**OS experiment no. 03**

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**Batch :** B1

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**Q1.** Write a program to show file management and process management using system call.

1. **Open, read, write and close for file management system call**

**CODE:**

#include <unistd.h>

#include <fcntl.h>

#include <sys/stat.h>

#include <sys/types.h>

#include <stdio.h>

int main(){

    int n,fd;

    char buffer[50];

    char file\_name[30];

    printf("Enter name of file to be created: ");

    fflush(stdin);

    gets(file\_name);

    printf("Enter text to be written in the file:\n");

    n = read(1, buffer, 100);

    fd = open(file\_name, O\_CREAT | O\_RDWR,0777);

    write(fd, buffer, n);

    write(1, buffer, n);

    int close(int fd);

    return 0;

}

**OUTPUT:**

**First, we execute these commands in terminal**

twilight@Devanshs-Ubuntu\_db ~ % cd Desktop

twilight@Devanshs-Ubuntu\_db Desktop % gcc -o test test.c

twilight@Devanshs-Ubuntu\_db Desktop % ./test

warning: this program uses gets(), which is unsafe.

Enter name of file to be created: system\_call

Enter text to be written in the file:

File Management System Calls Executed Perfectly

File Management System Calls Executed Perfectly

twilight@Devanshs-Ubuntu\_db Desktop %

**We Find that a file with name specified by user was created and user input text was added into the file**

twilight@Devanshs-Ubuntu\_db Desktop % ls

Gcc.docx

**system\_call**

test

test.c

ubuntu-20.04.3-desktop-amd64.iso

**‘system\_call’ file content:**

File Management System Calls Executed Perfectly

1. **For fork() system call**

**CODE:**

#include <stdio.h>

#include <sys/types.h>

#include <unistd.h>

int main()

{

    fork();

    fork();

    printf("Testing fork system call\n");

    return 0;

}

**OUTPUT:**

twilight@Devanshs-Ubuntu\_db Desktop % gcc -o test1 test1.c

twilight@Devanshs-Ubuntu\_db Desktop % ./test1

Testing fork system call

Testing fork system call

Testing fork system call

Testing fork system call

twilight@Devanshs-Ubuntu\_db Desktop %

**Outcome:** CO1: Understand basic structure of modern operating system:

**Conclusion:** We understood the results how system calls are used for file and process

handling.