# Java Programming (CIS1010-N) Lecture 18: Metalli Case Study

## Introduction

Metalli Engraving provides customised signs made from a range of metals.

## Sign Cost(s)

Signs are supplied in three sizes (small, medium, or large) with the following optional extras:

* Tree Stake (£25.00) – cannot be included if Backing Board is selected.
* Backing Board (£7, £10 or £12 respectively for small, medium, and large signs) – cannot be included if Tree Stake is selected.
* Silhouette Picture (£4.50).
* Fixing Holes (free).
* Border (£3.50).
* Black Paint Filled Lettering (extra 7p for each letter) - only available on 18mm or higher font sizes.

The following table summarises the sign plate charges:

|  |  |  |  |
| --- | --- | --- | --- |
| Metal Size | Small | Medium | Large |
| Aluminum | £18.51 | £24.70 | £29.95 |
| Brass | £21.35 | £28.50 | £34.55 |
| Stainless Steel | £20.77 | £27.72 | £33.60 |

Lettering is charged at £2.50 per 40 characters excluding any spaces (the charge for 50 characters would be £5.00).

The total charge is calculated by adding together the charges for the sign plate, lettering and any optional extras and then subtracting any discount.

Discounts are based on a code that consists of two digits followed by two letters. The two digits represent the percentage discount (for example 15TA represent 15% discount).

## Requirements

Metalli requires a prototype Java application that asks the user for the following information:

* Sign size (small, medium, or large).
* Type of metal (Aluminium, Brass or Stainless Steel).
* Font size (10mm - 25mm).
* Sign text (up 160 characters).
* Discount Code (blank indicates no discount).
* Optional Extras (the user must be able to select and deselect the extras).

Once the information has been collected the prototype must display a summary screen including the company title, today’s date, the total charge, and the optional extras selected.

## Final Thoughts

All inputs must be validated.

The prototype application must be easily expandable (Metalli are currently considering adding express delivery and signs rotated by 45 degrees as optional extras).

## Document History

Revision 0 (23-Nov-21): This is the initial version of the 2021/22 case study.