Challenge three: DCT

The identified independent variables or factors that affect the discount, shipping costs, and label requirements are:

- Product colour
- Package size
- Shipping location
- Product type
- Destination country

The determinant possible values for each factor are:

- Product colour: White, green, and other colours
- Package size: Small and medium
- Shipping location: Europe and elsewhere
- Product type: Electronics and non-electronics
- Destination country: European and non-European countries

Since shipping locations and destinations are the same, then we have these values to consider:

Colours:

- 10% discount for white products
- 11% discount for green products
- No discount for products of other colours

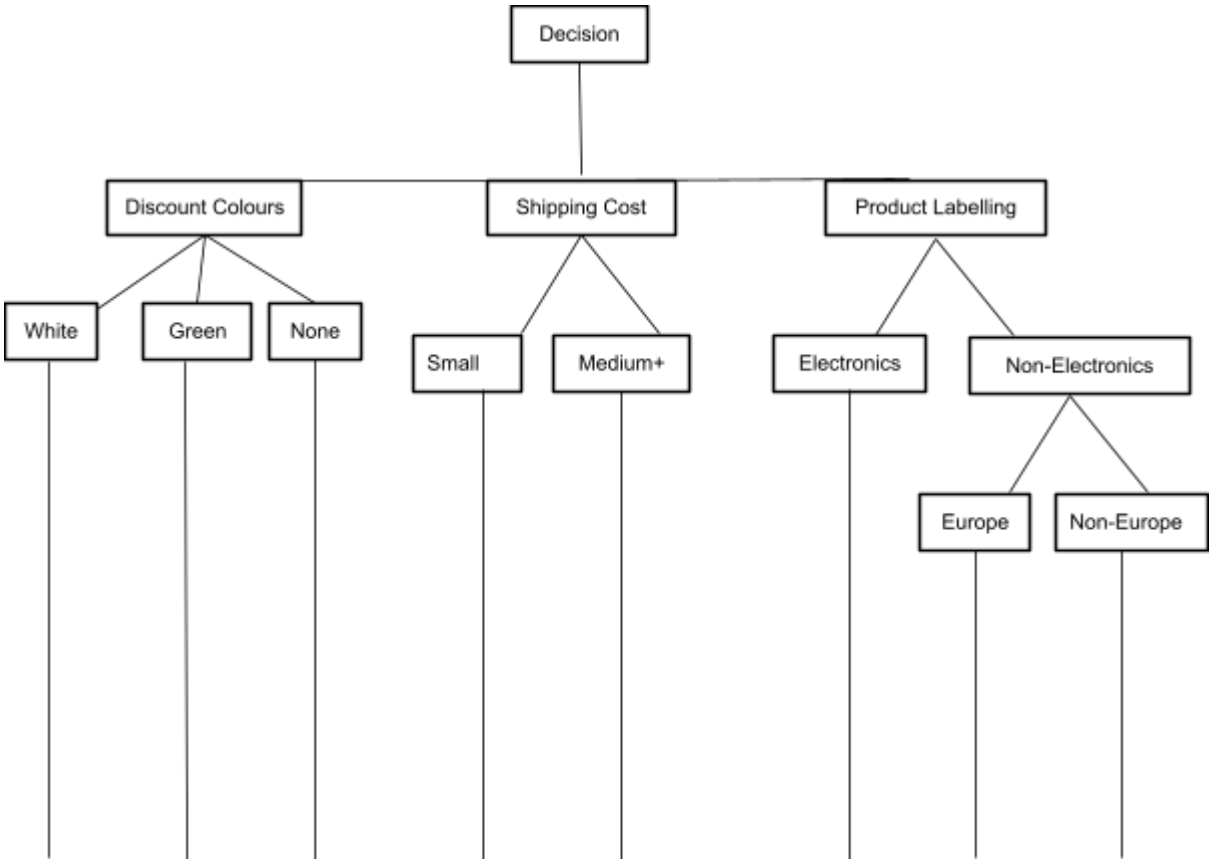
Shipping Sizes:

- Free shipping for small packages
- 12 euro shipping fee for medium and large packages

Product Labelling:

- Label not needed for electronics products
- Label needed for non-electronics products being shipped outside of Europe

Using the Classification Tree to analyse the above data with Equivalence Partitioning and Boundary Value Analysis techniques, we will be able to apply pairwise coverage to generate a reduced number of test cases with great coverage.



TC1			x	x		x		
TC2	x				x			x
TC3		x			x		x	

1. Test case 1: Other colour, small package, Electronics - Expected outcome: No discount, free shipping, label required.

2. Test case 2: White colour, medium package, Non Europe - Expected outcome: 10% discount, shipping cost of 12 euro, label required.

3. Test case 3: Green colour, medium package, Europe - Expected outcome: 11% discount, 12 euro, no label required.

We can generate 15 more test cases from here but these 3 have given great test coverage.