Rubric for Written File.

Question Number	Mark Distribution	Explanation
Question-1 **1 marks**	0.5 mark	Generate a computer simulation which can produce the output of a squirel jumping randomly and dying when reaching one end.
	0.5 mark	Plot each step of this simulation with x axis as the current position. Display this data in a movie (use commands getframe and movie in matlab).
Question-2 **1 marks**	0.5 mark	For fixed grid length (=10) and start position (=5), comment out the movie portion and repeat the previous simulation 30 times.
	0.5 mark	From this data, report if you believe Squeaky will die or not die if you run the simulation the 31st time.
Question-3 **4 marks**	2 marks	Fix the grid length to be 15 and vary the start position from 0 to 15 in steps of length 1. Plot a graph of current position vs average number of hops required to die (take at least 30 observations). Report your conclusion on relationship between start position and life expectancy for Squeaky.
	2 mark	Fix the current position to 7 from the left and vary the grid length from 15 to 30. Plot a graph of grid length vs average number of hops required to die (take at least 30 observations). Report your conclusion on relationship between grid length and life expectancy for Squeaky.
Question-4 **4 marks**	3 mark	Clearly state and derive the formula for life expectancy in terms of starting position and grid length. Calculate the theoretical life expectancy for grid length 15 and starting position varying from 0 to 15.
	0.5 mark	Calculate the discrepancy of this theoretical life expectancy from the life expectancy obtained from your simulation in question 3 part a. Make a table with simulated life expectancy, theoretical life expectancy and discrepancy as 3 columns.
	0.5 mark	Explain the discrepancy.

Total Marks	10

The final marks distribution for Lab/Mini-project-1 would be out of 100 which would later be scaled down to 10. The respective weightage allotted is explained below-

Components	Total Assigned Marks	Scaling
Written Component Word/Latex	10	10x4
Interview	10	10x2
Debugging	10	10x2
Self Assesment	10	10x2
	Final Score	100

Note:

1) Evaluation for all questions for the written file, interview and debugging will be conducted during the Lab session. Evaluation for Section-2 will be on 17th March and for Section-1 on 22nd March. The written file must be submitted on LMS on the day of the evaluation by 5:00 pm. Failure to submit on time will result in deduction of 10 points from 100.
2) For any conclusion you make using the simulation, you must properly show it emerging from the data in a statistically relevant fashion (table/plots). Any intuitive/heuristic replies may not be accepted.