```
function MatData = Initialize_MatData(E0, s_y0, b, R0, cR1, cR2, a1, a2, L, A)
  % Inputs
    % E0,; Modulus of Elasticity
    % s_y0; Yeild Stress
    % b, R0, cR1, cR2, a1, a2, ;Menegotto-Pinto Model parameters
    % L; length
    % A; Area
  % Returns the structural parameter of equivalent Truss
    % MatData; Structure with all of the above information
   MatData.E = E0;
   MatData.fy = s_y0;
   MatData.b = b;
   MatData.R0 = R0;
   MatData.cR1 = cR1;
   MatData.cR2 = cR2;
   MatData.a1 = a1;
   MatData.a2 = a2;
   MatData.L = L;
   MatData.A = A;
   MatData.ey = MatData.fy/MatData.E;
end
```