**Network Models – Assignment (Properties)**

Problem Rewritten by Jill Nguyen

**Model:**

Parameters:

: Revenue received from investor

*Decisions:*

*: Whether property*

*Objective: Maximize revenue*

*\**

*Constraints:*

*A property can be sold to maximum 1 investor*

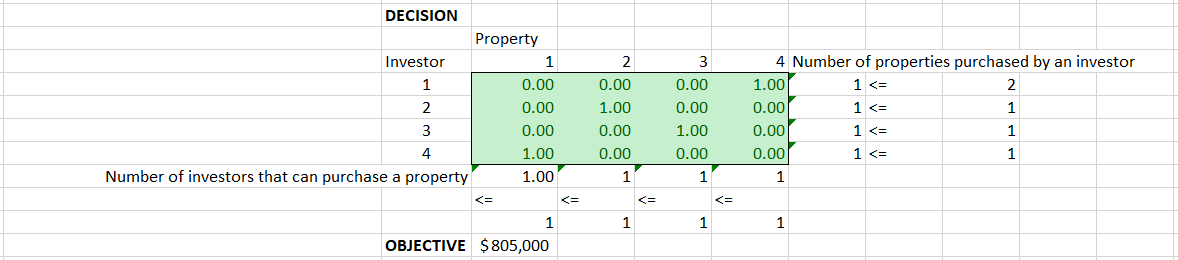
*2) Investor 1 can purchase a maximum of 2 properties*

*(3) Demand of destination j must be satisfied, . Investors are willing to purchase at most 1 property*

*(4) Binary variable for assignments*

**Optimal Solution:**

A maximum revenue of $805,000 can be attained by selling the properties to the investors as shown below.



**Sensitivity Report:**

It is optimal to:

* sell property 1 to investor 4
* sell property 2 to investor 2
* sell property 3 to investor 3
* sell property 4 to investor 1

This solution gives a maximum profit of $805,000.

Reduced cost: The amount which be decrease from the total profit if the lower bound is increased.

Shadow price: The amount which would be added to total profit if there is an additional investor to buy and an additional property to sell.

