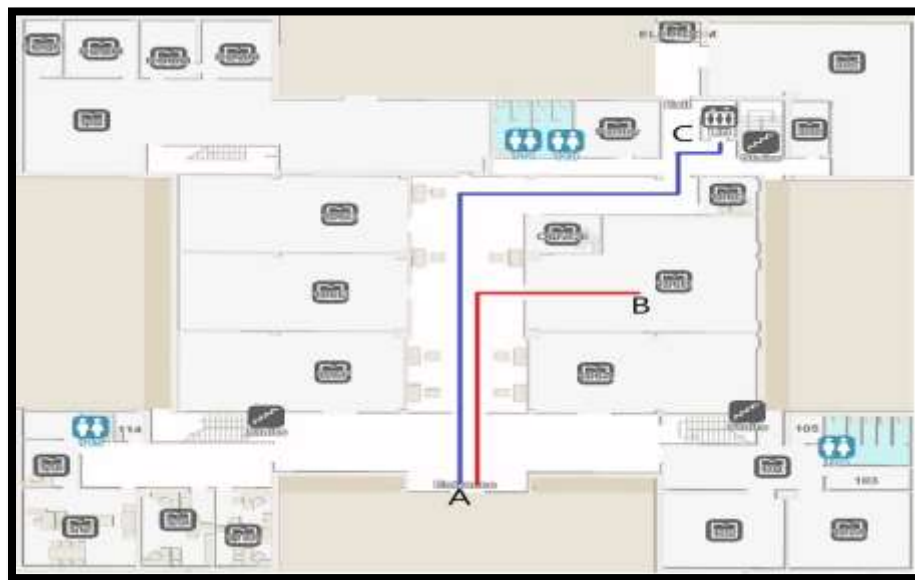**Figure 6:** System Overview

Environment. The evaluation experiments were carried out on the ground floor of the 'B09' building of Qatar University.

Figure 2 illustrates the floor plan of the building 'B09' (ground floor). Ten people were involved in the testing including 8 females and 2 males to evaluate the navigation systems in real-time. The blindfolded participants were asked to walk from the entrance door of the B09 building to two specific points of interest in the B09 building. Each participant has to walk from point A to B (Red line in the floor plan, distance = 30 meters) and A to C (Blue line in the floor plan, distance = 47 meters) using the three navigation systems separately.

A service to perform scene recognition in the real-time environment has been created to analyze the performance of the trained deep learning model. The service is responsible for receiving query images sent by users and classifying them to predict their location. The deep learning model achieved 96.9 % success rate.

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Figure 2: Floor Plan for