**Project P5 - Project Description**

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As stated in the project update, the group has implemented an app that gives the user the option to send a file via WiFi-direct or Bluetooth connection. We have a file set up that will be our test document for transferring on both the WiFi-direct and Bluetooth connections. The app sets up a connection between two devises utilizing the selected communication format. Once this connection has been established, both devises begin performing the Diffie-Hellman algorithm by creating public keys that they send to one another and private keys that they use to generate the secret shared key. After both sides have calculated the secret shared key, they can send encrypted messages across the connection. When they receive a message, they know it came from the other party and can easily decrypt it to read the message. Aside from establishing the connection between phones and sending messages between the phones, the two connection types use the same code to perform Diffie-Hellman and encrypt/decrypt the messages.

Screenshots of what our application looks like and a demo have been included below with descriptions.