#### Solution

#### A Simple Example

*Scenario: A marketing company wishes to construct a decision table to decide how to treat clients according to three characteristics: Gender, City Dweller, and age group: A (under 30), B (between 30 and 60), C (over 60). The company has four products (W, X, Y and Z) to test market. Product W will appeal to female city dwellers. Product X will appeal to young females. Product Y will appeal to Male middle aged shoppers who do not live in cities. Product Z will appeal to all but older females.*

1. Identify Conditions & Values

The three data attributes tested by the conditions in this problem are gender, with values M and F; city dweller, with value Y and N; and age group, with values A, B, and C as stated in the problem.

2. Compute Maximum Number of Rules

The maximum number of rules is 2 x 2 x 3 = 12

3. Identify Possible Actions

The four actions are: market product W, market product X, market product Y, market product Z.

4. Enter All Possible Rules

The top of the table would look as follows: Note that all combinations of values are present.

Rules

Proc. 1 2 3 4 5 6 7 8 9 10 11 12

Name

Sex F M F M F M F M F M F M

City Y Y N N Y Y N N Y Y N N

Age A A A A B B B B C C C C

5. Define Actions for each Rule

The bottom of the table would look as follows:

Market 1 2 3 4 5 6 7 8 9 10 11 12

W X X X

X X X

Y X

Z X X X X X X X X X X

6. Verify the Policy

Let us assume that the client agreed with our decision table.

7. Simplify the Table

There appear to be no impossible rules. Note that rules 2, 4, 6, 7, 10, 12 have the same action pattern. Rules 2, 6 and 10 have two of the three condition values (gender and city dweller) identical and all three of the values of the non- identical value (age) are covered, so they can be condensed into a single column 2. The rules 4 and 12 have identical action pattern, but they cannot be combined because the indifferent attribute "Age" does not have all its values covered in these two columns. Age group B is missing. The revised table is as follows:

Rules

Process 1 2 3 4 5 6 7 8 9 10

Gender F M F M F F M F F M

City Dweller Y Y N N Y N N Y N N

Age Group A - A A B B B C C C

Actions

Market 1 2 3 4 5 6 7 8 9 10

W X X X

X X X

Y X

Z X X X X X X X X

8. Generate Test Cases.