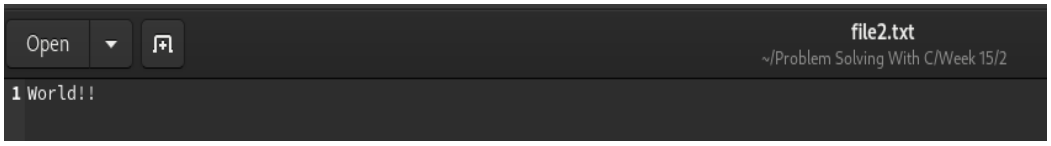
```
    while((c=fgetc(f))!=EOF)
    {
       fputc(c,w);
       putchar(c);
    }
    printf("\n");
    fclose(fp);
    fclose(f);
    fclose(w);
    w=fopen("file3.txt","r");
    printf("Contents of third file:\n");
    while ((c=fgetc(w))!=EOF)
    {
       putchar(c);
    }
    fclose(w);
    return 0;
}
int main()
{
    merge();
    return 0;
}
```

Output

file1.txt



file2.txt




```
Contents of first file:Hello
Contents of second file:World!!
Contents of third file:
HelloWorld!!
```

3)Write a C program to write multiple lines in a text file.

Code:

```
#include<stdio.h>
int input()
{
    char fn[100],c[255],a;
    int n;
    printf("Enter filename");
    fgets(fn,sizeof(fn),stdin);
    FILE *f=fopen(fn,"w");
    printf("Enter the number of lines");
    scanf("%d",&n);
    printf("Enter the sentences:");
    for(int i=0;i<=n;i++)
    {
        fgets(c,255,stdin);
        fflush(stdin);
```

```
        fputs(c,f);
    }
    fclose (f);
    f = fopen(fn, "r");
    printf("Contents of the file:");
    while ((a = fgetc(f)) != EOF)
        putchar(a);
    return 0;
}
int main()
{
    input();
    return 0;
}
```

Output

```
[dev@arch 3]$ ./a.out
Enter filenamefile1.txt
Enter the number of lines3
Enter the sentences:Welcome
to
C
Contents of the file:
Welcome
to
C
```

Practice programs:

1.Write a C program to replace a specific line in a text file.

Code:

```
#include<stdio.h>
#include<stdlib.h>
int replace(int n)
{
   FILE *f,*c;
   int l=1;
   char s[255];
   f=fopen("File.txt","r");
   c=fopen("Temp.txt","w");
   while (!feof(f))
   {
      if(l!=n)
      {
         fgets(s,sizeof(s),f);
         fputs(s,c);
         fflush(f);
      }
      else
      {
         fgets(s,255,f);
         printf("Enter new line contents: ");
         scanf("%s",s);
         fflush(stdin);
         fputs(s,c);
```

```
        }
        l++;
    }
    fclose(f);
    fclose(c);
    remove("File.txt");
    rename("Temp.txt","File.txt");
    return 0;
}
int display()
{
    FILE *f;
    char s[255];
    f=fopen("File.txt","r");
    while(!feof(f))
    {
        fgets(s,sizeof(s),f);
        printf("%s",s);
    }
    fclose(f);
    return 0;
}
int main()
{
```

```
    int n;
    printf("Contents of original file:\n");
    display();
    printf("\nEnter line number to be replace");
    scanf("%d",&n);
    replace(n);
    printf("Contents after replacing line no %d:\n",n);
    display();
    printf("\n");
    return 0;
}
```

Output

```
[dev@arch 4]$ ./a.out
Contents of original file:
Hello
Hi
Enter line number to be replace2
Enter new line contents: World
Contents after replacing line no 2:
Hello
World
```

2.Write a C program to compare the contents of two files.

Code:

```
#include<stdio.h>
int compare()
{
```

```
FILE *f,*g;
char a[255],b[255],c,d;
printf("Enter the name of the first file: ");
scanf("%s",a);
printf("Enter the name of second file: ");
scanf("%s",b);
f=fopen(a,"r");
g=fopen(b,"r");
if(f==NULL || g==NULL)
{
   printf("Cannot open file");
   return -1;
}
while ((c=fgetc(f))!=EOF && (d=fgetc(g))!=EOF)
{
   if(c!=d)
   {
      return 1;
   }
}
if ((c=fgetc(f))==EOF && (d=fgetc(g))==EOF)
{
   fclose(f);
   fclose(g);
```

```
        return 0;
    }
    fclose(f);
    fclose(g);
    return 1;
}
int main()
{
    int a;
    a=compare();
    if(a==1)
        printf("Files are not same");
    else if(a==0)
        printf("Files are same");
    printf("\n");
    return 0;
}
```

Output

f1.txt

f2.txt

```
[dev@arch 5]$ ./a.out
Enter the name of the first file: f1.txt
Enter the name of second file: f2.txt
Files are not same
```