| *Ahsanullah University of Science & Technology*Department of Computer Science & Engineering logo.jpg |
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| A Truck |
| Computer Graphics Lab (CSE 4204) |

Project Final Report

| Submitted By: | |
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**Project Requirements:**

A truck needs to be created using three js which would have custom shaders, implementation of lighting, perspective projection, texture for each object, animation, and mouse and keyboard interaction. Camera will move around the truck using keyboard and light position will rotate around the truck using mouse. The wheels of the truck should also be able to rotate.

**Software Platform:**

Visual studio code

**Project Features:**

The features of our project and description of how each feature works is given below:

| # | Features | Status |
| --- | --- | --- |
| 1 | Truck Wheel Rotation | Implemented |
| 2 | Truck Speed Control | Implemented |
| 8 | Truck Movement | Implemented |
| 3 | Lamp Control | Implemented |
| 7 | Moon Revolves | Implemented |
| 4 | Camera Movement with Mouse | Implemented |
| 5 | Zoom In and Out | Implemented |
| 6 | Camera Movement with Key Strokes | Implemented |

Table 01: Project Feature Table

**Truck Wheel Rotation:** The wheels of the truck rotate with the movement of the truck.

**Truck Speed Control:** The speed of the truck can be controlled up and down arrow key. Up arrow key increases speed while down arrow key decreases speed.

**Lamp Control:** There are street lamps which emits light. The lamps can be turned on or off with the key “O”. The light emitted by the lamps is created with custom vertex shader using interpolation.

**Camera Movement with Mouse:** The camera position around the truck can be controlled using mouse movement.

**Zoom In and Out:** Camera position can be zoomed in or out using mouse scroll movement.

**Camera Movement with Key Strokes:** Camera position can also be changed along the axis with w, a, s, and d key.

**Moon Revolves:** There is a moon that revolves around the Y-axis. The position of the moon can be changed with left mouse click.

**Truck Movement:** Truck movement can be controlled using up and down arrow keys. Up arrow keys enable the truck to move forward and down arrow key enables the truck to move backwards.

**Snapshots:**

Provide some snapshots of your project indicating how each feature works.

**Contribution:**

Specify which part is done by whom in this section.

**Future Work:**

For future work, there can be houses, cottages around the truck. The truck can also have the ability to move in all directions. The day and night environment can also be able to interchange with proportion to time. There can be a forest near the road where the leaves of the tree will change over time mimicking a seasonal change.