

Description: File Transfer is a project that enables users to transfer files between different computers or devices over a network using the Java programming language for the backend logic and JavaFX for the user interface (UI). This project combines both the power of Java for networking and JavaFX for creating a user-friendly interface.

Class Name: App

Description: App is the primary class for JavaFX application, responsible for setting up and managing the user interface, handling user interactions, and facilitating file transfers. The application's primary window is created and managed within this class.

Attributes:

- pStage: A reference to the primary stage of the application.
- progressBar2: A progress bar used to display the progress of file transfers.
- Text, progressBar, storeDirFile: These are class-level attributes used for tracking progress and storing directory information during file transfer.

Methods:

- start() : This method is called when the application is started. It is responsible for setting up the main window and other components of the application.
- getIpAddress() : This method displays a separate dialog window to input an IP address and returns the entered IP address as a 'String'.
- aboutUs() : This method displays a dialog box with information about the project members.
- chooseDirectory() : Opens a directory chooser dialog to select a directory where received files will be saved.
- popup(String msg) : Displays a pop-up window with a specified message, used for showing warning messages or notifications to the user.
- showWebsite() : Opens a web browser to navigate to a specific website (e.g., "https://www.core2web.in") when the "Know More!!" button is clicked.
- selectFile() : Opens a file chooser dialog to select a file for sending.
- sendFileAction() : Handles the action when the "Send File" button is clicked. It obtains the IP address, selects a file, and initiates the file sending process.
- receiveFileAction() : Handles the action when the "Receive File" button is clicked. It opens a directory chooser and shows a waiting window for file reception.
- showSendingProgress(String fileName) : Displays a window showing the progress of file sending, including the file name and a progress bar.

- *sendFile(File fileToSend, String ipAddress)* : Implements the logic for sending a file to a specified IP address. It establishes a connection, sends file metadata, and transfers the file data.
- *showWaitingWindow(File file)* : Displays a waiting window for receiving files, showing the user's IP address and a progress bar.

Test Procedure:

To test the above code, you can follow the steps below:

1. Create a new Java project in your preferred development environment.
2. Set up the JavaFX environment in your project.
3. Copy the provided code into your main Java class file.
4. Make sure you have the necessary JavaFX libraries and dependencies configured in your project.
5. Run the application.

Here is a sample test procedure:

1. Launch the application.
2. Click the "Send File" button, select a file, and provide a valid IP address. Verify that the file is sent correctly, and the progress bar updates during the transfer.
3. Click the "Receive File" button, select a directory, and wait for a file to be sent from another instance of the application. Verify that the file is received and saved in the selected directory, and the progress bar updates during the transfer.

During the test, make sure the IP-Address Entered is Valid.

Note: Ensure that you have JavaFX properly configured in your development environment, as the provided code relies on JavaFX components and features.