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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:

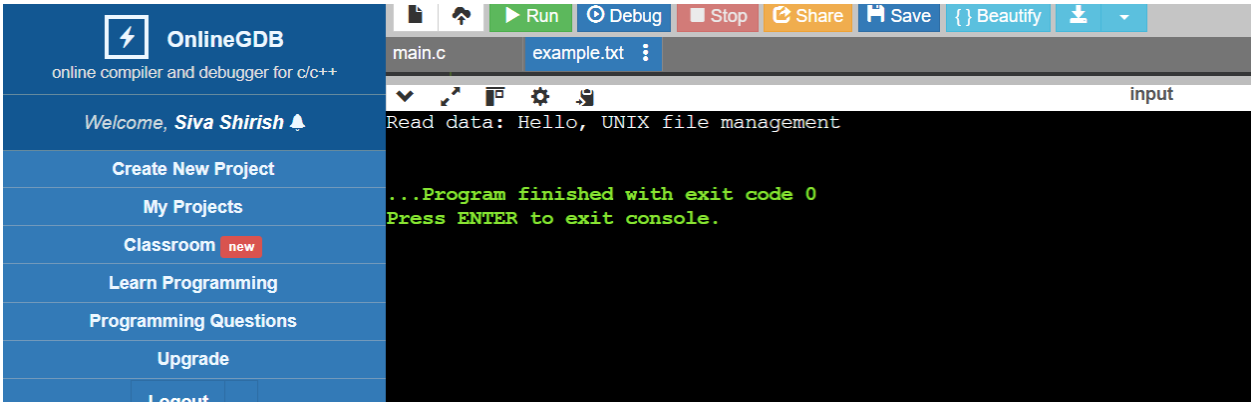
```
#include <fcntl.h>

#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:


OnlineGDB
online compiler and debugger for c/c++
Welcome, Siva Shirish
Create New Project
My Projects
Classroom new
Learn Programming
Programming Questions
Upgrade
Run
Debug
Stop
Share
Save
{ } Beautify
main.c
example.txt
input
Read data: Hello, UNIX file management
...Program finished with exit code 0
Press ENTER to exit console.