

EXP – 3

EX – 1

```
#include <stdio.h>
#include <fcntl.h>
#include <unistd.h>

int main() {
    char source[] = "input.txt";
    char dest[] = "output.txt";
    int fd_src = open(source, O_RDONLY);
    if (fd_src < 0) {
        perror("Error opening source file");
        return 1;
    }
    off_t size = lseek(fd_src, 0, SEEK_END);
    lseek(fd_src, 0, SEEK_SET);
    off_t half_size = size / 2;
    char buffer[half_size];
    int choice;
    printf("Enter 1 to copy first half or 2 to copy second half: ");
    scanf("%d", &choice);
    if (choice == 2) {
        lseek(fd_src, half_size, SEEK_SET);
    }
    int bytes_read = read(fd_src, buffer, half_size);
    int fd_dest = open(dest, O_WRONLY | O_CREAT, 0644);
    write(fd_dest, buffer, bytes_read);
}
```

```
close(fd_src);
close(fd_dest);
return 0;
}
```

EX – 2

```
#include <stdio.h>
#include <fcntl.h>
#include <unistd.h>
int main() {
    char ch;
    int fd = open("input.txt", O_WRONLY | O_CREAT, 0644);
    while (read(STDIN_FILENO, &ch, 1) > 0 && ch != '$') {
        write(fd, &ch, 1);
    }
    close(fd);
    return 0;
}
```

EX – 3

```
#include <stdio.h>
#include <fcntl.h>
#include <unistd.h>
int main() {
    char buffer[1024];
    int fd_in = open("input.txt", O_RDONLY);
    int fd_out = open("encrypted.txt", O_WRONLY | O_CREAT, 0644);
```

```

int n = read(fd_in, buffer, sizeof(buffer));
for (int i = 0; i < n; i++) {
    buffer[i] += 3;
}
write(fd_out, buffer, n);
close(fd_in);
close(fd_out);
return 0;
}

```

EX – 4

(a)

```

#include <fcntl.h>
#include <unistd.h>
int main() {
    int fd = open("sample.txt", O_WRONLY | O_CREAT, 0644);
    if (fd < 0) {
        perror("Error creating file");
        return 1;
    }
    close(fd);
    return 0;
}

```

(b)

```

#include <sys/stat.h>
int main() {
    chmod("sample.txt", S_IRUSR | S_IWUSR);
}

```

```
    return 0;
}
```

(c)

```
sudo chown username sample.txt
```

(d)

```
#include <unistd.h>

int main() {
    link("sample.txt", "sample_link.txt");
    return 0;
}
```

(e)

```
#include <unistd.h>

int main() {
    symlink("sample.txt", "sample_symlink.txt");
    return 0;
}
```