Java Programming @ The department of Computer Science

UNIVERSITY OF LIVERPOOL

Landscape Gardening Quote Task 1(a)

Requirements

Customers provide a landscape gardening company with a plan detailing lawns, concrete patios and water features. Unit material costs and installation times are as shown in the table. Customers who engage our landscape gardening company can specify two types of landscape gardening item (i) Type 1, items specified by length and width (lawns and patios) and (ii) Type 2, items specified by quantity (water features). Both have unit material costs and installation times associated with them. When generating quotes for customers, the landscape gardening company needs to determine the total material cost and installation time for each item. Create a collection of Java classes that will: (a) allows a user to input lawn and patio dimensions and the number of water features required (if any), (b) calculate individual total material costs and (c) calculate the installation time per item.

Work to be done	Unit cost of materials	Unit time to install
Laying a lawn	£15.50 per m^2	20 mins per m^2
Laying a concrete patio	£20.99 per m^2	20 mins per m^2
Installing a water feature (e.g. a fountain)	£150.00 each	60 mins each

Note

This exercise is based on an AQA HCSE Specimen Controlled Assessment.

Java Arithmetic

Arithmetic operations are among the most fundamental instructions that can be included in a computer program. Java supports all the standard mathematics operations (see Table).

Operator	Interpretation
+	Unary plus or addition
-	Unary minus and subtraction
*	Multiplication
/	Division
%	Remainder
++	Increment by 1
--	Decrement by 1
+=	Add expression
-=	Subtract expression

The += and -= are used to add/subtract an arithmetic expression to the value of a data item. For example:

```
number = number+(6/2);
number = number-(6/2);
```

will be equivalent to:

```
number += 6/2;
number -= 6/2;
```


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