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24.Design a C program to demonstrate UNIX system calls for file management.

### **Aim**

To write a C program that demonstrates the use of UNIX system calls for file management, including file creation, opening, reading, writing, and closing.

### **Algorithm**

1. Start the program.
2. Use `creat()` or `open()` to create or open a file.
3. Write data to the file using `write()`.
4. Close the file using `close()`.
5. Reopen the file using `open()` in read mode.
6. Read data from the file using `read()`.
7. Display the read data on the console.
8. Close the file.
9. End the program.

### **Procedure**

1. Import necessary headers (like `fcntl.h` and `unistd.h`).
2. Define the file name and data to write.
3. Use `creat()` or `open()` to create/open a file.
4. Use `write()` to write data into the file.
5. Close the file using `close()`.
6. Use `open()` to reopen the file in read mode.
7. Use `read()` to read the data from the file into a buffer.
8. Display the content read from the file.
9. Close the file using `close()`.

### **Code:**

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

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

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

```
int main() {
```

```
int fd;

char buffer[100];

const char *data = "Hello, UNIX file management!";


fd = creat("example.txt", 0644);

write(fd, data, 27);

close(fd);


fd = open("example.txt", O_RDONLY);

read(fd, buffer, 27);

buffer[27] = '\0';

printf("Read data: %s\n", buffer);

close(fd);

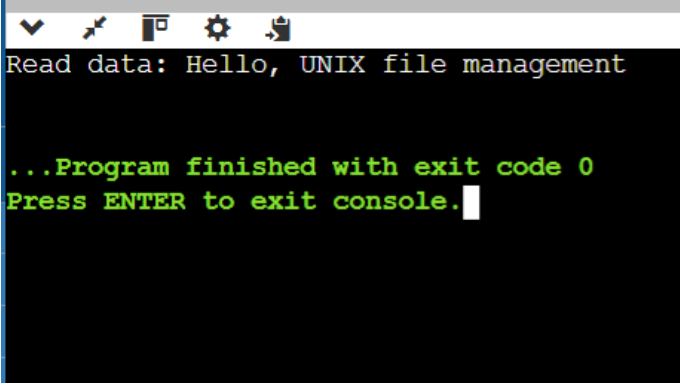

return 0;

}
```

## Result

The program demonstrates the creation, writing, reading, and closing of a file using UNIX system calls. When executed, the content of the file ("Hello, UNIX file management!") is read and displayed on the console.

Output:

A terminal window with a dark background and a light gray title bar. The title bar contains five icons: a downward arrow, a magnifying glass, a square, a gear, and a document. The terminal text is as follows:

```
Read data: Hello, UNIX file management

...Program finished with exit code 0
Press ENTER to exit console.
```

The text is in a monospaced font. The first line is white, and the subsequent lines are green. A white cursor is at the end of the last line.

```
Read data: Hello, UNIX file management

...Program finished with exit code 0
Press ENTER to exit console.
```