Weight 5 % **Core Portfolio I**

Playground Calculator (PlayCalc)

Purpose – to create a costed Packing Slip reflecting the materials needed to build a playground fence

Topics of Evaluation

1. Obtaining and displaying information
2. Sequential processing
3. Numerical calculations
4. Create a working maintainable programming solution using topics 1-4 above, to create the Playground Calculator program using programming techniques demonstrated in class.

Requirements

1. Create a model for the program by drawing a flowchart or writing the pseudo code for the program.
2. Create a test plan and proof of output
3. Enter the code to implement your model.
4. Test your code with your test plan. If you discover mistakes, correct the code and model, and execute the test plan again.

Specifications

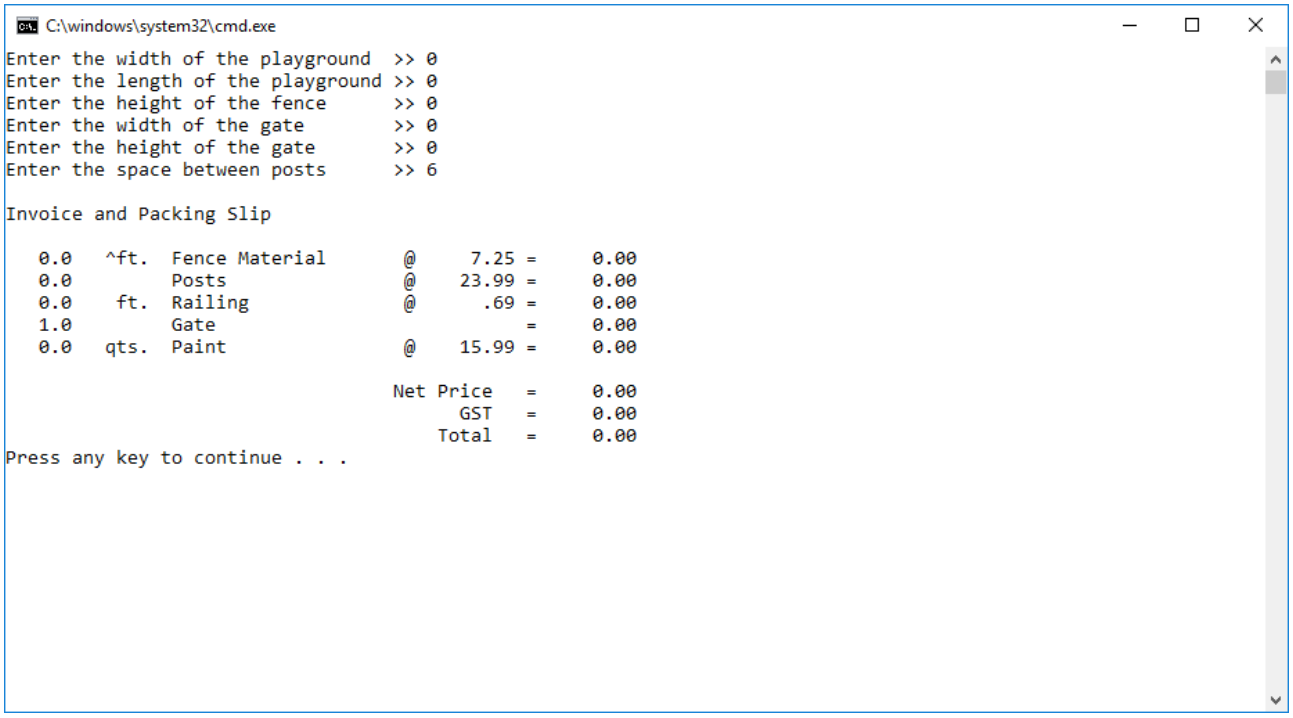
Inputs (feet as a double, assume valid input)

Dimensions of a rectangular playground (length, width and height of fence including the gate)
Height and width of a single gate- always chain link (120.00 + 15.75 per square foot)
Distance between posts (usually 6 – 8 feet)
Type of paint/stain
    Premium 15.99 /quart - gallon (covers 400 sq feet)
Type of fence material
    Cedar – 7.25 / square foot + 23.99 per post + 0.69 / lineal foot of railing

Outputs

Amount of fencing material required and extended price
Number of posts required and extended price
Lineal feat of railing required and extended price
Amount of paint required and extended price
Gate Price
Net Price
Total GST (5%)
Total Price

Ex**ample of Formatting**



Additional Requirements

Calculate a 10 percent waste factor on all lineal and square footages after all other material calculations have been done

Posts should be calculated by dividing the total lineal footage of the fence by the gap between posts and rounded up to the next whole number. Add 1 post for the first corner

A fence requires both top and bottom railings

Paint can only be bought in whole quarts (4 per gallon)

Chain Link does not require paint

Right align all number columns, left align text columns

Format prices to two decimal places and all other numbers to one decimal place

Your instructor may stipulate additional requirements

Submission

On or before the suggested due date demonstrate your application to your instructor.

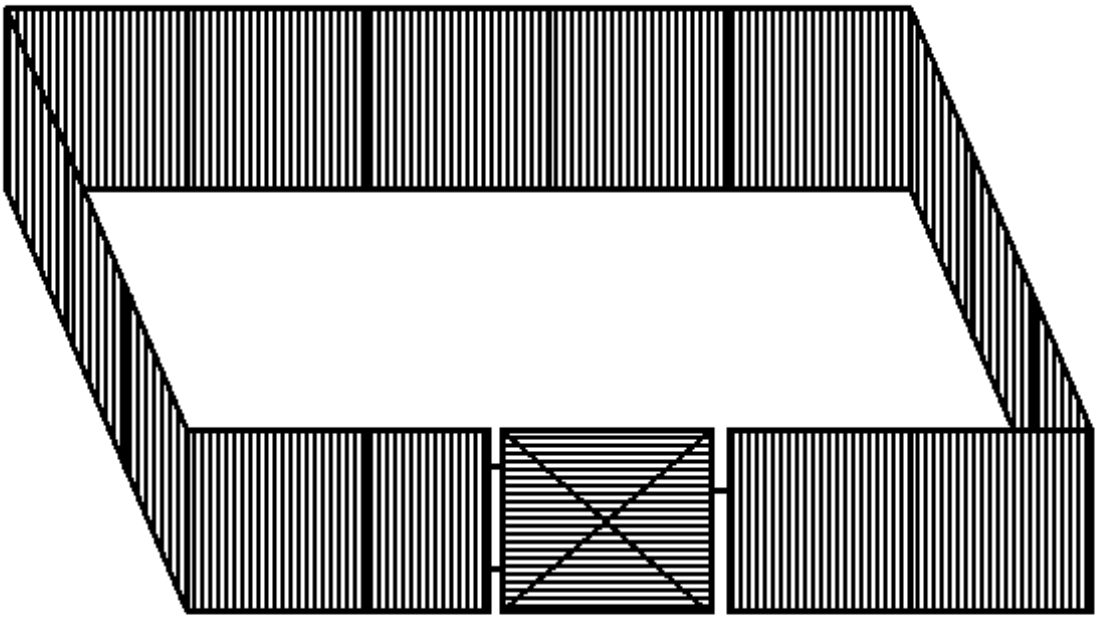
You may have your solution repeatedly tested up until the due date.

Your solution will be marked as pass/fail.

You are expected to complete the lab to an 85% level.

Your instructor will inform you on how/where your final solution should be submitted.

Typical playground fence



Marking guide

Input formatting	2 marks (- .5 per error)
Calculations	6 marks (-2 per error)
Output formatting	2 marks (- .5 per error)
Total	10 marks (8.5 required to pass)