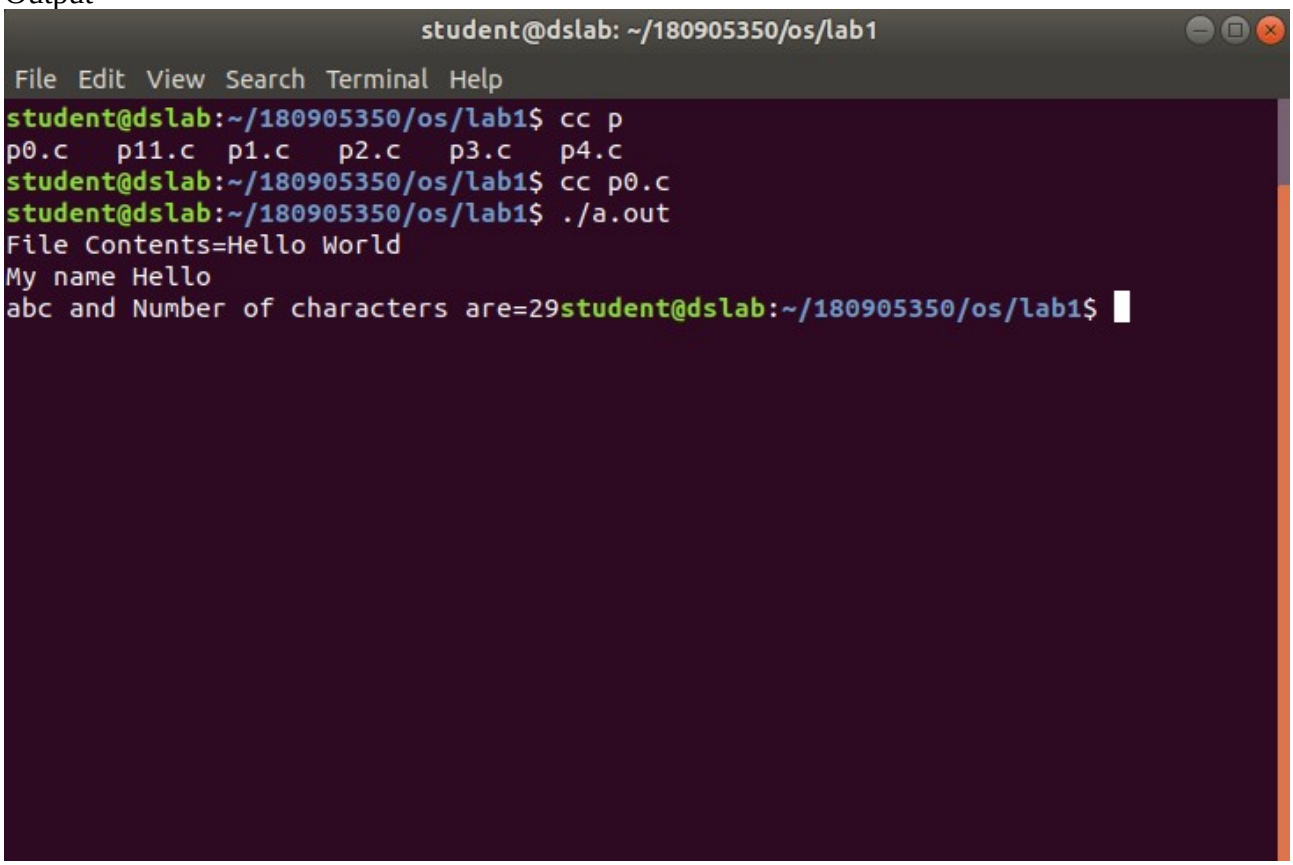
Aditya Pradhan 180905350 cse d os
Practice program

Q0

```
#include<stdio.h>
#include <unistd.h>
#include<sys/stat.h>
#include<fcntl.h>
#include<stdlib.h>
int main(){

        char c;
        int in,out;
        char buffer[128];
        int nread;
        in=open("abc.txt",O_RDWR);
        nread=read(in,buffer,128);
        printf("File Contents=%s and Number of characters are=%d",buffer, nread);
        exit(0);

}
```

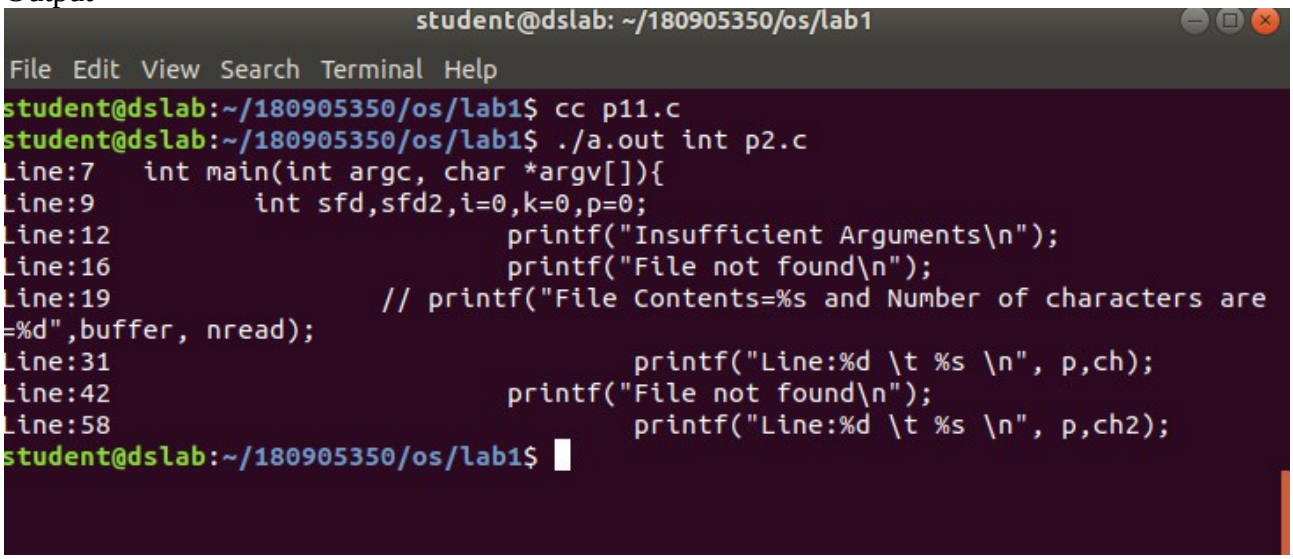
Output



Q1
code-

```
#include<stdio.h>
#include <unistd.h>
#include<sys/stat.h>
#include<fcntl.h>
#include<stdlib.h>
#include <string.h>
int main(int argc, char *argv[]){

	int sfd,i=0,k=0;
	char ch[100],chr;
	if(argc!=3){
		printf("Insufficient Arguments\n");
		exit(1);
	}
	if( (sfd=open(argv[2],O_RDONLY))==-1){
		printf("File not found\n");
		exit(1);
	}
	// printf("File Contents=%s and Number of characters are=%d",buffer, nread);
	while((read(sfd,&chr,1))>0){
		if(chr!='\n'){
			ch[i]=chr;
			i++;

		}
		else{
			k++;
			ch[i]='\0';
			i=0;
			if(strstr(ch,argv[1])!=NULL){
				printf("Line:%d \t %s \n", k,ch);
			}
		}
	}

	exit(0);

}
```

Output


student@dslab: ~/180905350/os/lab1
File Edit View Search Terminal Help
student@dslab:~/180905350/os/lab1$ cc p11.c
student@dslab:~/180905350/os/lab1$ ./a.out int p2.c
Line:7 int main(int argc, char *argv[]){
Line:9 int sfd,sfd2,i=0,k=0,p=0;
Line:12 printf("Insufficient Arguments\n");
Line:16 printf("File not found\n");
Line:19 // printf("File Contents=%s and Number of characters are
=%d",buffer, nread);
Line:31 printf("Line:%d \t %s \n", p,ch);
Line:42 printf("File not found\n");
Line:58 printf("Line:%d \t %s \n", p,ch2);
student@dslab:~/180905350/os/lab1$

Q2

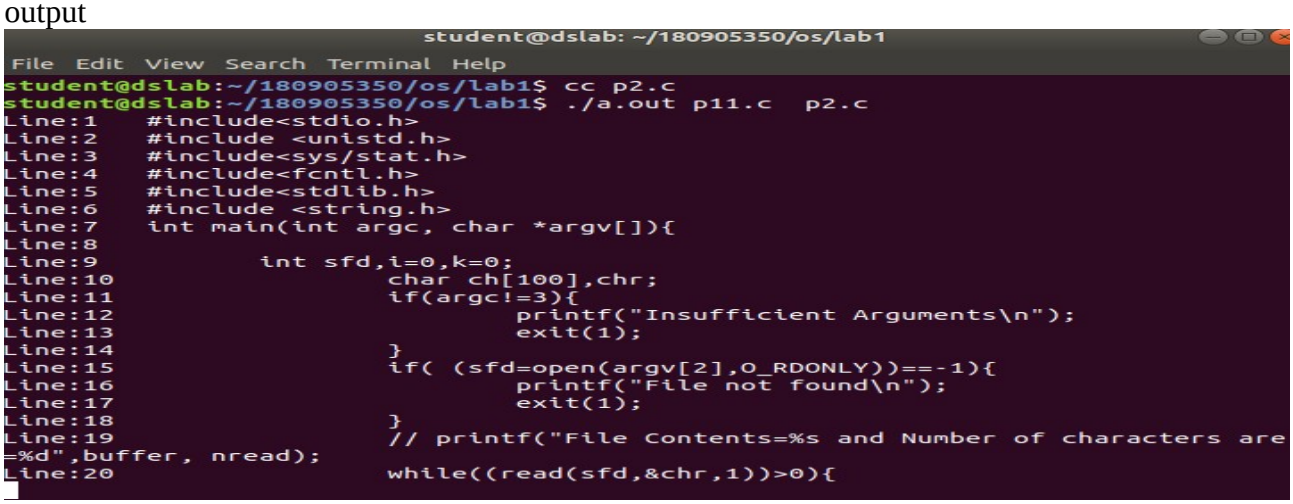
code-

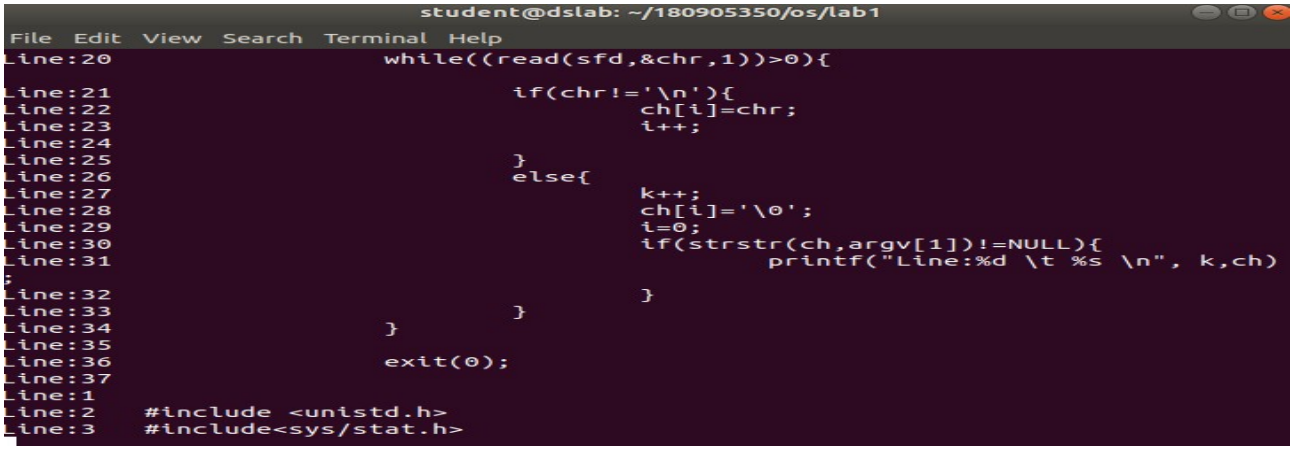
```
#include<stdio.h>
#include <unistd.h>
#include<sys/stat.h>
#include<fcntl.h>
#include<stdlib.h>
#include <string.h>
int main(int argc, char *argv[]){

	int sfd,sfd2,i=0,k=0,p=0;
	char ch[100],ch2[100],chr;
	if(argc!=3){
		printf("Insufficient Arguments\n");
		exit(1);
	}
	if( (sfd=open(argv[1],O_RDONLY))==-1){
		printf("File not found\n");
	#include<stdio.h>
#include <unistd.h>
#include<sys/stat.h>
#include<fcntl.h>
#include<stdlib.h>
#include <string.h>
int main(int argc, char *argv[]){

	int sfd,sfd2,i=0,k=0,p=0;
	char ch[100],ch2[100],chr;
	if(argc!=3){
		printf("Insufficient Arguments\n");
		exit(1);
	}
	if( (sfd=open(argv[1],O_RDONLY))==-1){
		printf("File not found\n");
		exit(1);
	}
	// printf("File Contents=%s and Number of characters are=%d",buffer, nread);
	while((read(sfd,&chr,1))>0){
		if(chr!='\n'){
			ch[i]=chr;
			i++;

		}
		else{
			k++;
			p++;
			ch[i]='\0';
			i=0;
			printf("Line:%d \t %s \n", p,ch);
			if(k==20){
				fgetc(stdin);
```

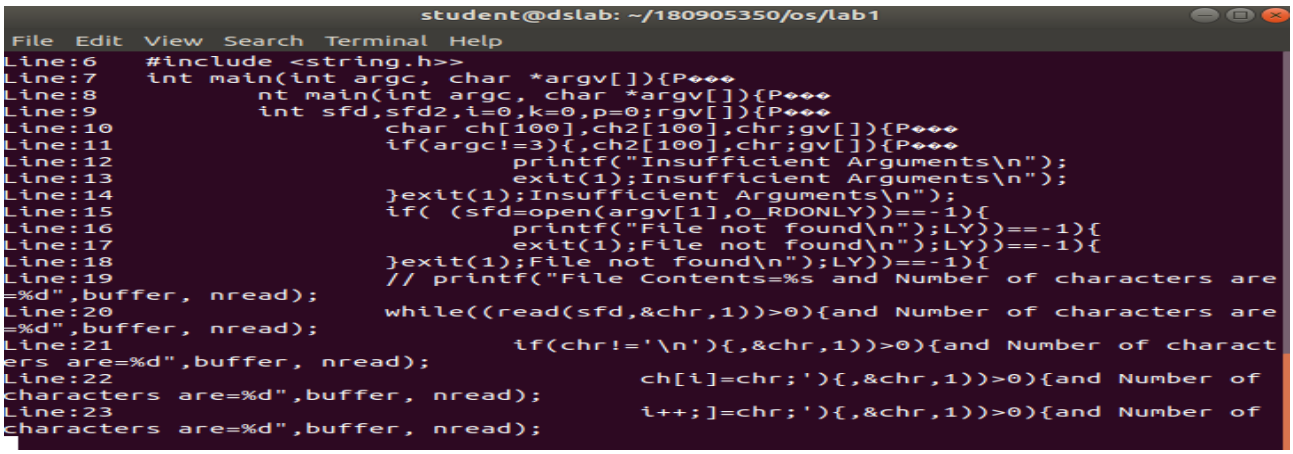
```
                        k=0;

                }
        }
}
close(sfd);

if( (sfd2=open(argv[2],O_RDONLY))==-1){
        printf("File not found\n");
        exit(1);
}

p=0;
while((read(sfd,&chr,1))>0){
        if(chr!='\n'){
                ch2[i]=chr;
                i++;

        }
        else{
                k++;
                p++;
                ch[i]='\0';
                i=0;
                printf("Line:%d \t %s \n", p,ch2);
                if(k==20){
                        fgetc(stdin);
                        k=0;

                }
        }
}

exit(0);

}       exit(1);
        }
        // printf("File Contents=%s and Number of characters are=%d",buffer, nread);
        while((read(sfd,&chr,1))>0){
                if(chr!='\n'){
                        ch[i]=chr;
                        i++;

                }
                else{
                        k++;
                        p++;
                        ch[i]='\0';
                        i=0;
                        printf("Line:%d \t %s \n", p,ch);
                        if(k==20){
                                fgetc(stdin);
```

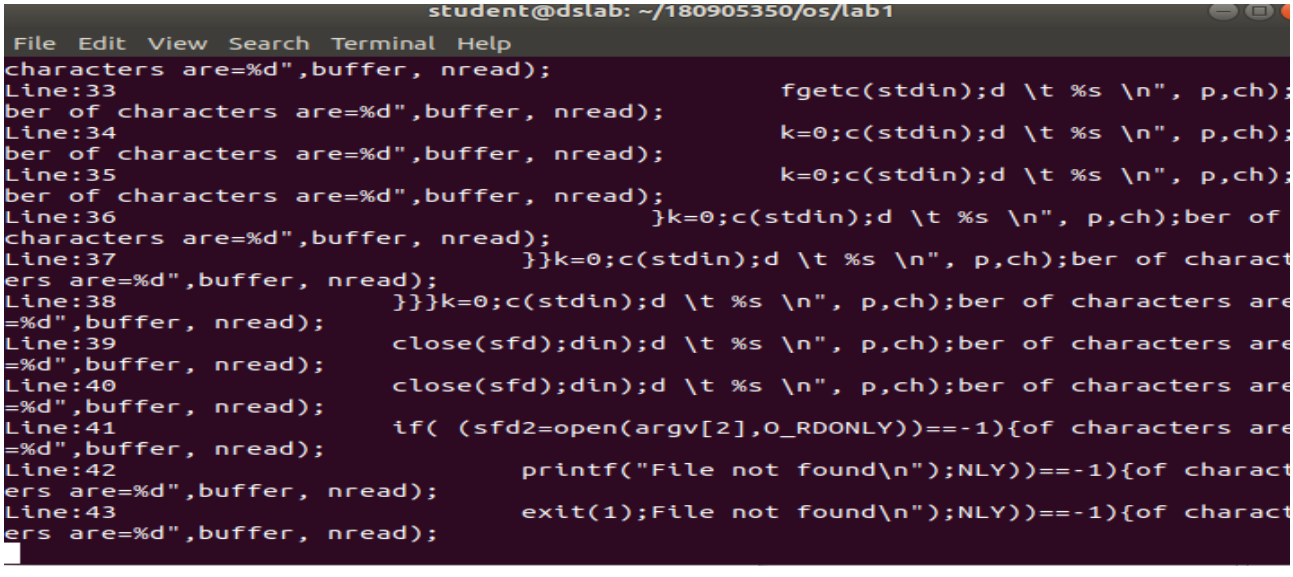
```
                        k=0;

                }
        }
}
close(sfd);

if( (sfd2=open(argv[2],O_RDONLY))==-1){
        printf("File not found\n");
        exit(1);
}

p=0;
while((read(sfd,&chr,1))>0){
        if(chr!='\n'){
                ch2[i]=chr;
                i++;

        }
        else{
                k++;
                p++;
                ch[i]='\0';
                i=0;
                printf("Line:%d \t %s \n", p,ch2);
                if(k==20){
                        fgetc(stdin);
                        k=0;

                }
        }
}

exit(0);

}
```

output


student@dslab: ~/180905350/os/lab1
File Edit View Search Terminal Help
student@dslab:~/180905350/os/lab1$ cc p2.c
student@dslab:~/180905350/os/lab1$ ./a.out p11.c p2.c
Line:1 #include<stdio.h>
Line:2 #include <unistd.h>
Line:3 #include<sys/stat.h>
Line:4 #include<fcntl.h>
Line:5 #include<stdlib.h>
Line:6 #include <string.h>
Line:7 int main(int argc, char *argv[]){
Line:8
Line:9 int sfd,i=0,k=0;
Line:10 char ch[100],chr;
Line:11 if(argc!=3){
Line:12 printf("Insufficient Arguments\n");
Line:13 exit(1);
Line:14 }
Line:15 if((sfd=open(argv[2],O_RDONLY))==-1){
Line:16 printf("File not found\n");
Line:17 exit(1);
Line:18 }
Line:19 // printf("File Contents=%s and Number of characters are
=%d",buffer, nread);
Line:20 while((read(sfd,&chr,1))>0){


student@dslab: ~/180905350/os/lab1
File Edit View Search Terminal Help
Line:20 while((read(sfd,&chr,1))>0){
Line:21 if(chr!='\n'){
Line:22 ch[i]=chr;
Line:23 i++;
Line:24
Line:25 }
Line:26 else{
Line:27 k++;
Line:28 ch[i]='\0';
Line:29 i=0;
Line:30 if(strstr(ch,argv[1])!=NULL){
Line:31 printf("Line:%d \t %s \n", k,ch)
;
Line:32 }
Line:33 }
Line:34 }
Line:35
Line:36 exit(0);
Line:37
Line:1
Line:2 #include <unistd.h>
Line:3 #include<sys/stat.h>

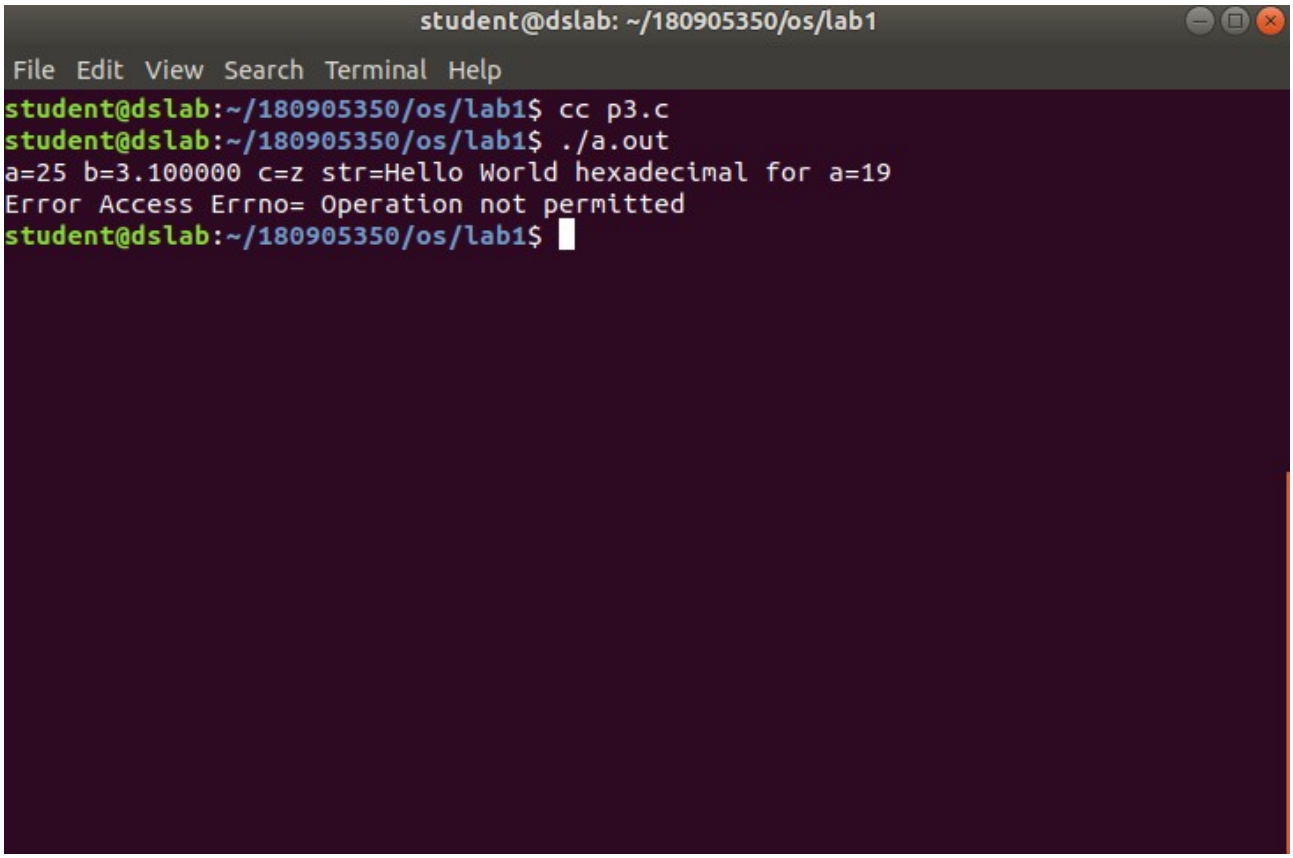

student@dslab: ~/180905350/os/lab1
File Edit View Search Terminal Help
Line:6 #include <string.h>>
Line:7 int main(int argc, char *argv[]){P
Line:8 nt main(int argc, char *argv[]){P
Line:9 int sfd,sfd2,i=0,k=0,p=0;rgv[]){P
Line:10 char ch[100],ch2[100],chr;gv[]){P
Line:11 if(argc!=3){,ch2[100],chr;gv[]){P
Line:12 printf("Insufficient Arguments\n");
Line:13 exit(1);Insufficient Arguments\n");
Line:14 }exit(1);Insufficient Arguments\n");
Line:15 if((sfd=open(argv[1],O_RDONLY))==-1){
Line:16 printf("File not found\n");LY))==-1){
Line:17 exit(1);File not found\n");LY))==-1){
Line:18 }exit(1);File not found\n");LY))==-1){
Line:19 // printf("File Contents=%s and Number of characters are
=%d",buffer, nread);
Line:20 while((read(sfd,&chr,1))>0){and Number of characters are
=%d",buffer, nread);
Line:21 if(chr!='\n'){,&chr,1))>0){and Number of charact
ers are=%d",buffer, nread);
Line:22 ch[i]=chr;'){,&chr,1))>0){and Number of
characters are=%d",buffer, nread);
Line:23 i++;]=chr;'){,&chr,1))>0){and Number of
characters are=%d",buffer, nread);


student@dslab: ~/180905350/os/lab1
File Edit View Search Terminal Help
characters are=%d",buffer, nread);
Line:33 fgetc(stdin);d \t %s \n", p,ch);
ber of characters are=%d",buffer, nread);
Line:34 k=0;c(stdin);d \t %s \n", p,ch);
ber of characters are=%d",buffer, nread);
Line:35 k=0;c(stdin);d \t %s \n", p,ch);
ber of characters are=%d",buffer, nread);
Line:36 }k=0;c(stdin);d \t %s \n", p,ch);ber of
characters are=%d",buffer, nread);
Line:37 }}k=0;c(stdin);d \t %s \n", p,ch);ber of charact
ers are=%d",buffer, nread);
Line:38 }}}k=0;c(stdin);d \t %s \n", p,ch);ber of characters are
=%d",buffer, nread);
Line:39 close(sfd);din);d \t %s \n", p,ch);ber of characters are
=%d",buffer, nread);
Line:40 close(sfd);din);d \t %s \n", p,ch);ber of characters are
=%d",buffer, nread);
Line:41 if((sfd2=open(argv[2],O_RDONLY))==-1){of characters are
=%d",buffer, nread);
Line:42 printf("File not found\n");NLY))==-1){of charact
ers are=%d",buffer, nread);
Line:43 exit(1);File not found\n");NLY))==-1){of charact
ers are=%d",buffer, nread);

Q3)
Code

```
#include<stdio.h>
#include<stdlib.h>
#include<errno.h>
// extern int errno;
int main(){
        int a=25;
        float b=3.1;
        char c='z';
        char str[]="Hello World";
printf("a=%d b=%f c=%c str=%s hexadecimal for a=%x \n",a,b,c,str,a);
        errno=EPERM;
        printf("Error Access Errno= %m\n");

}
```

Output



Q4)

Code-

```
#include<stdio.h>
#include <unistd.h>
#include<sys/stat.h>
#include<fcntl.h>
#include<stdlib.h>
int main(int argc, char *argv[]){

        char c;
        int in,out;
        char buffer[128];
        int nread;
        if(argc!=3){
                printf("Insufficient Arguments\n");
                exit(1);
        }
        in=open(argv[1],O_RDWR);
        out=open(argv[2],O_WRONLY|O_CREAT, S_IRUSR|S_IWUSR);
        if( in==-1 || out==-1){
                printf("File not found\n");
                exit(1);
        }
        while(read(in,&c,1) == 1){
                write(out,&c,1);

        }
        printf("Contents of file copied\n");
        exit(0);

}
```

Output