

ACS 1803 – Assignment Exercise

1. Discuss and review with your classmates.

- a) What is a relational database? Explain clearly.
- b) How would you set up a relational database for the following data? Express your design completely, showing all the data fields and all records in any table(s) that you may have. You do not need to provide a record layout for your table(s).
 - i) Product X1, large desk, grey in color, large in size, sold in the office market for \$200, in the student market for \$ 170 and in the seniors market for \$125
 - ii) Product X2, reclining office chair, black in color, medium in size, sold in the office market for \$ 120, in the student market for \$ 100 and in the seniors market for \$80.
 - iii) Product X3, filing cabinet, brown in color, small in size, sold in the home market for \$38.00, office market for \$45.00 and in the seniors market for \$29.00.

Master Data Table (Un-Normalized Form)

| ID | Description | Color | Size | Market | Price |
|----|------------------------|-------|--------|---------|--------|
| X1 | Large Desk | Grey | Large | Office | \$ 200 |
| X1 | Large Desk | Grey | Large | Student | \$ 170 |
| X1 | Large Desk | Grey | Large | Senior | \$ 100 |
| X2 | Reclining Office Chair | Black | Medium | Office | \$ 120 |
| X2 | Reclining Office Chair | Black | Medium | Student | \$100 |
| X2 | Reclining Office Chair | Black | Medium | Seniors | \$ 80 |
| X3 | Filing Cabinet | Brown | Small | Home | \$ 38 |
| X3 | Filing Cabinet | Brown | Small | Office | \$ 45 |
| X3 | Filing Cabinet | Brown | Small | Seniors | \$ 29 |

Product Table (1st Normalized Form)

| ID | Description | Color | Size |
|----|------------------------|-------|--------|
| X1 | Large Desk | Grey | Large |
| X2 | Reclining Office Chair | Black | Medium |
| X3 | Filing Cabinet | Brown | Small |

Market Table (1st Normalized Form)

| ID | Market | Price |
|----|---------|--------|
| X1 | Office | \$ 200 |
| X1 | Student | \$ 170 |
| X1 | Senior | \$ 100 |
| X2 | Office | \$ 120 |
| X2 | Student | \$100 |
| X2 | Seniors | \$ 80 |
| X3 | Home | \$ 38 |
| X3 | Office | \$ 45 |
| X3 | Seniors | \$ 29 |