## Good News Grocers

User View 1 - Price Update List

| Department | Product <br> Code | Aisle <br> Number | Price | Unit of <br> Measure |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
| Produce | 4081 | 1 | 0.35 | lb |
| Produce | 4027 | 1 | 0.90 | ea |
| Produce | 4108 | 1 | 1.99 | lb |
|  |  |  |  |  |
| Butcher | 331100 | 5 | lb |  |
| Butcher | 331105 | 5 | lb |  |
| Butcher | 332110 | 5 | lb |  |
|  |  |  | 5.00 | lb |
| Freezer | 411100 | 6 | ea |  |
| Freezer | 521101 | 6 | ea |  |
| Freezer | 866503 | 6 | ea |  |
| Freezer | 866504 | 6 | 5.00 | ea |

This report is used by the department managers to update the prices that are displayed in the grocery store for these products.

UNF:
product [ prod code, dept, aisle_no, price, um ]
1NF:
same
2NF:
same
3NF:
product [ prod code, dept_cd (FK), price, um ]
dept [ dept cd, dept_name, aisle_no ]
Note: it may be debatable whether department actually determines aisle number. This may be true in a small grocery store but in a large grocery store, products from a department may be found in multiple aisles. This should be discussed with your database client to determine their exact needs.

## Good News Grocers User View 2: Product Cost Report

| Supplier | Product | Cost | Markup | Price | Dept <br> Code |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 21 - Very Veggie | 4108 - tomatoes, plum | 1.89 | $5 \%$ | 1.99 | PR |
| 32 - Fab Fruits | 4081 - bananas | 0.20 | $75 \%$ | 0.35 | PR |
| 32 - Fab Fruits | 4027 - grapefruit | 0.45 | $100 \%$ | 0.90 | PR |
| 32 - Fab Fruits | 4851 - celery | 1.00 | $100 \%$ | 2.00 | PR |
| 08 - Meats R Us | 331100 - chicken wings | 0.50 | $300 \%$ | 1.50 | BU |
| 08 - Meats R Us | 331105 - lean ground beef | 0.60 | $400 \%$ | 2.40 | BU |
| 08 - Meats R Us | 332110 - boneless chicken breasts | 2.50 | $100 \%$ | 5.00 | BU |
| 10 - Jerry's Juice | 411100 - orange juice | 0.25 | $400 \%$ | 1.00 | FR |
| 10 - Jerry's Juice | 521101 - apple juice | 0.25 | $400 \%$ | 1.00 | FR |
| 45 - Icey Creams | 866503 - vanilla ice cream | 2.50 | $100 \%$ | 5.00 | FR |
| 45 - Icey Creams | 866504 - chocolate ice cream | 2.50 | $100 \%$ | 5.00 | FR |

This report is used by the grocery store manager to determine the final selling price of his products.

UNF:
product [ prod code, prod_desc, supplier_id, supplier_name, cost, markup, dept_cd ]

1NF:
same (because there were no repeating groups)
2NF:
same

3NF:
product [ prod code, prod_desc, supplier_id (FK), cost, markup, dept_cd]
supplier [ supplier id, supplier_name ]

## View 1 solution:

3NF:
product [ prod code, dept_cd (FK), price, um ] dept [ dept cd, dept_name, aisle_no ]

## View 2 Solution:

3NF:
product [ prod code, prod_desc, supplier_id (FK), cost, markup, dept_cd ]
supplier [ supplier id, supplier_name ]

## Merged 3NF solution:

product [ prod code, prod_desc, um, dept_cd (FK), supplier_id (FK), cost, markup ]
dept [ dept cd, dept_name, aisle_no ]
supplier [ supplier id, supplier_name ]

## Q. No 3

## Solutions:



