

CSE 564: Software Design

Fall 2015

Team Assignment 2

In this assignment, you are required to add more features to Assignment 1 where you will take input from the user, calculate some values and present the results in a flexible visual format.

Your software will calculate the maximum dimensions of two more geometric shapes that can be made from one long piece of wood.

Shape 1: Rectangular-based pyramid

Shape 2: Triangular-based pyramid

- The program will allow the user the option to enter the size in metric units (centimeters/meters) or American units (inches/yards).
- The program will calculate the maximum possible shapes (Shape 1 and Shape 2) that can be made with the given piece.
- The program will display the shape's side length as well as its volume in text form.
- The software will also display a drawing of the resultant shape, showing the dimensions of the shape side as well as the volume.
- The user can switch the input as well as the output values between the two measurement systems at will. The program will offer flexibility of transforming between the two standards (American and Metric) for both the input and the output.
- The software will also provide a list of the dimension breakdown the user need to cut the long piece of wood at.

Make any necessary assumptions if needed.