Kathmandu University

Department of Computer Science and Engineering

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A Project Concept Note on

"Solar System Simulation"

COMP 342 : Computer Graphics

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Introduction

This project is a simulation of the Solar System. It is a 3D graphics application that visualises a simplified model of the solar system. Developed using Python, Pygame, and OpenGL, the project aims to provide an interactive and visually appealing representation of celestial bodies in our solar system.

With the sun at the centre of the Solar System, each planet revolves around the sun and also follows its own orbit. The orbits are visualised using lines to show a kind of simulation that is close to its reality. Planets also rotate on their axes which this project will simulate the natural spinning motion of celestial bodies. Each planet is rendered with distinct colours and sizes as close to the real ones as possible. Since the removal of Pluto as a planet in the Solar System, the project does not simulate the planet.

The project serves as a captivating blend of science and technology, offering users an opportunity to delve into the wonders of our solar system. With further enhancements and refinements, it has the potential to provide an immersive learning experience about the dynamics and characteristics of the solar system.

Library and Language Used

Python

The primary programming language used for the project.

OpenGL

A widely-used graphics library that enables high-performance 3D rendering.