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ABSTRACT

OpenGL is the industry's most widely used and supported 2D and 3D graphics application programming interface (API), bringing thousands of applications to a wide variety of computer platforms. OpenGL fosters innovation and speeds application development by incorporating a broad set of rendering, texture mapping, special effects, and other powerful visualization functions.

This project, "Amusement Park" aims at drawing a virtual amusement park. The park includes objects like the Giant Wheel and Columbus ship. Giant Wheel is visualized using circular rings. Rotation effects are provided for the Giant Wheel. Swinging action is employed for Columbus ship. The project also includes a first person movement where the viewer can move around anywhere in the scene. Mouse drag for rotation is supported. The mouse context menu helps the user in selecting various options. The colours of various objects can be changed. The SkyBox texture background can be changed. The user can control various camera positions like, Free Movement, On Roller Coaster, On Columbus ship and In Giant Wheel. The user will also be able to control the movement of individual objects. Objects like cube, sphere and cylinders are used to implement 3D objects.The following options are supported:

• Navigate in the scene. Rotate 360 degree to view.

• Start and stop Giant Wheel rotation and Columbus swinging action

• Change colours of Giant Wheel and Columbus ship.