Lab 5 (06.10.2016)

1) Create a set of 25 rules of all combination of {speed = very slow, slow, medium, fast, very fast} and {distance = very short, short, medium, long, very long}. Brake is reasonably specified by myself.

RULES		
IF *SPEED* IS	AND *DISTANCE* IS	THEN *BRAKE* IS
Very slow	Very small	Weak
Very slow	Small	Weak
Very slow	Medium	Very weak
Very slow	Long	Very weak
Very slow	Very long	Very weak
Slow	Very small	Medium
Slow	Small	Weak
Slow	Medium	Very weak
Slow	Long	Very weak
Slow	Very long	Very weak
Medium	Very small	Strong
Medium	Small	Medium
Medium	Medium	Medium
Medium	Long	Weak
Medium	Very long	Very weak
Fast	Very small	Strong
Fast	Small	Strong
Fast	Medium	Medium
Fast	Long	Medium
Fast	Very long	Weak
Very fast	Very small	Very strong
Very fast	Small	Very strong
Very fast	Medium	Strong
Very fast	Long	Medium
Very fast	Very long	Weak

2) Get de-fuzzified brake value for all 99 combinations of speed = 0, 2.5, 5, 7.5, 10, 12.5, 15, 17.5, 20 and distance = 0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000.

Speed	Distance	Brake
0	0	3
0	100	3
0	200	3
0	300	1,67
0	400	0,875
0	500	0,875
0	600	0,875
0	700	0,875
0	800	0,875
0	900	0,875
0	1000	0,875
2,5	0	3,1081081
2,5	100	3,1081081
2,5	200	3
2,5	300	1,67
2,5	400	0,875
2,5	500	0,875
2,5	600	0,875
2,5	700	0,875
2,5	800	0,875
2,5	900	0,875
2,5	1000	0,875
5	0	4,0625
5	100	4,0625
5	200	3
5	300	1,6666667
5	400	0,88
5	500	0,875
5	600	0,875
5	700	0,875
5	800	0,875
5	900	0,875
5	1000	0,875

Speed	Distance	Brake
7,5	0	5,15625
7,5	100	5,15625
7,5	200	3,40625
7,5	300	2,1071429
7,5	400	1,71
7,5	500	2,0566038
7,5	600	1,423
7,5	700	1,5227273
7,5	800	0,875
7,5	900	0,875
7,5	1000	0,875
10	0	6
10	100	6
10	200	4,5
10	300	4,5
10	400	4,5
10	500	3,625
10	600	3
10	700	1,6666667
10	800	0,875
10	900	0,875
10	1000	0,875
12,5	0	6
12,5	100	6
12,5	200	5,59375
12,5	300	5,375
12,5	400	4,5
12,5	500	3,75
12,5	600	3,84375
12,5	700	2,4807692
12,5	800	1,9545455
12,5	900	1,9545455
12,5	1000	1,9545455
15	0	7,125
15	100	7,125
15	200	7,125
15	300	6,68
15	400	4,9375
15	500	5,0833333
15	600	4,5
15	700	3,625
15	800	3
15	900	3
15	1000	3
17,5	0	8,4938272
17,5	100	8,4938272
17,5	200	8,4938272
17,5	300	7,7419355
17,5	400	5,8918919
17,5	500	5,375
17,5	600	4,5
17,5	700	3,625
17,5	800	3
17,5	900	3
17,5	1000	3
20	0	8,6363636
20	100	8,6363636
20	200	8,6363636
20	300	7,8666667
20	400	6
20	500	5,375
20	600	4,5
20	700	3,625
20	800	3
20	900	3
20	1000	3

3) Show 99 points in 3D coordinate

99 points in 3D coordinate