

SPL1 Project Proposal Form, 2022
Institute of Information Technology (IIT)
University of Dhaka

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<p>Project Description: The main goal of this project named 'traJectory' is to visualize projectile motion.</p> <p>Using this application 2nd-degree parabolic equation of a projectile motion can be solved. traJectory offers different types of functionalities. It can be listed as:</p> <ul style="list-style-type: none">● Basic path of the equation $y = x \tan \theta - \frac{gx^2}{2u^2(\cos \theta)^2}$.● Maximum vertical range.● Maximum horizontal range.● Time of the flight.● Length of the path.● Distance from the origin, height, Component of velocity in x and y axis, preservation of energy at a certain point (Only if user inputs the time function or time can be extracted from the given data). <p>Moreover, 'traJectory' also takes friction of the air, gravitational force, and gravitational acceleration as parameters so that it can deal with hypothetical (such as projectile motion in another planet) as well as real-world problems.</p>			
Languages or Tools to be used: C, C++, OpenGL, Git, Github.			
<p>Supervisor's Name: Abdus Satter</p> <p>Signature of the supervisor: _____</p> <p>Date: <u>04/01/2023</u> _____</p>			