INTERACTIVE 3D GRAPHICS – PROJECT 1

STUDENTS

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GOALS

1. Visualise the table data in the form of a 3D bar chart, or pie chart, or area chart: **SATISFIED**
2. Allow the user to rotate the camera around the displayed 3D graph, zoom in and zoom out: **SATISFIED**
3. Allow the user to highlight one particular data (or row of data, in the case of area charts) by clicking with the mouse over it: **SATISFIED**

It is also possible, for the user, to reset the highlighting by clicking the reset button in the GUI.

REQUIREMENTS

1. The 2D table numeric data can be directly hard-coded in the javascript code. Ideally, our application should be able to read a *csv* file from the server, parse it, and visualise the graph, but this is not mandatory: **SATISFIED**

The data are a random matrix of numbers, that is generated every time, if there are changes in the table section of the GUI;

1. The user should be able to choose which kind of chart to visualise through a menu in the page: **SATISFIED**
2. The chart scene can be constructed using any kind of three.js geometries: **SATISFIED**
3. Colors in the chart can be decided by the application. Choose a suitable set of colors so that the visualisation is clear. Consider the use of transparencies when they are useful to better understand the graph: **SATISFIED**

The user may select the color set to use with the charts through the GUI; there are two color sets provided with the application.

1. The camera should be initialised in a position where all the graph is initially visible, and the projection and viewport mapping should be adapted when the browser window is resized to avoid distortions: **SATISFIED**