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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';

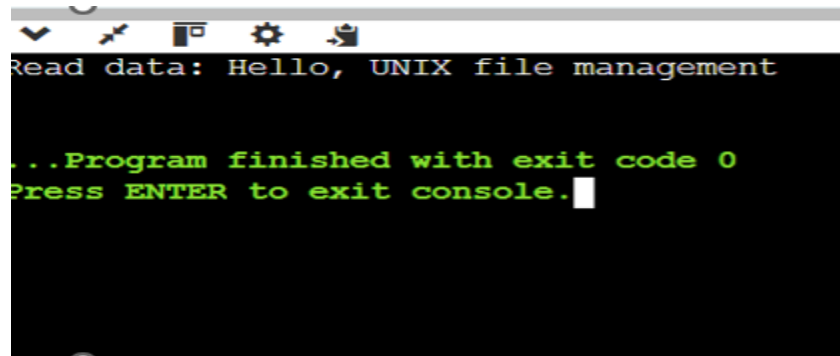
printf("Read data: %s\n", buffer);

close(fd);


return 0;

}
```

**Output:**

A screenshot of a terminal window with a dark background. The window has a title bar with standard Linux window controls (minimize, maximize, close) and a toolbar with icons for back, forward, search, and other navigation functions. The terminal output is in a monospaced font. The first line is "Read data: Hello, UNIX file management" in white. The second line is "...Program finished with exit code 0" in green. The third line is "Press ENTER to exit console." in green, followed by a white cursor character.

