**Design of a Microstrip single element and three different array antennas are presented in this paper. Two different array configurations are designed and simulated for 4 element arrays, along with a 2 element array. The design is done for Ku Band Applications at 16 GHz. The substrate height is 0.254 mm and the dielectric constant is 2.2 of RT/duroid 5880 (tm). Simulation is done in HFSS and the results are exhibited, which show increase in directivity and gain with the increase in patch elements.**