Lab 4: Introduction to Tinkercad
CSE 2100-001

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Partners:

1 Objective

Create a Tinkercad account and design a 3D model of a typical car or truck. At a minimum, your car should have 4 wheels and a body with a roof. The size of your model should fit within a 3x6x3 (width x length x height) inch volume. Additionally, the rear and front wheel pairs should be aligned along the same axis. You are encouraged to add additional detail, such as body contours, embossed text, colors, hood ornaments, etc. The best design in each section will be 3D printed and returned to the designer at a later date.
Show your design to the lab GTA when you are done, and submit a copy of your .STL file along with your weekly lab report. If you are working with a partner, you only need to design a single 3D model (but you must both submit the .STL file on your BlackBoard account).

1.1 Definitions

CAD Computer Aided Design that creates technical drawing with the use of computer software

Solidworks is a solid modeling computer aided design and computer aided engineering and drawing software application

AutoCAD is a commercial computer-aided design CAD and drafting software application

.STL is a file format native to stereo lithography CAD software created by 3D system

.OBJ is the geometry definition file format first developed by Wavefront technologies for its advanced visualizer animation packages

2 Question 1

What action must be done to combine several primitive geometric shapes into a single complex part?

Grouping objects

3 Question 2

What steps would you take to create a hollow 5 inch cube with 0.5 inch thick walls?

First, we make a 5x5x5 inch cube, then a 4x4x4 inner cube, and center it with 5inch cube