**MODULE 3 ASSIGNMENT**

**PROBLEM 3**

1. **Dimensions**

Franchise: 350 (ERD).

Customer: 50,000 (ERD) + (150/spreadsheet \* 200 spreadsheets) = 80,000.

Sales Item: 500 (ERD – Merchandise) + 20 (ERD – ServCategory) + 1

(spreadsheet – Special Events) = 521.

1. **Fact Table Size (per year)**

450,000 (ERD – Contains (merchandise)) + 100,000 (ERD – ServicePurchase) + 300 \* 200 (spreadsheets) = 610,000

1. **Sparsity estimate**

1 - (fact table size / product of dimensions )

1-(610,000/(350 \* 80,000 \* 521 \* 365) = 1-(610,000/10,220,000,000) =

1-0.0000596885 = 0.9999403