

CPRG256
ASSIGNMENT 2
HTML, CSS AND JAVASCRIPT and AJAX

On your computer, create a directory titled 'cprg256/assignment2'.

A landscaping company builds custom planters for clients. Create a customized page with appropriate background colours or images. Include a header that lists the company name and contact information. Your page will contain a form that prompts the user for the following:

Customer Name (This can be one input to include the full name or separate inputs for first and last name)
Address
Postal Code
Phone number
E-mail

Control the user input as follows:

Use HTML 5 inputs

All the fields must be entered

Validate the data (except address) using patterns or regular expressions.

'Autofocus' must be set to the Customer Name

The planters are in the following shapes:

- Square/Rectangular Cubes
- Flat bottomed cylinders
- $\frac{1}{2}$ Spherical
- Truncated cone

The volume formulas for each of these shapes are:

Square/Rectangular Cubes $V = \text{length} * \text{width} * \text{height}$

Flat bottomed cylinders $V = \pi * \text{radius} * \text{radius} * \text{height}$

$\frac{1}{2}$ Spherical $V = \frac{1}{2} * (\frac{4}{3} * \pi * \text{radius} * \text{radius} * \text{radius})$

Truncated cone $V = \frac{1}{3} * \pi * (\text{radius1} * \text{radius1} + \text{radius1} * \text{radius2} + \text{radius2} * \text{radius2}) * \text{height}$

The dimensions entered will be in cm and the volume in cm^3 . The costs for each type of planter are as follows:

Square/Rectangular Cubes: .001 cents per cm^3

Flat bottomed cylinders: .0012 cents per cm^3

$\frac{1}{2}$ Spherical: .0015 cents per cm^3

Truncated cone: .002 cents per cm^3

Example:

A rectangular planter with dimensions $30 \times 40 \times 20 = 24\,000\text{cm}^3$ volume

Cost: $24\,000 \times .001 = \$24.00$

Requirements:

Your application must use AJAX to control the data entry for the planter type.

You will need to create for separate HTML page for each of the individual planter types. Each page will contain a form that will list the appropriate dimensions required for that type of planter.

Example: If the user selects a square/rectangular planter, a form will appear showing input fields for length, width and height. The application will calculate the volume and cost and display all of the information on the page:

Customer Name

Address

Postal Code

Type of Planter

Dimensions and Volume

Total cost



Your pages must use CSS to create an interesting, well formatted and pleasing interface.

All of your work must be original. Do NOT use any third party packages or code unless explicitly allowed by your instructor.

Submit the 'zipped' contents of 'assignment2' to the course Brightspace site under 'Assignments/assignment2'.

30 Marks