***Abstract- To design rectangular microstrip antenna whose frequency lies between 1.5GHz -3GHz is designed using Fractal technique. The material required will be glass epoxy sheet (FR4) having dielectric constant 4.4 and SMA connector. This design is a two stage iteration, designed on FR4 substrate of thickness h= 0.78mm.The Dimensions are length(L)=38mm and width(W)=38.4mm. The simulation with the given parameters using HFSS simulation is performed, analyzed and compared with hardware tested results. The testing will be done with the help of VNA. Microstrip patch antennas has advantage of small size and economical with easy fabrication. One of new designs is Fractal antenna. Fractal shapes are recursive geometries which are similar to each other . They provide high gain, multiband, wideband results and provide miniaturisation. Plots obtained are return loss plots for determining gain, bandwidth and resonant frequency etc***