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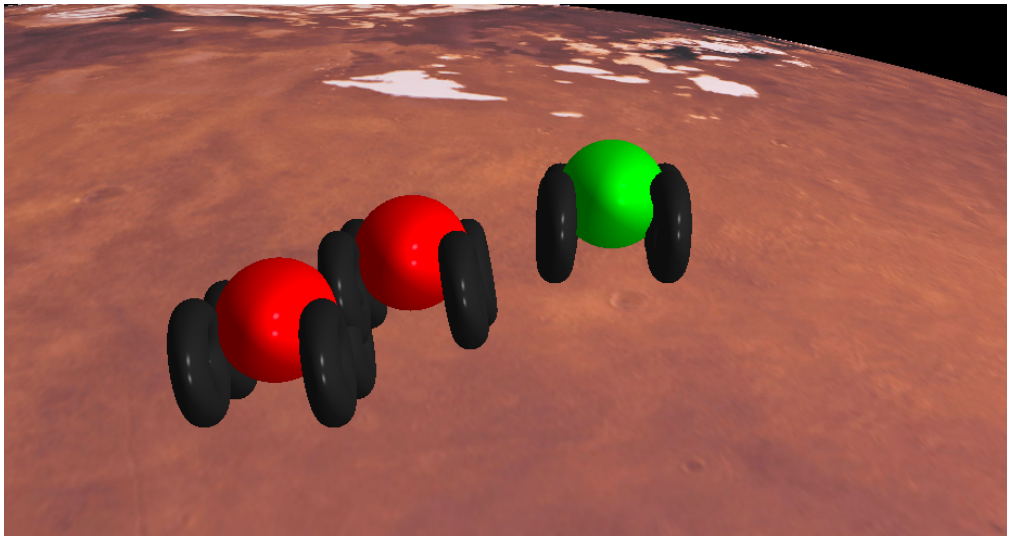
3D Project Pat 2 Report

How to control?

- **W, A, S, D** to control the rover(W for up, A for left, S for down, D for right)
- **KeyUp** and **KeyDown** also used to control the rover(KeyUp for forward, KeyDown for Backward movement)
- **Q** and **E** are used to look around(Q to look left, E to look right) you need to press it for about 2 secs
- **C** is used for camera mode. If you click C you can move the camera freely with the same keys(W,A,S,D,KeyUp…). Camera is 10 times faster than rover and if you are in camera mode the rover cannot move. Moreover, if the rover hits, it cannot move but camera mode can be used.
- **V** is used to turn off the camera mode. When you click V you can control the rover again.
- **Mouse control**, you can use mouse to look around both for camera view and rover view.

About the Project

There is one green rover that controlled by player and two red rovers that are chasing the green rover. If one of the red rover catch the green rover then green rover cannot move and game is over.



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Tasks

Texture Mapping with Shading blending (30 points)

Texture mapping is implemented successfully for Mars with a 12K image attached.

Independent Camera Control with Mouse and Keyboard (20 points)

Camera can move independently both with mouse and keyboard (W, A, S, D, KeyUp, KeyDown, Q, E) after pressing key C.

One Rover Control with Mouse and Keyboard, a rover has 4 rotating wheels (30 points)

Rover can be controlled in rover mode to switch rover mode press key V if you are in camera mode. Rover can move any direction with keys W, A, S, D, KeyUp, KeyDown. Mouse control is used to look around of the rover. The wheels are rotating when the rovers are moving.

Two Rovers trying to catch and collide with the user-controlled Rover, if there is a collision, user-controlled Rover stops (20 points)

There are two more rovers trying to catch user-controlled rover in the implementation. If they can catch and collision happens, then user-controlled rover stops and cannot move.

All tasks stated in the project documentation is implemented successfully.

A video file is also attached in case of texture loading problem due to MacOS