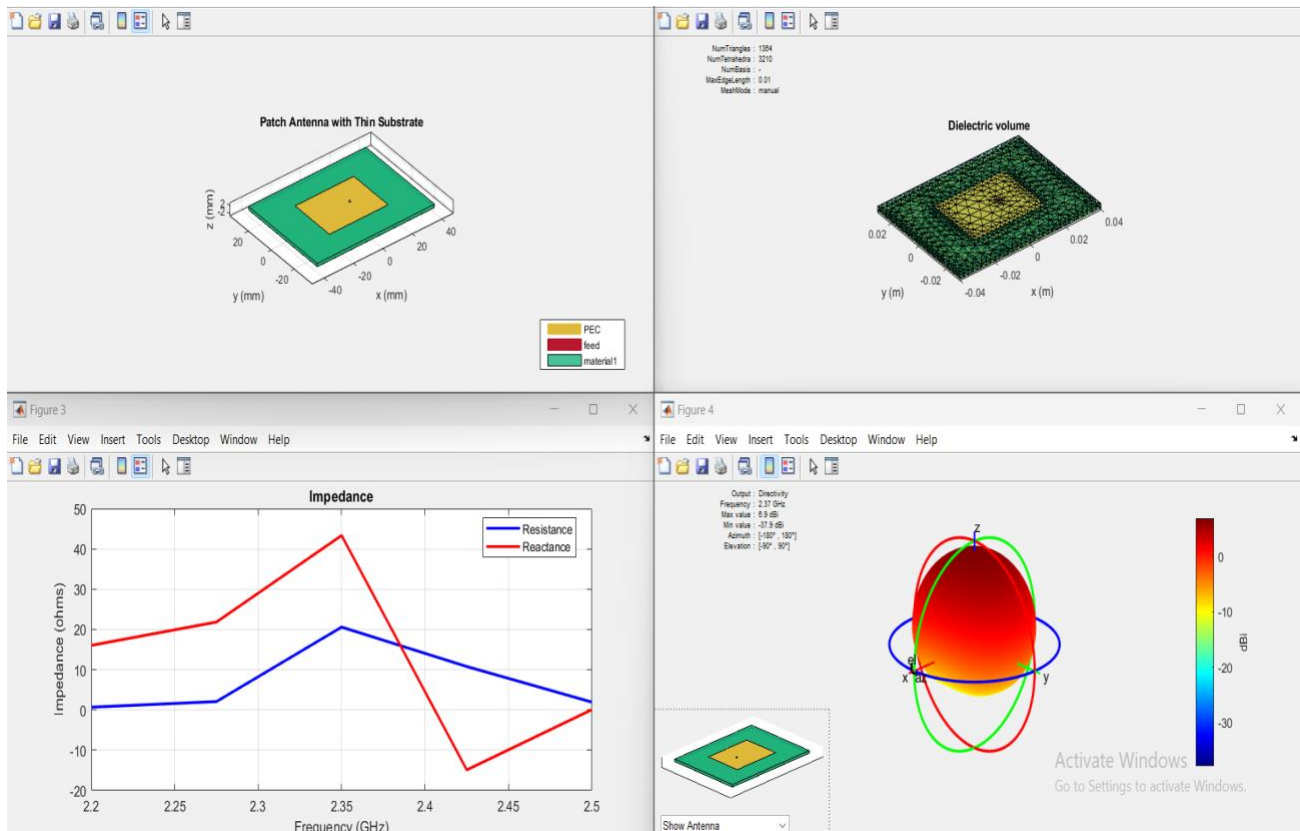


Prepared by: Sadia Tabassum
GitHub: <https://github.com/SadiaPikachu>

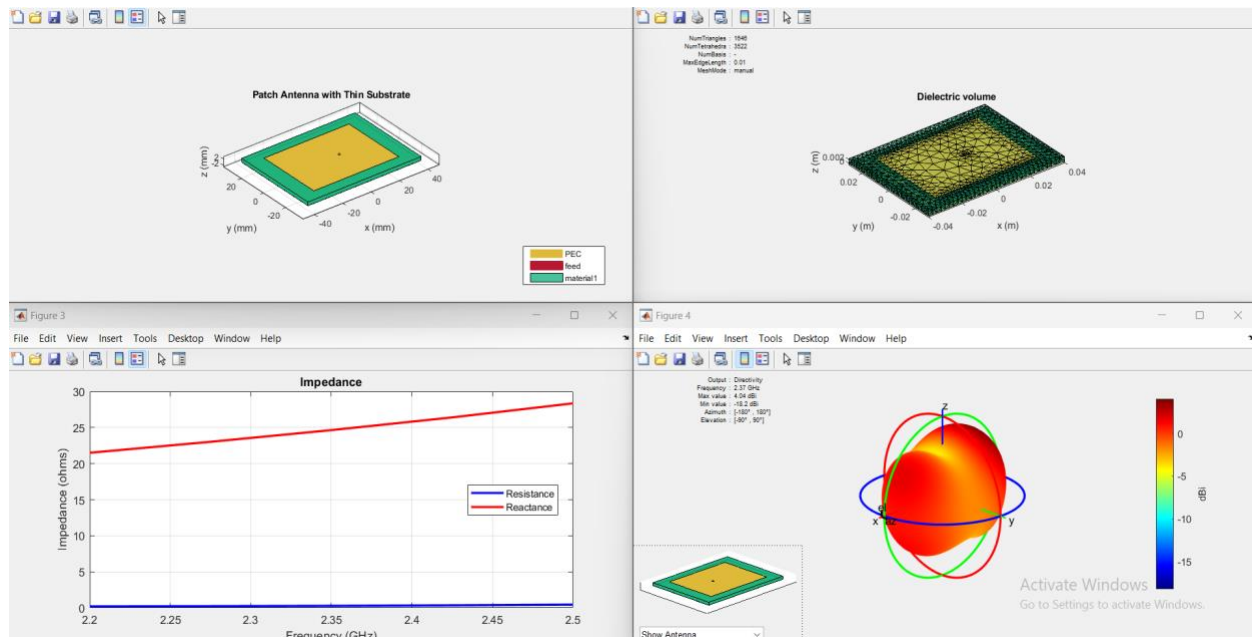
TASK A

Base code

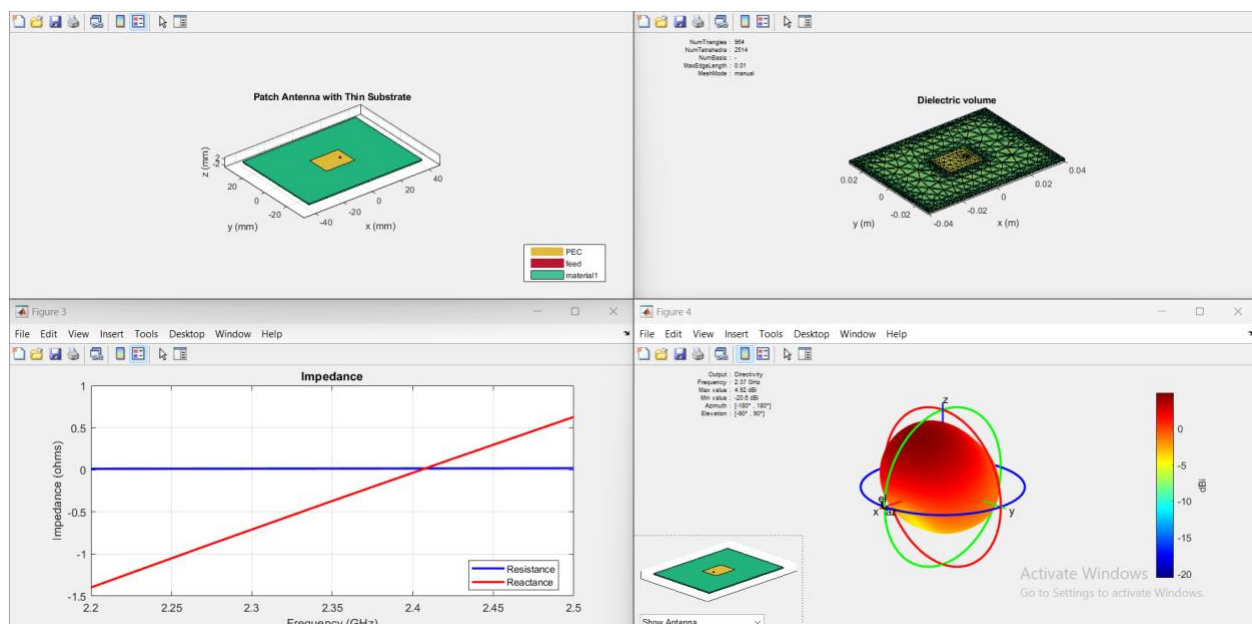


Task 1 (Increase and decrease the dimensions of the patch by 50%)

In case of increasing:

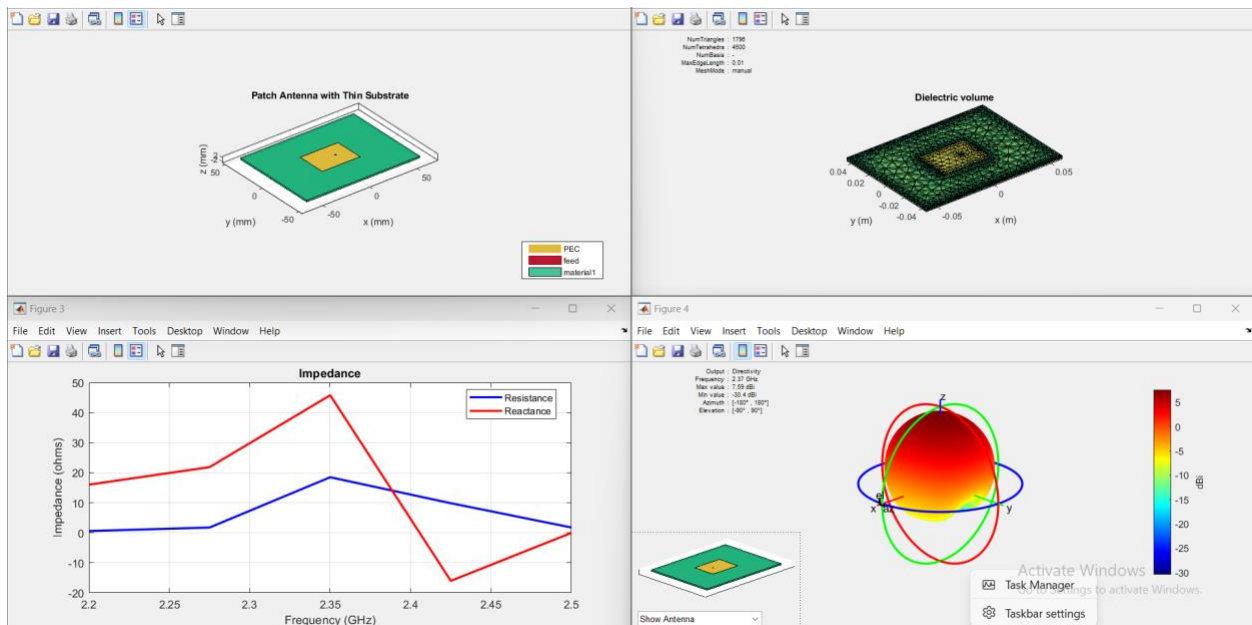


In case of decreasing:

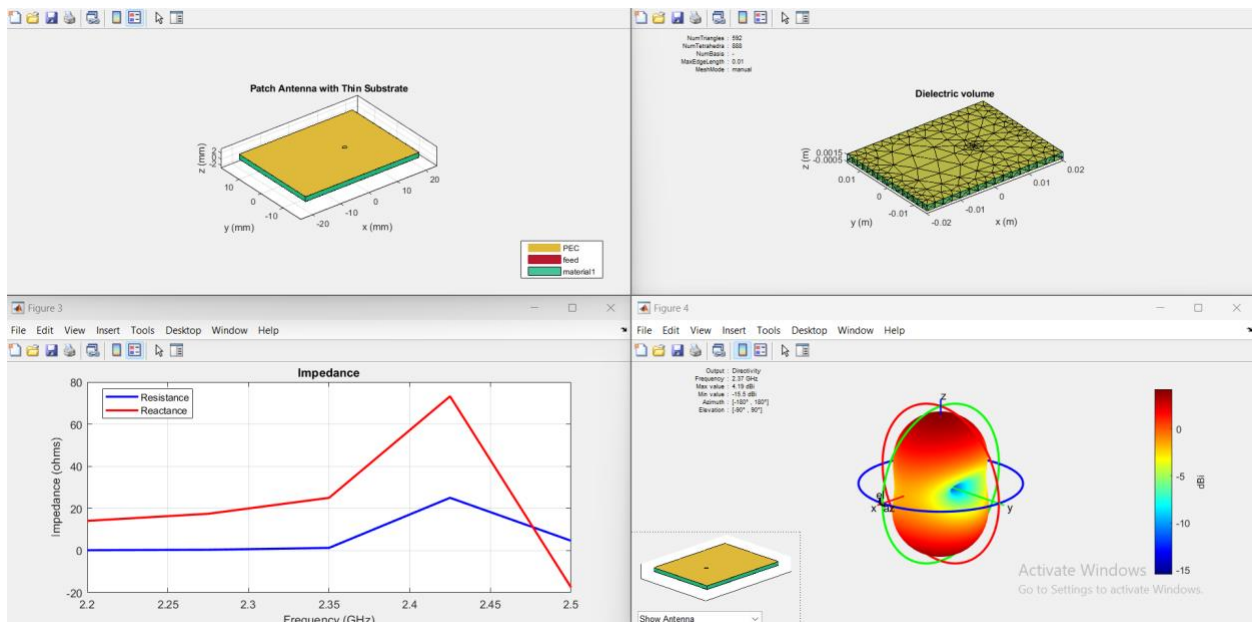


Task 2 (Increase and decrease the dimensions of the ground plane by 50%)

In case of increasing:

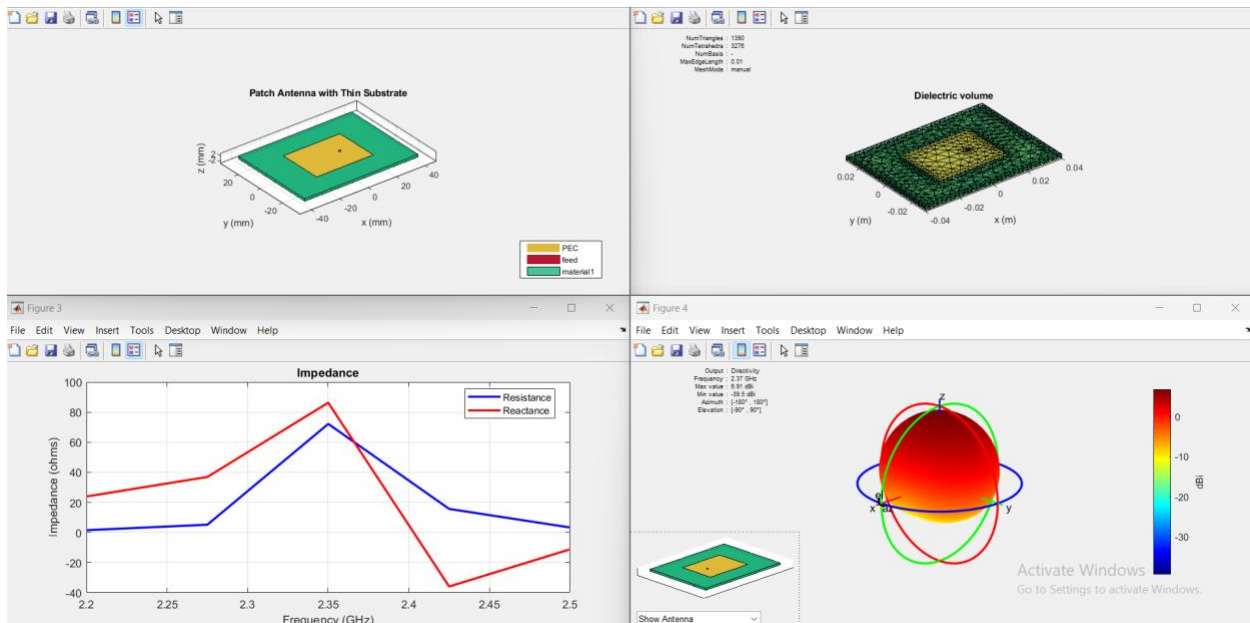


In case of decreasing:

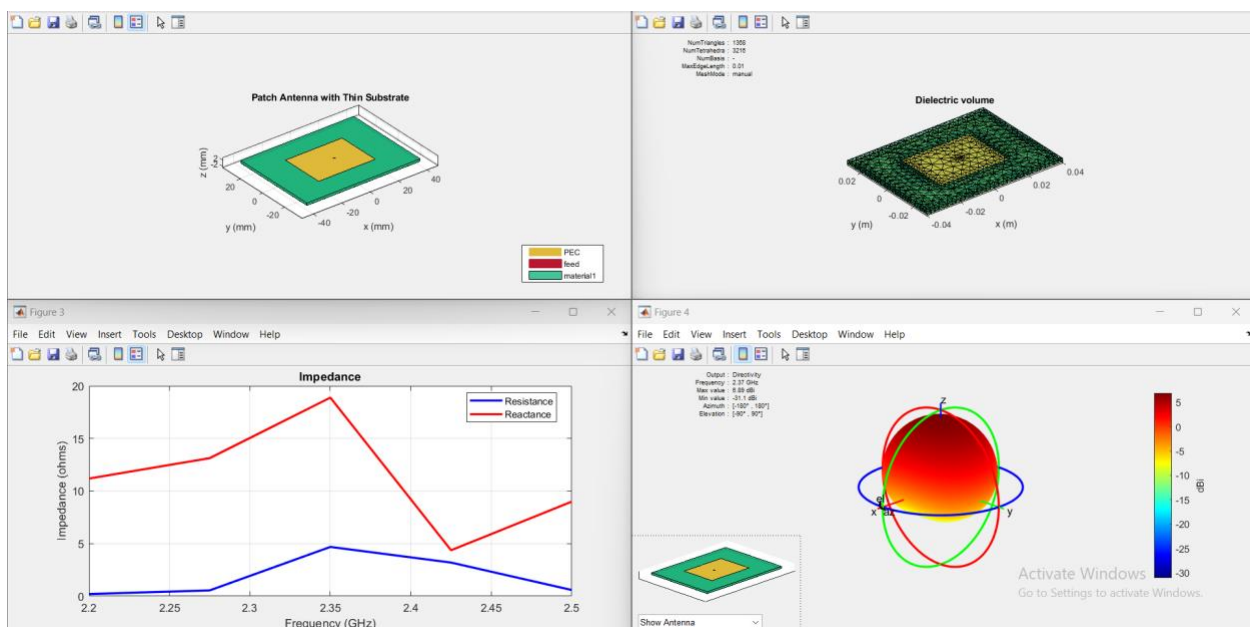


Task 3 (Move the feed offset position by 50% towards two different sides of the patch edge)

In case of increasing:

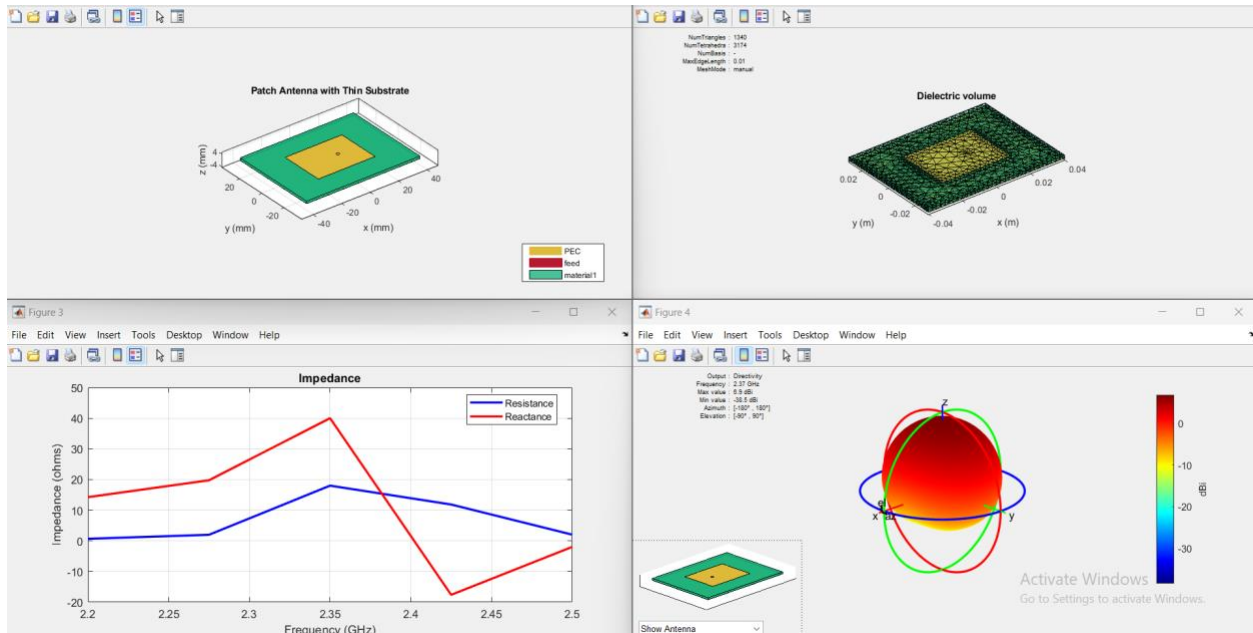


In case of decreasing:

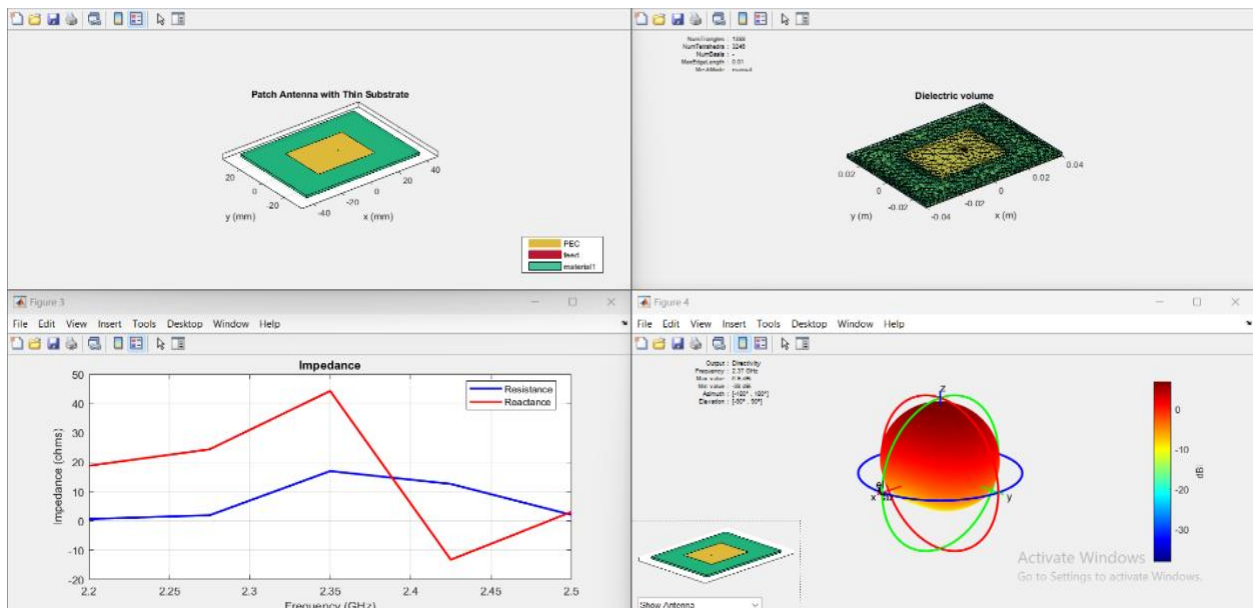


Task 4 (Increase and decrease the feed dimension by 50%)

In case of increasing:

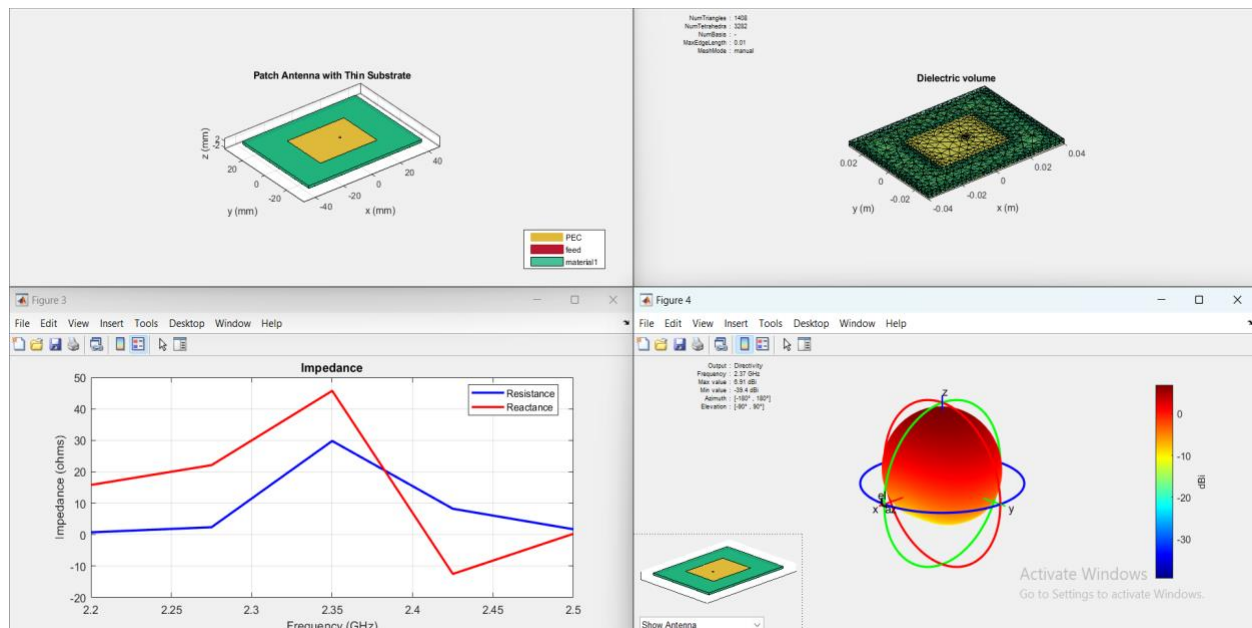


In case of decreasing:

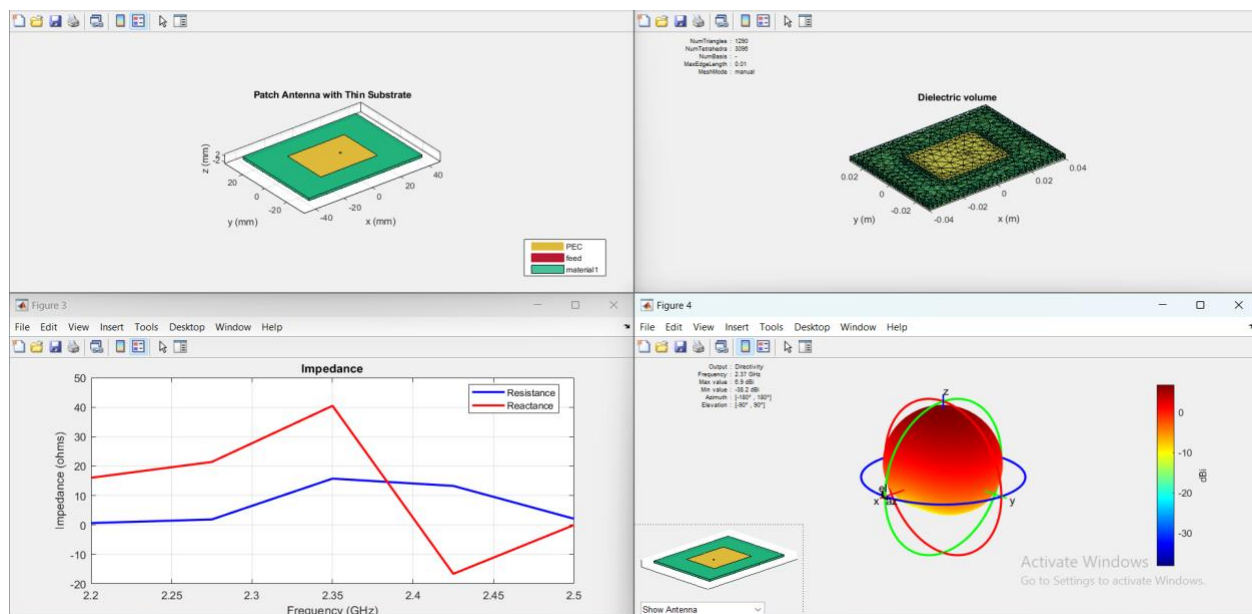


Task 5 (Change the provided feed via the model)

In the case of the hexagon model:

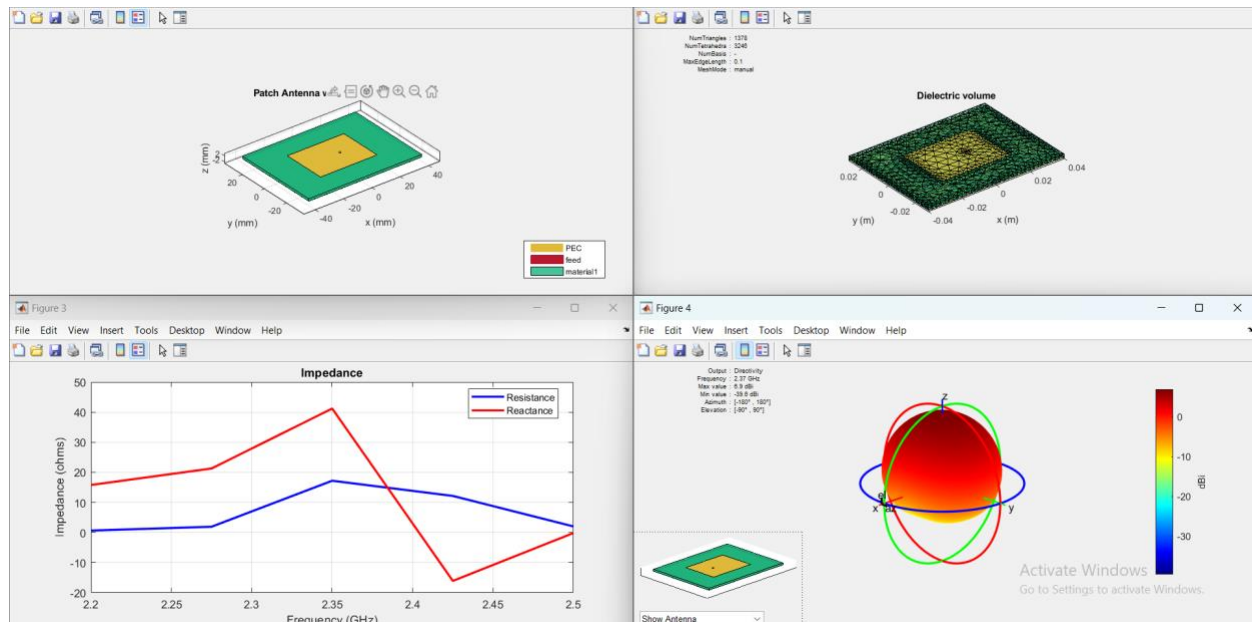


In the case of the strip model:

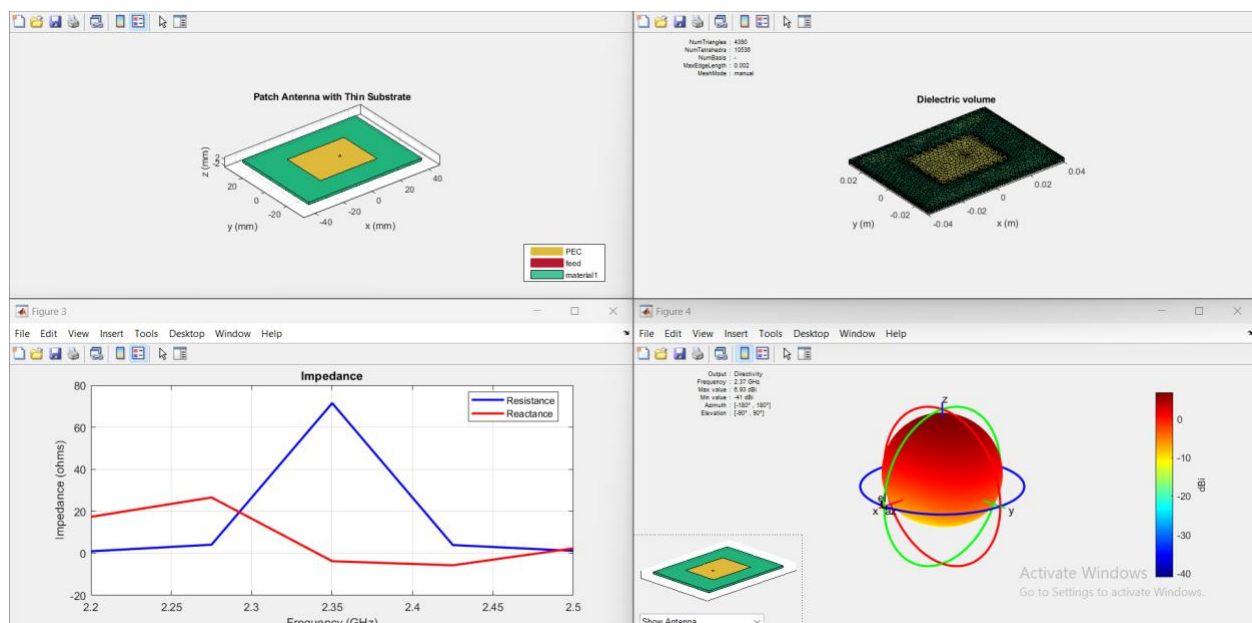


Task 6 (For meshing, increase and decrease MaxEdgeLength by 10 times)

In case of increasing:

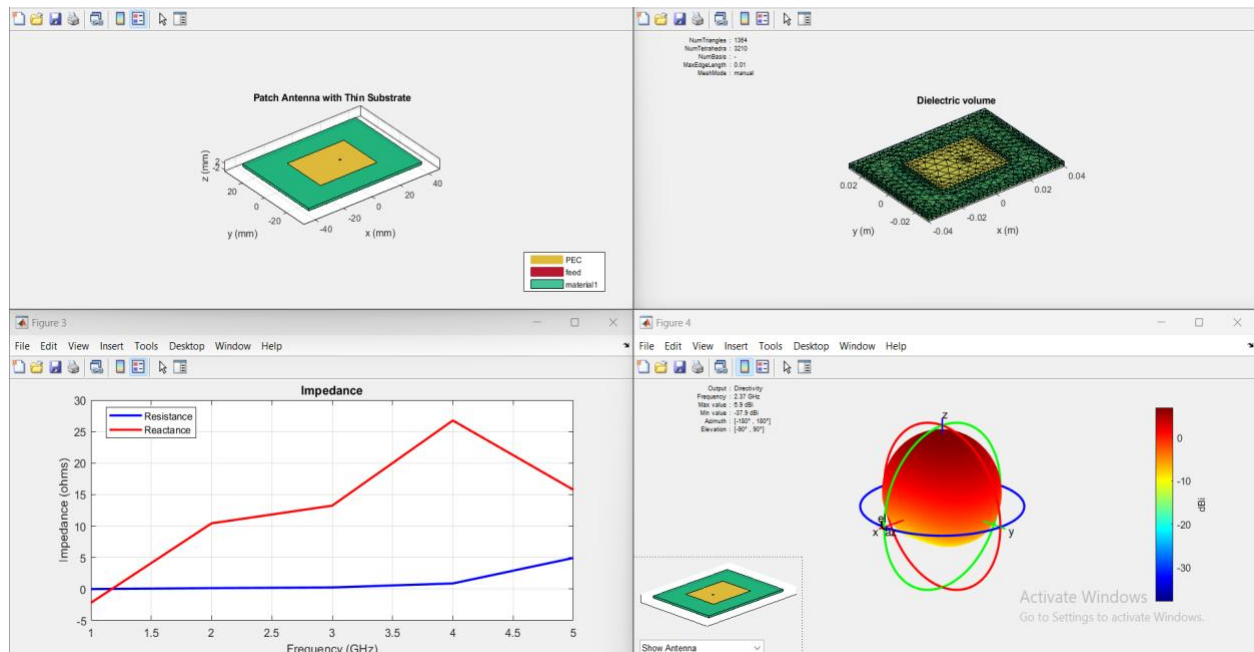


In case of decreasing:

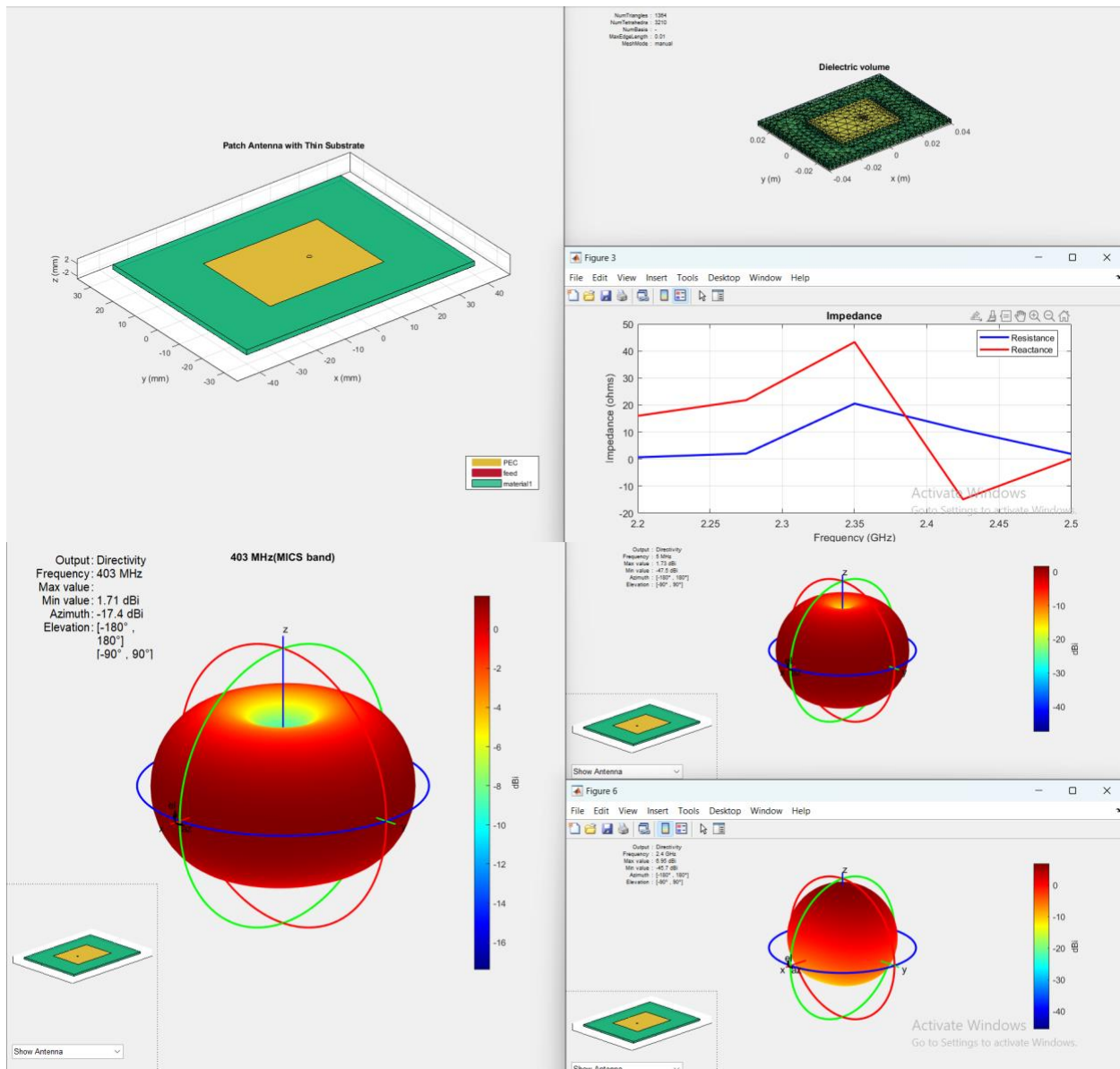


Task 7 (For input impedance plotting, perform the operation for an extended frequency range, such as 1-5 GHz)

In case of 1-5 GHz:

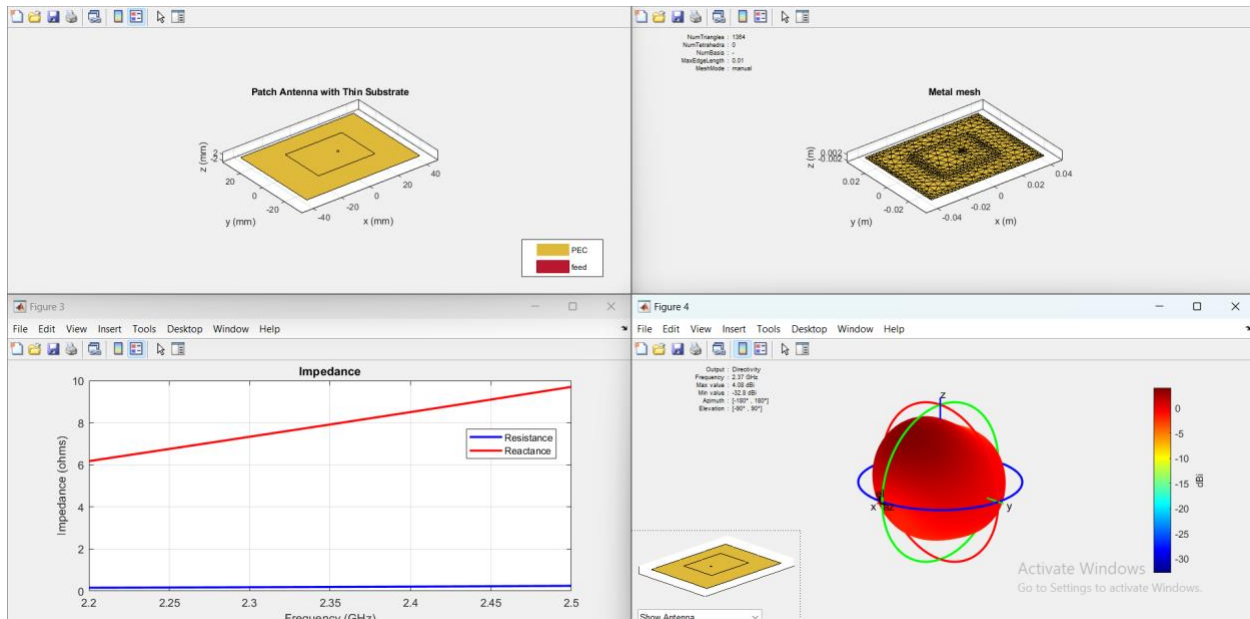


Task 8 (For pattern plotting, try frequency of 403 MHz (MICS band), 5MHz, and 2.4 GHz (ISM band))

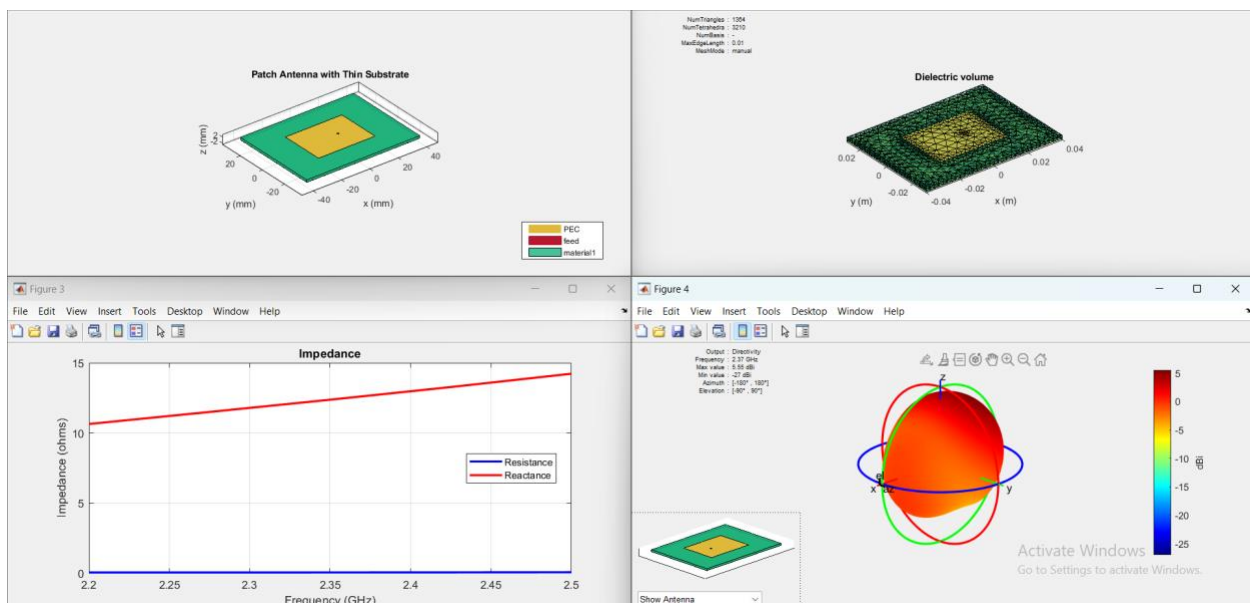


Task 9 (Try different values of the Dielectric constant of substrate material (1,5 and 10))

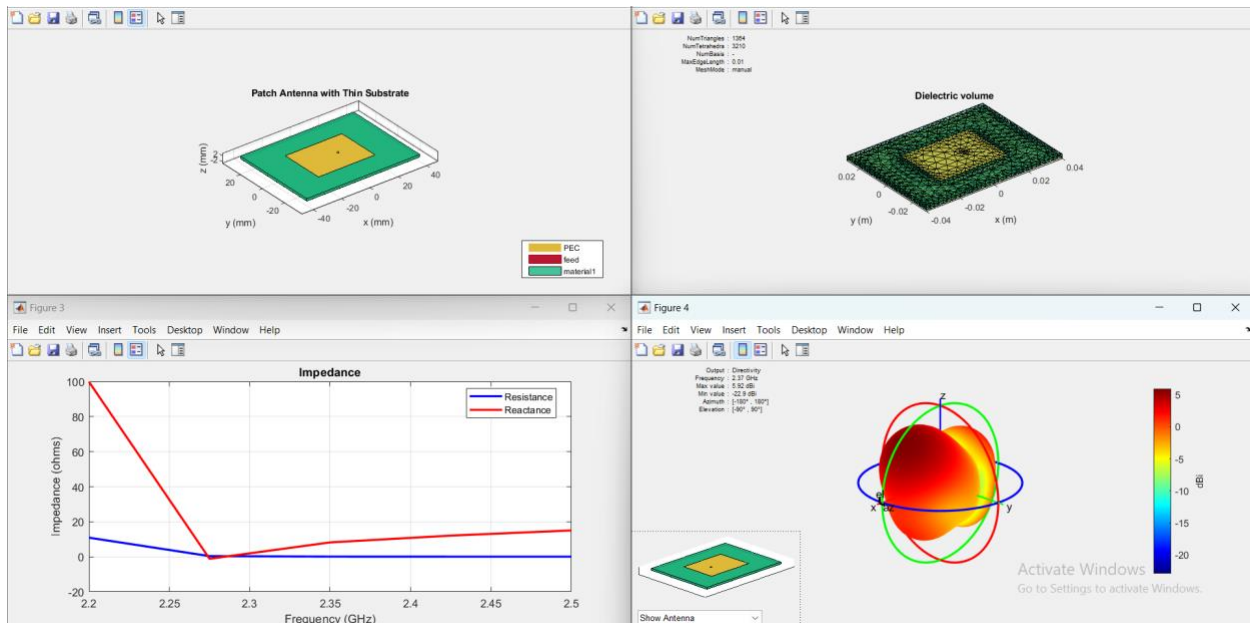
In case Dielectric constant = 1:



In case Dielectric constant = 5:



In case Dielectric constant = 10:



Task 10 (Perform the whole analysis for base case only with 7,14, and 21 frequency points)

