DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
(ARTIFICIAL INTELLIGENCE & MACHINE LEARNING)

Academic Year: 2024-25   **Name of Student: Pandey kalash**

Semester: IV   **Student ID:23106049**

Class / Branch: SE AIML   **Date of Performance:10-02-25**

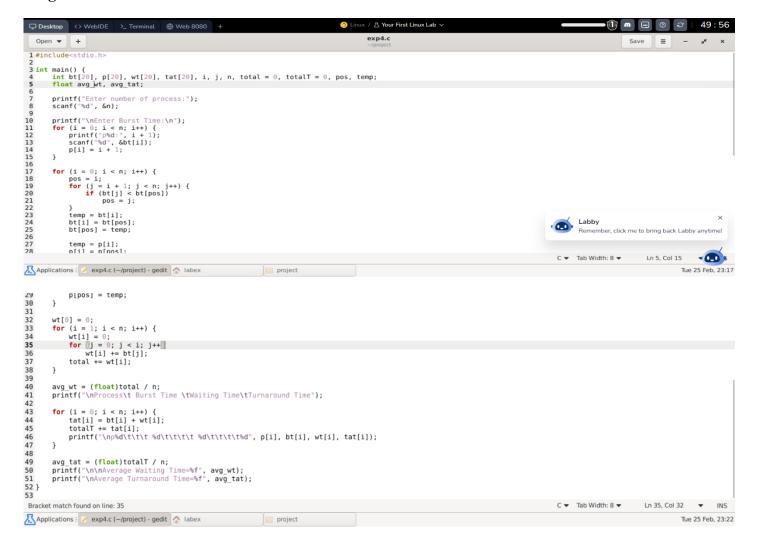**Subject: CSL403 Operating System Lab**   **Date of Submission:10-02-25**

Name of Instructor: Prof. Vijaya Bharathi J

Experiment No.3

Aim: Implement any one basic commands of linux like ls, cp, mv and others using kernel APIs

Program:

Output:

```
Average Turnaround Time 137000000
labex:project/ $ gcc exp3.c
labex:project/ $ ./a.out
Listing files in directory: .
.
..
exp3.c
exp4.c
a.out
labex:project/ $
```

Labby
Remember, click me to bring back Labby anytime!

Program:

```
                *exp3.c                          Untitled Document 1                    *exp

1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <fcntl.h>
4 #include <unistd.h>
5
6 #define BUFFER_SIZE 1024
7
8 int main(int argc, char *argv[]) {
9     char buffer[BUFFER_SIZE];
10    ssize_t bytes;
11    FILE *src, *dest;
12
13    if (argc != 3) {
14        fprintf(stderr, "Usage: %s <source_file> <destination_file>\n", argv[0]);
15        return 1;
16    }
17
18    src = fopen(argv[1], "r");
19    if (!src) {
20        perror("Error opening source file");
21        return 1;
22    }
23
24    dest = fopen(argv[2], "w");
25    if (!dest) {
26        perror("expopening destination file");
```

C ▾   Tab Width: 8 ▾   Ln 16, Col 6

Applications : *exp3.c (~/project) - gedit labex   project   project   Wed 26 Feb, 00:00

```
26        perror("expopening destination file");
27        fclose(src);
28        return 1;
29    }
30
31    while ((bytes = fread(buffer, 1, BUFFER_SIZE, src)) > 0) {
32        if (fwrite(buffer, 1, bytes, dest) != bytes) {
33            perror("Error writing to destination file");
34            fclose(src);
35            fclose(dest);
36            return 1;
37        }
38    }
39
40    fclose(src);
41    fclose(dest);
42
```

C ▾   Tab Width: 8 ▾   Ln 17, Col 1

Applications : *exp3.c (~/project) - gedit labex   project   project   Wed 26 Feb, 00:00

Output:

```
zsh: command not found: 0
labex:project/ $ ./exp3 source.txt destination.txt
File copied successfully from source.txt to destination.txt
labex:project/ $
```

Conclusion: Hence, we have studied the basic command of linux ls and cp using kernel APIs.