

## MK 8710 CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

Fall, 2017



*Center for Excellence in*  
**BRAND & CUSTOMER MANAGEMENT**

**Professor: V. Kumar**  
**J. Mack Robinson College of Business**  
**Georgia State University**  
**Office Hours: By appointment**  
**Email: vk@gsu.edu**

### Assignment 2

**Note:** Please name the document as: *LASTNAME\_FIRSTNAME\_2*. Please submit the assignment by email to alahiri1@gsu.edu by **October 22<sup>nd</sup> at 5pm.**

Consider ABC Sportswear, a catalog seller of Sportswear. You have data on the purchase behavior of six customers over the last five months (assume you are analyzing the data in the month of June). The following table gives the **dollar amount** that each customer spent during January through May:

Customer	Jan	Feb	March	April	May
1	80	0	200	30	70
2	30	60	0	150	0
3	300	0	50	0	40
4	60	20	0	150	0
5	30	200	0	0	40
6	100	40	130	100	0

The following table gives the **frequencies** of purchase in each month for the six customers:

Customer	Jan	Feb	March	April	May
1	3	0	2	1	1
2	1	2	0	3	0
3	1	0	1	0	1
4	2	1	0	5	0
5	1	3	0	0	1
6	4	1	3	1	0

1. Analyze each customer's profitability in June using the **RFM method** and **rank the customers based on their scores**. Use the following table for the RFM scores:

<b>Recency =</b>	<b>20</b> points if purchased within the last 1 month
	<b>10</b> points if purchased 2 months ago
	<b>3</b> points if purchased 3 or 4 months ago (count only once) <i>i.e. If a customer has purchased both in 3 and 4 months ago (Feb and March), the recency point is 3. (not 6)</i>
	<b>2</b> points if purchased 5 or more months ago
Relative weight	50%
<b>Frequency =</b>	<b>3</b> points for each purchase within the last 6 months
Relative weight	20%
<b>Monetary Value =</b>	<b>10%</b> of \$ amount of purchase within the last 6 months
Relative weight	30%

2. Let the Gross contribution be 30% of the purchase amount. **Compute each customer's profitability (in the month of June) using the Past Customer Value scoring method, and rank the customers accordingly**. Assume an annual discount rate of 15%. The formula for computing the Past Customer Value is given below:

$$\sum_{n=1}^5 GC_{in} * (1 + 0.0125)^n$$

where,

i = customer

n = number of months preceding the current month when purchases were made

GC = Gross Contribution

Hint:

*First calculate the gross contribution in each month for each customer and apply the appropriate discount factor. For example, the discount factor for gross contribution in April is  $(1+0.0125)^2$ . Summation of discounted gross contribution across all months will give you PCV scores for each customer.*