**Pseudo code for file explorer application**

**Main.cpp**

// Include necessary headers

Include "file\_operations.cpp"

Include "directory\_operations.cpp"

Include "search\_operations.cpp"

Include "permission\_operations.cpp"

Include <iostream>

Include <string>

Include <sys/stat.h>

// Function to parse and execute commands

Function parseCommand(command, arg1, arg2):

If command is "cp":

Call copyFile(arg1, arg2)

Else If command is "mv":

Call moveFile(arg1, arg2)

Else If command is "rm":

Call deleteFile(arg1)

Else If command is "touch":

Call createFile(arg1)

Else If command is "cd":

Set currentPath to "."

Call changeDirectory(currentPath, arg1)

Else If command is "ls":

Call listFiles(arg1)

Else If command is "search":

Call searchFiles(arg1, arg2)

Else If command is "chmod":

Convert arg2 to octal mode and store in mode

Call changePermissions(arg1, mode)

Else:

Print "Unknown command: " + command

// Main function

Function main():

Declare command, arg1, arg2

While true:

Print "> "

Read input into command

If command is "exit":

Break

If command is "cp" or command is "mv" or command is "search" or command is "chmod":

Read input into arg1 and arg2

Else:

Read input into arg1

Call parseCommand(command, arg1, arg2)

Return 0

**File operations.cpp**

Function copyFile(source, destination):

Try:

Open source file for reading

Open/Create destination file for writing

While not end of source file:

Read chunk of data from source file

Write chunk of data to destination file

Close source file

Close destination file

Catch exception:

Print error message

Function moveFile(source, destination):

Try:

Call copyFile(source, destination)

Delete source file

Catch exception:

Print error message

Function deleteFile(filePath):

Try:

Remove the file at filePath

Catch exception:

Print error message

Function createFile(filePath):

Try:

Create a new file at filePath

Close the file

Catch exception:

Print error message

**Directory\_operations.cpp**

Function changeDirectory(currentPath, newPath):

Try:

Update currentPath to newPath

If newPath is valid:

Set currentPath to newPath

Else:

Print error message "Invalid directory"

Catch exception:

Print error message

Function listFiles(directoryPath):

Try:

Open directory at directoryPath

If directory is successfully opened:

For each file in directory:

Print file name

Close directory

Else:

Print error message "Unable to open directory"

Catch exception:

Print error message

**Search\_operations.cpp**

Function searchFiles(directoryPath, searchString):

Try:

Open directory at directoryPath

If directory is successfully opened:

For each file in directory:

Try:

Open file for reading

While not end of file:

Read line from file

If searchString is in line:

Print file name and line

Close file

Catch exception:

Print error message for file

Close directory

Else:

Print error message "Unable to open directory"

Catch exception:

Print error message

**Permission\_operations.cpp**

Function changePermissions(filePath, mode):

Try:

Convert mode to appropriate format (if necessary)

Change permissions of filePath to mode

If operation is successful:

Print "Permissions changed successfully"

Else:

Print error message "Failed to change permissions"

Catch exception:

Print error message