- **Develop a MATLAB code to generate simple 1D, 2D, and 3D meshes using structured grids or basic meshing algorithms.**
- **Implement mesh visualization to verify the generated mesh's correctness.**

My code for meshing in MATLAB:

```
Nodesfor1D = 10;
x1D = linspace(0, 1, Nodesfor1D);


Nodesfor2D = 5;
[x2D, y2D] = meshgrid(linspace(0, 1, Nodesfor2D), linspace(0, 1, Nodesfor2D));

Nodesfor3D = 3;
[x3D, y3D, z3D] = meshgrid(linspace(0, 1, Nodesfor3D), linspace(0, 1, Nodesfor3D), linspace(0, 1, Nodesfor3D));

figure;
title('Meshing ')

subplot(1, 3, 1);
plot(x1D, zeros(size(x1D)), 'R o-');
title('1D Meshing on MATLAB');
xlabel('X');
ylabel('Y');
grid on;

subplot(1, 3, 2);
plot(x2D(:), y2D(:), 'B o');
title('2D Meshing on MATLAB');
xlabel('X');
ylabel('Y');
grid on;

subplot(1, 3, 3);
scatter3(x3D(:), y3D(:), z3D(:), 'G o');
title('3D Meshing on MATLAB');
xlabel('X');
ylabel('Y');
zlabel('Z');
grid on;
```

- **Output after Implementation:**