# Data Types:

1)  
2)

# Business Logic Constraints:

1. User can view and add holiday information but can’t delete holiday.
2. User can update population of cities in the system, then the city’s category part also need to be updated.
3. **(Report 2)** For Couches and Sofas Category, user assumes that if an item that was offered at a discount were instead offered at the retail prices, the quantity of items sold would be reduced by 25%.
4. **(Report 2)** In Actual versus Predicted Revenue for Couches and Sofas Report, only predicted revenue differences greater than $5000 (positive or negative) should be displayed and sorted in descending order.
5. **(Report 3)** In Store Revenue by Year by State Report, only states available in the drop-down box can be chosen. In the revenue calculation, items that were sold at a discount are also included.
6. **(Report 4)** When generating Outdoor Furniture on Groundhog Day Report, user explicitly query for February 2 in each year to get total number of items sold, the average number of units solid per day, and the total number of units in the outdoor furniture category. Assume a year is exactly 365 days when calculating average number of units sold per day.
7. **(Report 5)** In State with Highest Volume for each Category Report, user can only select year and month from the available dates. Each category will only be listed only once unless two or more states tied for selling the highest number of unites in that category. Products which do not have category is not considered in this report.
8. The city sizes are only categorized into four groups: Small (population <3,700,000), Medium (population >=3,700,000 and <6,700,000), Large (population >=6,700,000 and <9,000,000) and Extra Large (population >=9,000,000).
9. **(Report 7)** In the Childcare Sales Volume Report, stores that do not offer childcare should be included and grouped as “No childcare”. Other childcare categories include: XXXX. Only sales data in the last 12 months are included in this report. All limits may need to be updated if it changes.
10. **(Report 8)** In Restaurant Impact on Category Sales Report, any categories that are not assigned products are excluded from this report. The report should be ordered by category name ascending and with non-restaurant store data listed first.
11. **(Report 9)** In Advertising Campaign Analysis Report, all products sold at a discount price are included in this report. The report should be ordered by difference in descending order and only the top 10, followed by bottom 10 from the difference result should be displayed.

# Task Decomposition:

1)  
2)

# IFD Decomposition:

1. Task “Add Holidays” should be renamed as Add Holiday. Without “s”
2. Need to correct typo “Holiday Maintainance” to “Holiday Maintenance”.
3. Just a suggestion – standardize view report tasks’ names:
   1. View Product by Category Report
   2. View Actual vs. Predicted Revenue for Couches and Sofas Report
   3. View Store Revenue by Year by State Report
   4. View GroundHog Day Outdoor Furniture Report
   5. View State with Highest Volume by Category Report
   6. View Revenue by Population Report
   7. View Childcare Sales Volume Report
   8. View Restaurant Impact on Category Sales Report
   9. View Advertising Campaign Analysis Report