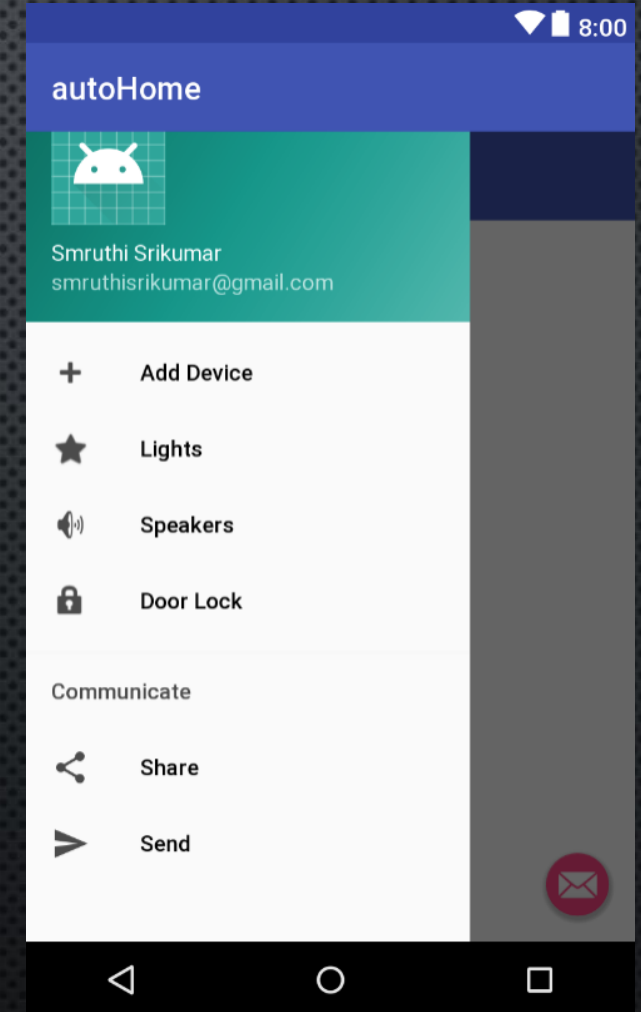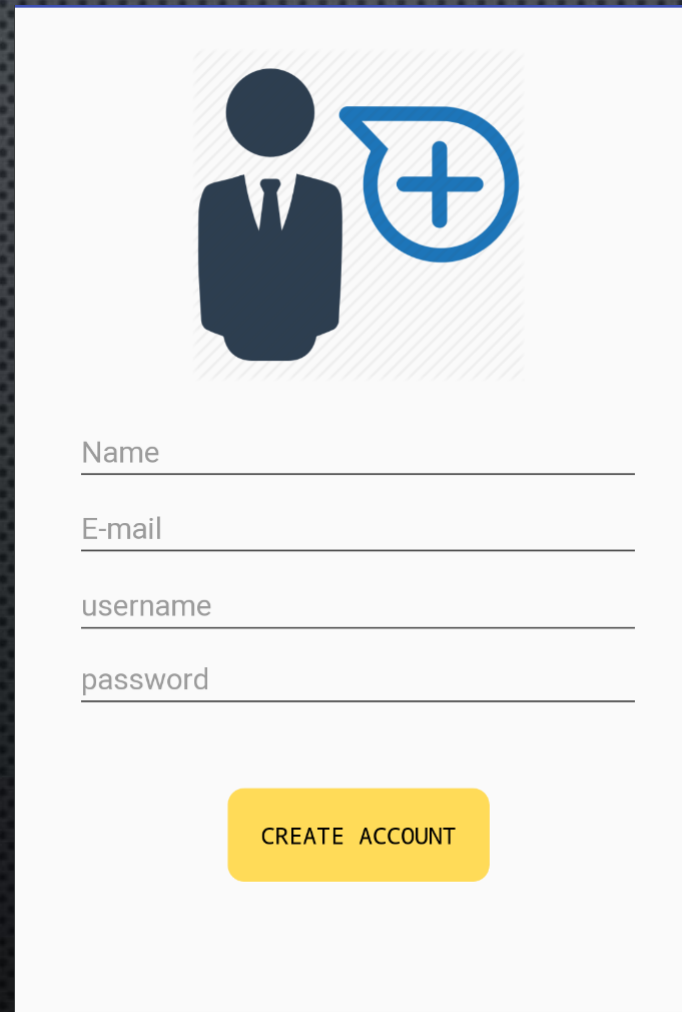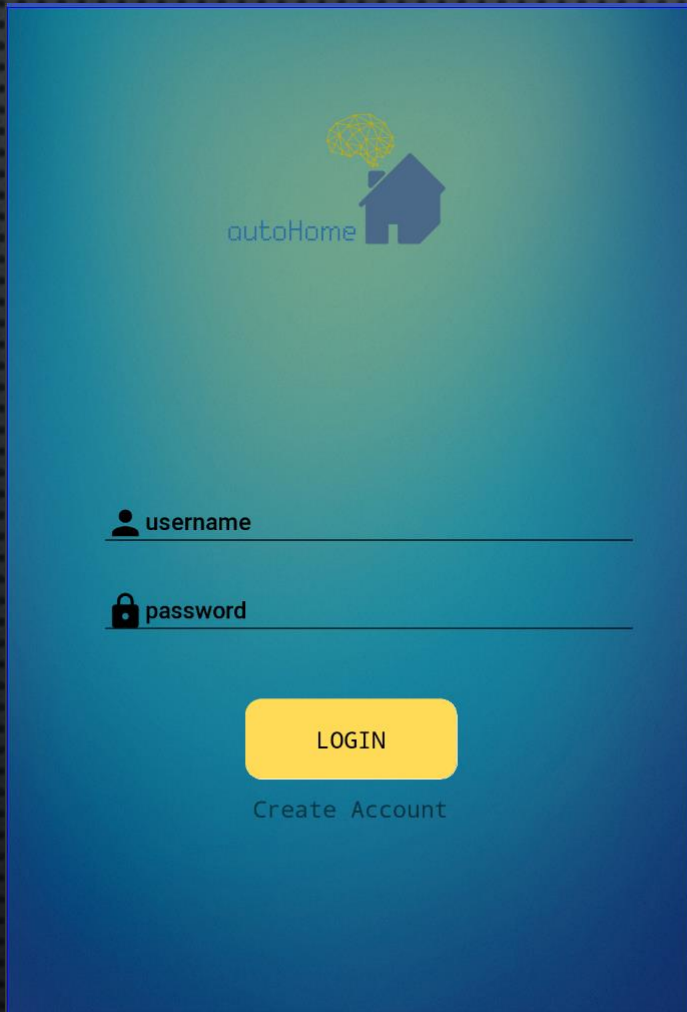# HOME AUTOMATION

Group 15:

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WHAT IS HOME AUTOMATION AND WHO IS IT FOR?

- Monitor lights at home via autohome.host website

- Turn lights on/off

- Change color of lights

- Check door/lock status

- Users who wish to save power/money

- Users who wish to have access to their lights from any remote location

MOBILE APPLICATION MOCKUPS

HOW DOES IT WORK?

- Light Control

- Done via Arduino Uno R3

- Door sensor works via Arduino Hall Effect Sensor

- Arduino communicates via Wi-Fi shield esp8266 12e

  - Allows Arduino to connect to a Wi-Fi network and make simple TCP/IP connections

HOW DOES IT WORK? (CONTINUED)

- WEBSITE / DATABASE

- HOSTED THROUGH A SERVER VIA RASPBERRY PI

- USER DATA IS SAVED TO A SECURE DATABASE WHERE LOGIN CREDENTIALS ARE STORED

- WEBSITE COMMUNICATES WITH RASPBERRY PI VIA WI-FI CHIP THAT IS INSTALLED IN THE ARDUINO

PLAN OF WORK

- Complete mobile application development (+ link to database)
- Complete web client development (finish login, register, memberpages)
- Develop Memberpages services (main application to monitor/control devices)
- Optimize database Structure (link user account information, login attempts, ip addresses, recovery questions, etc.)