# Design Overview

- The proposed application helps in finding a new student his/her friends or visitors as well as the building inside the University of Texas at Arlington.
- GPS provides the latitude and longitude of the user's position and helps in finding the bearing from current position to the destination i.e., the other person or the building.
- The application uses the bearing, compass reading and coordinates from GPS to find the direction and distance to the destination.

# System Evolution Description

- The proposed application is efficient in finding the different building in the university. Furthermore, the coordinates will be used to find a friend.
- In future prospect, it can go global and also the accuracy of the GPS data can be enhanced inside the building.

# Current Process

- In the first iteration we are able to authenticate the users from their Face book credentials.
- The data from the sensors like Global Positioning System, accelerometer and compass can be retrieved.
- Also the bearing is retrieved through in-built functions provided by the location library.
- Using this information, an arrow is used to point towards the same.
- As an example of this feature, readings are taken from ERB and the app is tested from NH.

# Proposed Process

- The further implementation includes covering the buildings belonging to different categories.
- Also, "Find a friend" part of this application will be implemented.

# Dependencies

- Main dependencies regarding the design effort.

**Dependency Action includes:**

1. GPS (Global Positioning System)
2. COMPASS
3 ACCERALOMETER

# Assumptions

| S.NO | Assumption | Reason |
|------|------------|--------|
| 1 | GPS is available on all outdoors | GPS accuracy for indoors is least |
| 2 | All phones used to run this application have all the required hardware sensors. | Without Sensor data, application provides the wrong data. |