Lab - 5 Assignment (Even ID Set)

Suppose there are 4 cars, A, B, C, and D. D is chased by A, C is chased by B, B is chased by D. C is moving independently parallel to the y-axis. Initial positions of A, B, C, and D are (10,0), (0,10), (10,10) and (0,0) . Velocities of A, B, C, and D are 3, 5, 7, and 2 ms^{-1}.

Now Simulate this Chase Problem for t=20 unit time. Print the x and y coordinate value of each vehicle at every time step. If the distance between any 2 vehicles is less than 5 m then a car will shoot its target [not destroy]. Print all the shootings and finally print the number of times each car got shot during the simulation.

Also, draw the graph showing the path of each car. Use plt.plot() function to do this.
[See the class lecture for a better explanation.]