

## UNIX ASSIGNMENT 2

1. Write a shell program to get the details of the student Name, age, USN and gender. Output all the details to the terminal. And also output whether the student is eligible to vote or not with suitable message.

```
mw20cs015@ubuntu-VirtualBox:~$ cat > el.sh
echo -n "enter name"
read name
echo -n "enter age"
read age
echo -n "enter USN"
read USN
echo -n "enter gender"
read gender
if [ "$age" -ge 18 ]; then
echo "you are eligible"
else
echo "you are not eligible"
fi
^C
mw20cs015@ubuntu-VirtualBox:~$ ./el.sh
bash: ./el.sh: Permission denied
mw20cs015@ubuntu-VirtualBox:~$ chmod +x el.sh
mw20cs015@ubuntu-VirtualBox:~$ ./el.sh
enter name Bhavana
enter age 20
enter USN 4MW20CS015
enter gender Female
you are eligible
mw20cs015@ubuntu-VirtualBox:~$
```

2. With example, explain the logical operators in shell programming ( logical and and logical or).

LOGICAL OR (| |): This is a binary operator, which returns true if either of the operand is true or both the operands are true and return false if one of them is false.

```

mw20cs015@ubuntu-VirtualBox:~$ cat > orop.sh
echo -n "Enter a number: "
read num
if [ $num -eq 15 ] || [ $num -eq 45 ]; then
echo "You won"
else
echo "You lost"
fi
mw20cs015@ubuntu-VirtualBox:~$ ./orop.sh
bash: ./orop.sh: Permission denied
mw20cs015@ubuntu-VirtualBox:~$ chmod +x orop.sh
mw20cs015@ubuntu-VirtualBox:~$ ./orop.sh
Enter a number: 34
You lost
mw20cs015@ubuntu-VirtualBox:~$ ./orop.sh
Enter a number: 45
You won
mw20cs015@ubuntu-VirtualBox:~$ █

```

LOGICAL AND (&&): This is a binary operator, which returns true if both the operands are true otherwise returns false.

```

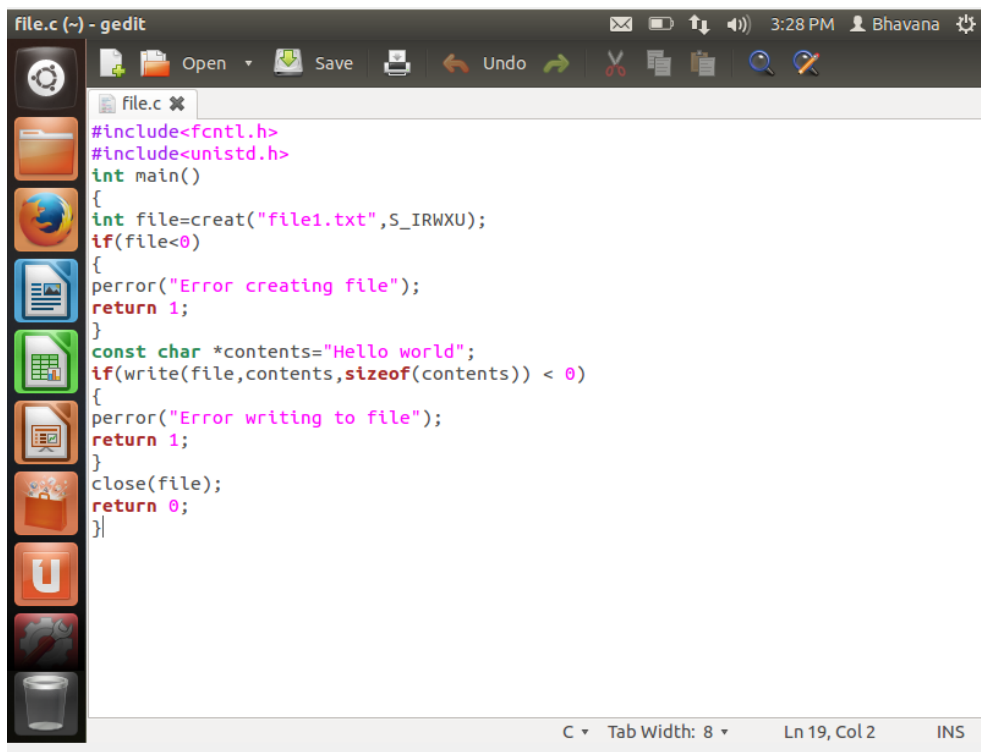
mw20cs015@ubuntu-VirtualBox:~$ cat > andop.sh
echo -n "Enter a number within 20: "
read num
if [ $num -lt 20 ] && [ $((num % 2)) -eq 0 ]; then
echo "even number"
else
echo "odd number"
fi
mw20cs015@ubuntu-VirtualBox:~$ chmod +x andop.sh
mw20cs015@ubuntu-VirtualBox:~$ ./andop.sh
Enter a number within 20: 3
odd number
mw20cs015@ubuntu-VirtualBox:~$ ./andop.sh
Enter a number within 20: 16
even number
mw20cs015@ubuntu-VirtualBox:~$ █

```

3. Write a simple program to create a file and write the contents using the

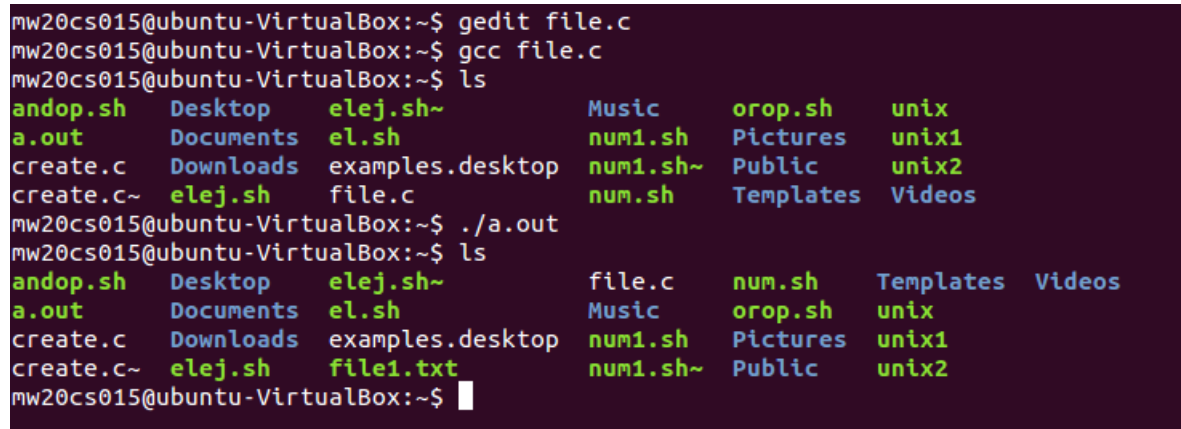
following APIs.

1. create ()
2. write ()



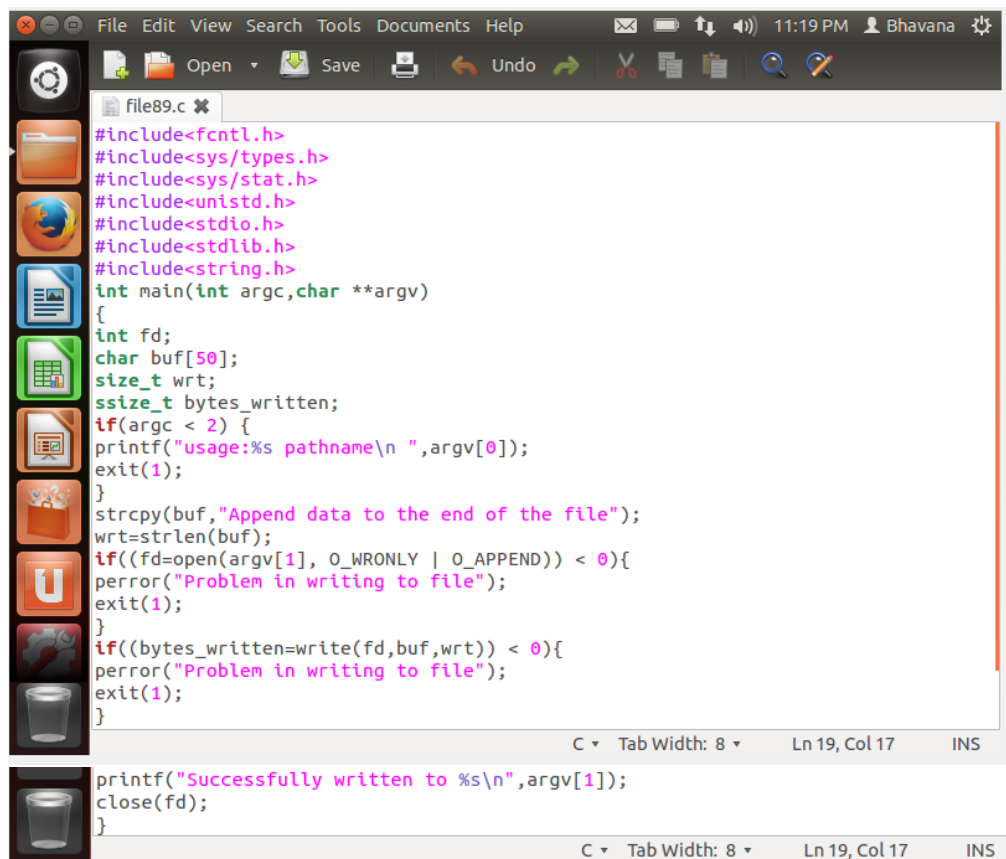
```
file.c (~) - gedit
#include<fcntl.h>
#include<unistd.h>
int main()
{
    int file=creat("file1.txt",S_IRWXU);
    if(file<0)
    {
        perror("Error creating file");
        return 1;
    }
    const char *contents="Hello world";
    if(write(file,contents,sizeof(contents)) < 0)
    {
        perror("Error writing to file");
        return 1;
    }
    close(file);
    return 0;
}
```

## Output



```
mw20cs015@ubuntu-VirtualBox:~$ gedit file.c
mw20cs015@ubuntu-VirtualBox:~$ gcc file.c
mw20cs015@ubuntu-VirtualBox:~$ ls
andop.sh  Desktop  elej.sh~  Music  orop.sh  unix
a.out     Documents el.sh     num1.sh Pictures unix1
create.c  Downloads examples.desktop num1.sh~ Public  unix2
create.c~ elej.sh  file.c    num.sh  Templates Videos
mw20cs015@ubuntu-VirtualBox:~$ ./a.out
mw20cs015@ubuntu-VirtualBox:~$ ls
andop.sh  Desktop  elej.sh~  file.c  num.sh  Templates Videos
a.out     Documents el.sh     Music  orop.sh  unix
create.c  Downloads examples.desktop num1.sh Pictures unix1
create.c~ elej.sh  file1.txt num1.sh~ Public  unix2
mw20cs015@ubuntu-VirtualBox:~$
```

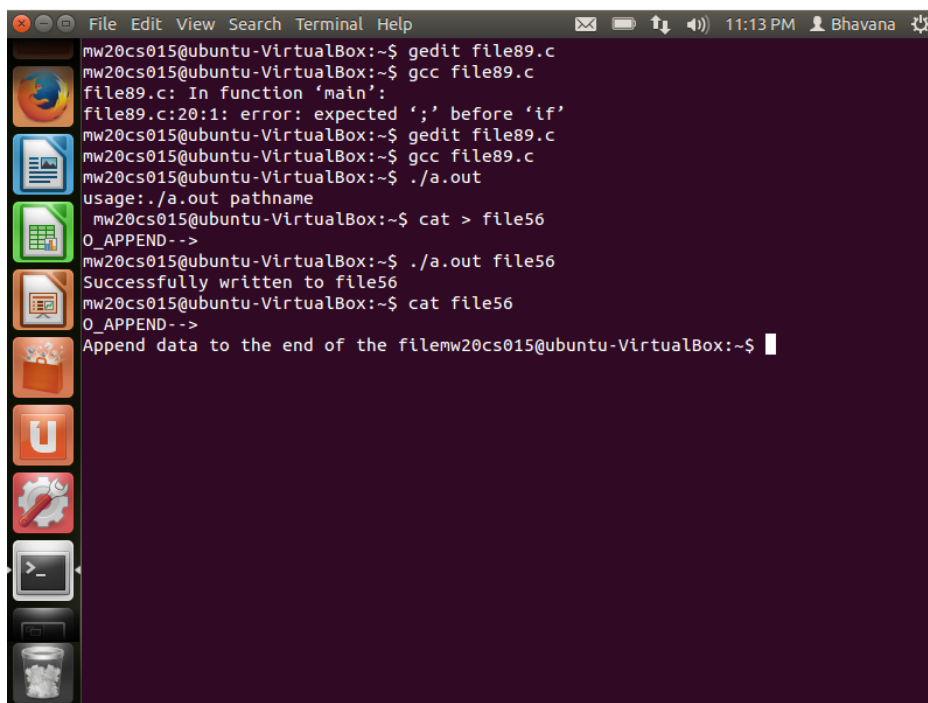
4. Write a simple program to open the existing file and append the contents using the following APIs. 1. open () 2. append ()



```
#include<fcntl.h>
#include<sys/types.h>
#include<sys/stat.h>
#include<unistd.h>
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
int main(int argc,char **argv)
{
    int fd;
    char buf[50];
    size_t wrt;
    ssize_t bytes_written;
    if(argc < 2) {
        printf("usage:%s pathname\n ",argv[0]);
        exit(1);
    }
    strcpy(buf,"Append data to the end of the file");
    wrt=strlen(buf);
    if((fd=open(argv[1], O_WRONLY | O_APPEND)) < 0){
        perror("Problem in writing to file");
        exit(1);
    }
    if((bytes_written=write(fd,buf,wrt)) < 0){
        perror("Problem in writing to file");
        exit(1);
    }

    printf("Successfully written to %s\n",argv[1]);
    close(fd);
}
```

## OUTPUT



```
mw20cs015@ubuntu-VirtualBox:~$ gedit file89.c
mw20cs015@ubuntu-VirtualBox:~$ gcc file89.c
file89.c: In function 'main':
file89.c:20:1: error: expected ';' before 'if'
mw20cs015@ubuntu-VirtualBox:~$ gedit file89.c
mw20cs015@ubuntu-VirtualBox:~$ gcc file89.c
mw20cs015@ubuntu-VirtualBox:~$ ./a.out
usage:./a.out pathname
mw20cs015@ubuntu-VirtualBox:~$ cat > file56
O_APPEND-->
mw20cs015@ubuntu-VirtualBox:~$ ./a.out file56
Successfully written to file56
mw20cs015@ubuntu-VirtualBox:~$ cat file56
O_APPEND-->
Append data to the end of the filemw20cs015@ubuntu-VirtualBox:~$
```

