

Project Id/No	-
Project Name	Study of Damage Assessment Using Simulation
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Abstract	<p>The overall purpose of the study was to learn and understand the concept of simulation. In this project, simulation was done for 145 mm gun with certain degree of line and range errors. These were used to calculate the impact points which were far-off from the aim points. Taking a gun to be consistent, it was established that the shots fired followed a normal distribution. Random number generators were thus used following normal distribution. Within the target area, uniform points were plotted. This was done by random number generators based on uniform distribution. Now, using the data for line and range errors, shots were fired and using the cookie-cutter law, uniform points within the lethal radius were declared as damaged. Calculations were done primarily on the ratio of damaged points and total number of points. More than thousands of simulations were run in order to stabilise the simulation. Cumulative average and Standard Deviation were calculated after each iteration. Following this experiment for different scenarios, percentage area damaged and percentage casualties were successfully simulated. The final standard deviation for percentage area and casualties got stabilised at 0.2244 and 2.0796 respectively, while the cumulative average was found to juggle between similar values but didn't stabilise to a single value. This could be attributed to non-consistent falling of shots in the target area. This study can be further used to find out the effectiveness of a gun for any scenario that can be computer replicated by some means.</p>

Project Photo

