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

```
#include <stdio.h>
#include <fcntl.h>     // For open()
#include <unistd.h>    // For read(), write(), close(), lseek()
#include <string.h>    // For strlen()

int main() {
   int fd;
   char buffer[100];
   char writeData[] = "This is a demo file using UNIX system calls.\n";

   // 1. Create or open the file with read-write permissions
   fd = open("demo.txt", O_CREAT | O_RDWR, 0644);
   if (fd < 0) {
      perror("Error opening file");
      return 1;
   }

   // 2. Write data to the file
   write(fd, writeData, strlen(writeData));

   // 3. Move the file pointer to the beginning
   lseek(fd, 0, SEEK_SET);

   // 4. Read data from the file
   int n = read(fd, buffer, sizeof(buffer) - 1);
```

```
    buffer[n] = '\0';  // Null-terminate the string

    // 5. Display the read data
    printf("Data read from file:\n%s", buffer);

    // 6. Close the file
    close(fd);

    return 0;
}
```

Sample Output

```
$ gcc file_syscall.c -o file_syscall
$ ./file_syscall
Data read from file:
This is a demo file using UNIX system calls.
```