Introduction-

Now a days Augmented Reality is in action and by using this technology we are going to make a indoor navigation for some blocks or corridors of the campus that will guide an individual in finding classes and blocks who are new in the campus or visiting first time. Main aim to use this technology to develop a prototype mobile application for making navigation and positioning easier using ARCore and integrating it with Mapbox by making custom maps and developing the app using Unity ,Basically we are taking the base of a location based game made using Unity tool.

Motivation behind this project is to make navigation easier for freshers and new visitors because its hard to navigate inside campus premises as a new comer and this app is also going to help the persons with disability ,by using voice navigation it will help visually impaired people and with multilingual feature its going to help people with different languages.

We will be using ARcore technology and MarkerLess Augmeted reality for navigation and Mapbox SDK for combining locationbased navigation with unity and Also using the custom map for our that we will create using mapbox only.

Literature Review-

Map box is the maker of or provide important contribution to some open source mapping libraries and applications The Maps SDK for unity is a set of the main research problems that we concerned about are tools for building unity applications from real time map data. It provides unity developers to deal with the Map box web mentioned below. services APIs such as Maps, Geocoding & Direction APIs and GPS do not support in indoor navigation. game objects via a c# base API and graphical user interface.

And unity gives us opportunity to develop mobile apps because it is a cross platform development tool It offers both 2D and 3D, and the engine offers a primary scripting API in C#. In the Last ARcore is developed by Google which we will be adding as plugin and downloading the prefabs for he environment. Google offers ARCore foundation for unity and ARCore SDK can be directly integrated into unity and android or web application .

Methodology-

This app will show and Augmented Arrow towards the chosen direction and also the distance and to reach the destination and mullitlingual feature to see the name of the destination. User will be able to choose the destination and it will already be added to the interface. We can also add an GEO TIFF image to the mapbox tileset for further more customisation of the map and to make our scene in unity we will be integrating the ARcore sdk and mapbox sdk for unity .

References-

Jayananda, P. K. V., Seneviratne, D. H. D., Abeygunawardhana, P., Dodampege, L. N., & Lakshani, A. M. B. (2018, December). Augmented reality based smart supermarket system with indoor navigation using beacon technology (easy shopping android mobile app). In *2018 IEEE International Conference on Information and Automation for Sustainability (ICIAfS)* (pp. 1-6). IEEE.