```matlab
%
%
% Project Title: Simulated Magnetism (SM) based Path Optimization for
 Target seeking multi robots
%
% Developer: Shripad V Deshpande
%
% Contact Info: deshpande.shripad2@gmail.com
%
%

function model=CreateModel()

    MaxNrobots=1;    % Max no of robots
    MaxNtargets=1;   % Max no pf targets
    MaxNobstacles=40; % Max no. of obstacles

    %rx=randi([25,75],MaxNrobots,1); % x coordinates of robots
    %ry=randi([10,30],MaxNrobots,1); % y coordinates of robots
    rx=[65];ry=[19];
    %tx=randi([10,90],MaxNtargets,1); % x coordinates of targets
    %ty=randi([60,90],MaxNtargets,1); % y coordinates of targets
    tx=[40];ty=[90];

    ox=randi([20,80],MaxNobstacles,1); % x coordinates of obstacles
    oy=randi([30,70],MaxNobstacles,1); % y coordinates of obstacles
    %ox=[50 60 45 ];oy=[50 60 80];

    coa=zeros(MaxNrobots,MaxNtargets);   % Coefficientof attraction
    cor=zeros(MaxNrobots,MaxNobstacles); % Coefficient of repulsion

    coa(1,1)=10; %R1 seeks T3 with priority 10
    for j=1:MaxNobstacles
        cor(1,j)=0.05;
    end
%   coa(2,5)=7;  %R2 seeks T5 with priority 7
%   coa(3,8)=12; %R3 seeks T8 with priority 12
%   coa(4,9)= 9; %R4 seeks T9 with priority 9

%   empty_path.x=[];
%   empty.path.y=[];
%   empty.path.pathCost=0;

%   path=repmat(empty_path,MaxNrobots,1);

%   for i=1:MaxNrobots
%       path(i).x(1)=rx(1);
%       path(i).y(1)=ry(1);
%   end
    model.r.x=rx;
    model.r.y=ry;
    model.t.x=tx;
```

```matlab
        model.t.y=ty;
        model.o.x=ox;
        model.o.y=oy;
        model.coa=coa;
        model.cor=cor;
        model.path=path;

end
```

ans =

  struct with fields:

        r: [1×1 struct]
        t: [1×1 struct]
        o: [1×1 struct]
      coa: 10
      cor: [1×40 double]
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