3. OBJECTIVE OF PRESENT WORK

1. Conventional micro strip antennas in general have a conducting patch printed on a grounded microwave substrate, and have the attractive features of low profile, light weight, easy fabrication, and conformability to mounting hosts. However, micro strip antennas inherently have a narrow bandwidth, and bandwidth enhancement is usually demanded for practical applications. In the proposed work the wideband micro strip antennas will be developed to fulfill the increasing need of wireless communication systems. The main emphasis will be on the development of **compact and cost effective wideband micro strip antennas**.

2. Using transmission line model, a rectangular micro strip patch antenna will be designed by selecting its essential parameters-
   - frequency of operation- resonant frequency of the antenna must be selected appropriately.
   - dielectric constant of the substrate- A substrate with a high dielectric constant reduces the dimensions of the antenna.
   - height of dielectric substrate.

3. Antennas will be designed using various geometries.

4. The designed antennas will be analyzed using the commercially available software Ansoft HFSS (High Frequency Structure Simulator). The antennas will be optimized for the desired characteristics like wide band, VSWR, directivity, antenna gain, return loss, efficiency etc.

5. Later on different techniques for obtaining wideband like using EBG structures making fractals, using shorting pins etc will be done to obtain high gain and broadband characteristics.