

**COMPUTER NETWORKS  
PROJECT REPORT**

Group Messenger Using UDP and FTP

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Section-A

* Objective:

Our objective is to create such an application which can be used as quick chat and to transfer file using unified datagram protocol and file transfer protocol using socket programming.

* Platform used:

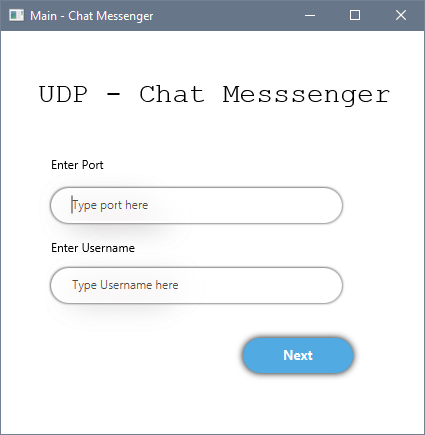
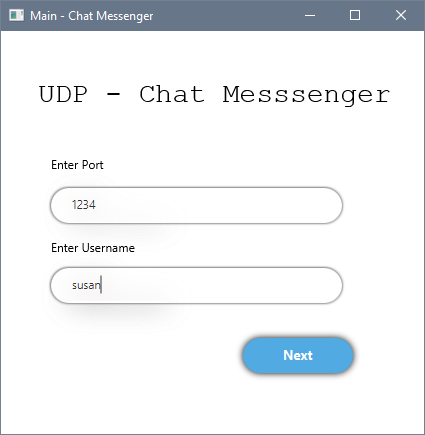
NetBeans (JAVA) with the concept of socket programming (Mutli cast sockets) and Multi-threading is used for development.

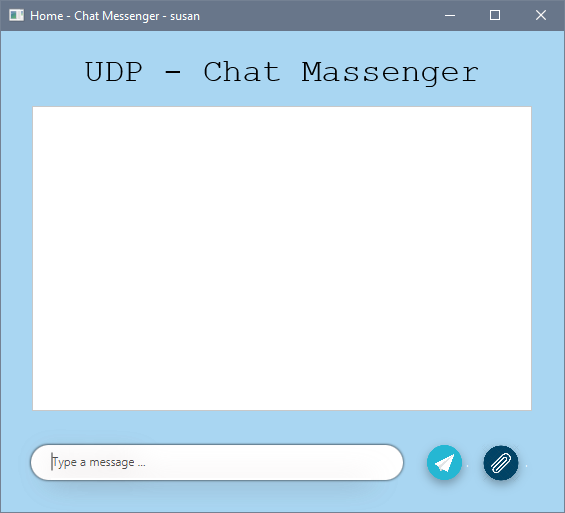
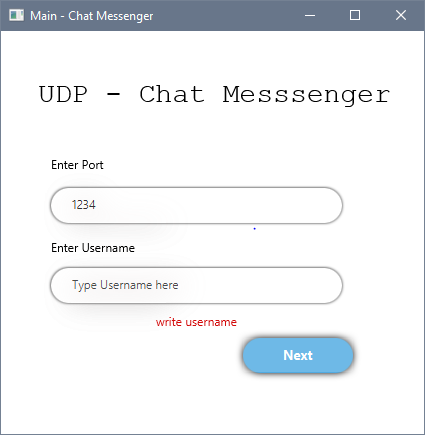
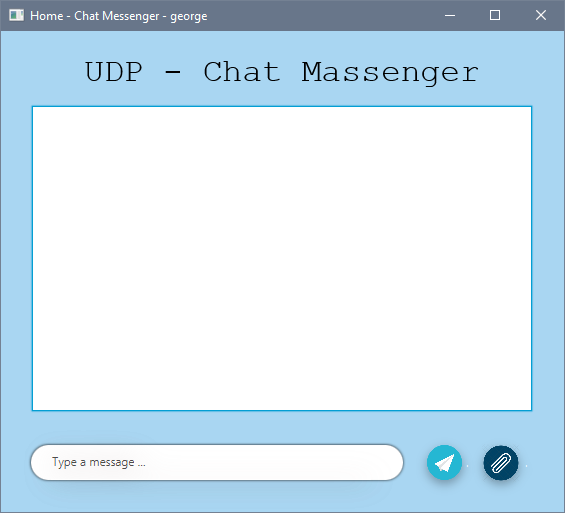
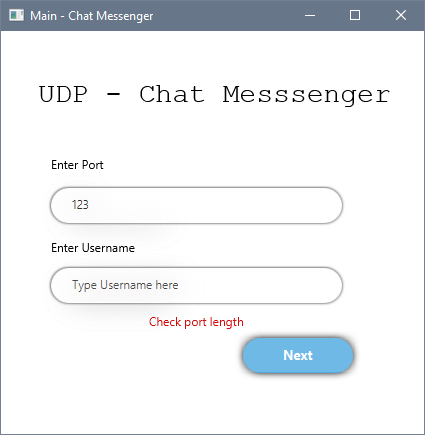
* Why used:

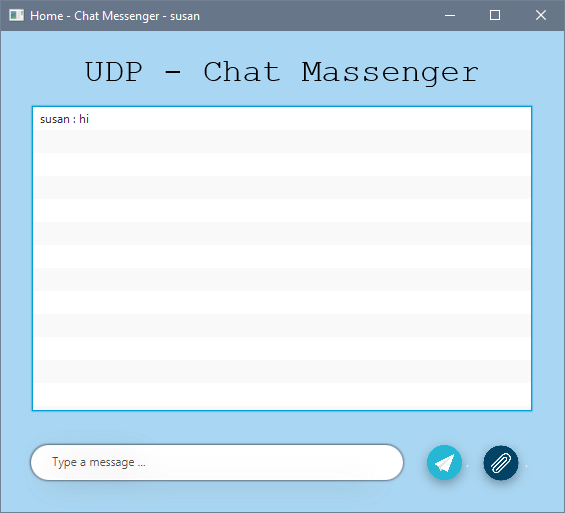
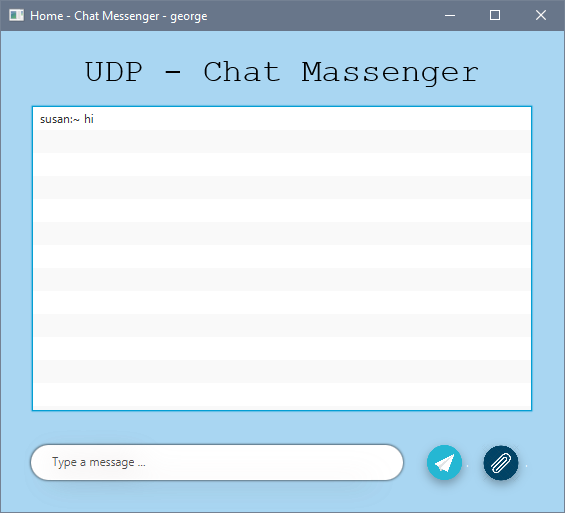
To practically apply the theoretical concepts taught in the course.

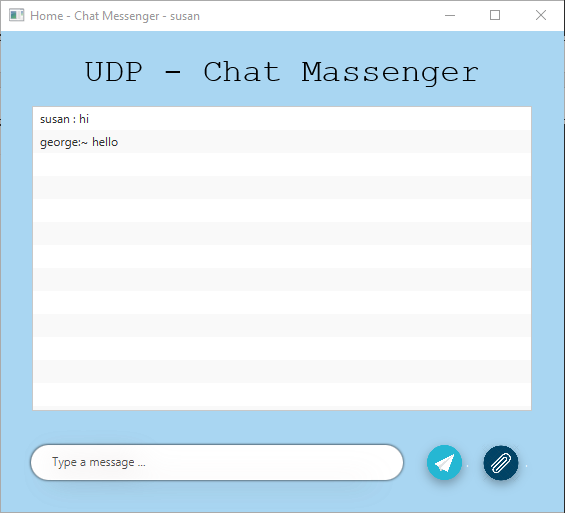
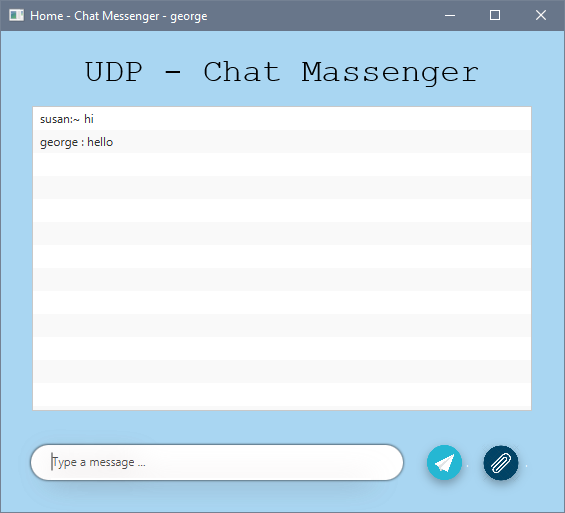
* Functionalities:

This app can be used as a platform for multiple clients where they can chat to each other using single group, and multiple groups can be created for multiple clients and other clients can also join any group using the 4-digit group code for the group.

* Implementations:
  + First, user enter the group code (port number) to join the specific chat
  + User then enters its username to join the chat
  + The application then checks if the group code is of correct length (4), else the respective exception will be thrown
  + The application checks if username is given, else the respective exception is thrown
  + If the user correctly enters the group code as well as the username then the user is directed to the chat main screen UI
  + Here, multiple user can send messages to each other over UDP protocol
  + They can also send file to each user who is the member of this chat.







* Limitations and Restrictions:
* In FTP, only ‘.txt’ file can be transferred
* The receiving buffer is of 2000 bytes
* Group number can only be 4-digit string