## Introduction

Question 1:

Given the success of the bakery in Bloomington, Le Napoleon is now considering opening another bakery in a neighbouring town. Build out the model to calculate the NPV and determine whether opening up the bakery is a good idea for Le Napoleon.

Please use the following assumptions when building out your model:

1. Please colour-code the model according to our color-coding convention: yellow for Inputs, blue for Decision Variables, orange for Calculations and gray for Outputs.
2. For the cost of constructing the bakery, assume the formula we used earlier which is **Bakery Building Cost = Fixed Cost + Unit Cost of Capacity x Total Annual Capacity**, where the fixed cost of construction is **$500,000**, each unit of capacity costs **$4.00** and **400,000** pastries can be baked per year.
3. The year 1 price of a pastry is **$4.00**. For each **$1** increase in price, the number of pastries demanded will go down by **50,000**. If the pastries are given away, then **500,000** pastries will be demanded.
4. The beginning growth rate of pastries demanded is **10%**. After **5** years, demand will decrease to a steady-state level and the growth rate will go down by half.
5. Prices increase by **5.0%** per year.
6. The variable cost of producing a pastry in Year 1 is **$2.00**. This cost increases **6.0%** per year.
7. The discount rate is **15%**.





