

## Capstone Project: Fall 2019

**Sponsored by:**



### **Team project (group of 4)**

**Maximum Possible Grade:** 100 points - This project is worth 10% of total class grade. \*\*See also "PRESENTATION TO PILOT FLYING J" section.

**Peer Reviews:** If a peer review is not submitted, a grade will not be available for this assignment. Peer reviews submitted late will result in 20 point grade deduction. Peer reviews are due **AT THE SAME TIME AS THE PROJECT.**

**Due: November 15, 2019 before 11:59pm. Submitted on Canvas**

\*\*Teams may submit a draft of the project (ON A USB DRIVE) for comments to Professor King by November 8, 2019 at 4:30 pm. If submitted to Professor King by 4:30pm Friday November 8, 2019, Professor King will provide comments to improve the project. Absolutely no submissions will be accepted via Canvas or via email. Students must present their ENTIRE project on USB drive to take advantage of this option. See Canvas for further details.

### **PRESENTATION TO PILOT FLYING J:**

The best group project from each lab will receive an invitation to present their project to Pilot Flying J executives. Each team will travel to Pilot Flying J on Friday November 22, 2019 to make these presentations. Teams selected to travel to Pilot Flying J will receive an A on this Capstone Project. Additionally, these teams will be awarded the same grade on the final exam for BUAD242 and will be excused from taking it.

**\*\*Note:** Teams must travel to Pilot Flying J and complete the presentation to be eligible for final exam replacement. Additionally, teams are judged at the sole discretion of the instructor. The instructor reserves the right to withhold the prize if no team in a lab presents a project worthy of presentation to business professionals. The project must meet instructor's requirements to qualify.

**CLIENT QUESTIONS: Teams are (required to answer at least 3 of the 4 questions below)**

**\*\*Remember, clients ask BIG questions. There are no step by step instructions here...**

1. What is the effect of running Coke or Pepsi pictures in the advertisement for each promotion? Does picturing Coke or Pepsi impact sales of either product in the promotion? What is the difference in sales when picturing one over the other? Please consider this overall and by division.
2. Are different divisions affected differently by different promotions? If so, what are the implications? Which products sell more effectively in which divisions? Are these sales directly related to promotions or are these sales regularly higher in these divisions?
3. Does the promotion work better when Pilot Flying J offers a broad category of options in their promotion or when specific brands are offered as part of the promotion? (Is more beef jerky sold under a jerky promotion or under a specific brand promotion?)
4. Are there any products that sell as well (or almost as well) whether they are on promotion or not? (This would mean that the client does not need to run them on special promotion).

**Files provided by client contain the following data:**

2017-2018 Thungry Schedule.xlsx

Field	Description
YEAR	Year of sale
MONTHS	Months of sale (includes 2 months)
PROMO ID	ID number of promotion
PROMOTION DESCRIPTION	Describes items on sale during promotion. All promotions come with sale of any non-alcoholic beverage
START DATE	Start date of promotion
END DATE	End date of promotion
FEATURED BEVERAGE ON STORE SIGNAGE	Product on all signage related to promotion both inside store and outside store. Remember, all beverages entitle customer to promotional deal

All UPC Descriptions.xls

Field	Description
MAIN UPC	Unique identifier - UPC code that identifies an individual product sold in stores
MAIN ITEM DESCRIPTION	Description of product, including name and other information
BRAND	Brand that produces the product
MANUFACTURER	Manufacturer of the product

Grocery\_Cooler 2017-2018 Sales.xls – Contains data on DOLLAR VALUE OF UNITS SOLD (whether or not related to promotion – TOTAL DOLLAR VALUE OF SALES)

Field	Description
OPER DIVISION	Division of the company – represents geographic area
MAIN UPC	Unique identifier - UPC code that identifies an individual product sold in stores
20170111	Date of sale (Week ending date) formatted YYYYMMDD

Grocery\_Cooler 2017-2018 Units.xls – Contains data on NUMBER OF UNITS SOLD (whether or not related to promotion – TOTAL NUMBER OF UNITS SOLD)

Field	Description
OPER DIVISION	Division of the company – represents geographic area
MAIN UPC	Unique identifier - UPC code that identifies an individual product sold in stores
20170111	Date of sale (Week ending date) formatted YYYYMMDD

Promo ID files (\*\*NOTE\*\* these files contain the same categories of data. Also note that each file is a .csv file. ANY FORMULAS, FUNCTIONS OR FORMATTING PLACED IN THESE FILES WILL BE DELETED WHEN CLOSED unless you change the files to .xlsx type files.

Field	Description
OPER_DIVISION_ID	Number of division of the company – this is only the number, represents geographic area
PROMOTION_ID	ID number of promotion
FISCAL_WEEK_ID	Date of sale (Week ending date) formatted YYYYMMDD
MAIN_UPC	Unique identifier - UPC code that identifies an individual product sold in stores
SALES	Dollar values of units sold RELATED TO PROMOTION
QTY	Units sold RELATED TO PROMOTION

## **Instructor Support**

The instructor will assist with requirement clarifications. Work together as a team and pool your intellect and business knowledge. To seek help from the instructor, your group must show that a good faith effort has taken place prior to seeking help. Be ready to explain your logic and show your attempted work. Do not seek help outside your group.

**Submission Instructions:** Failure to follow the instructions will result in a grade reduction.

1 – **Deliverables:** The deliverable for this assignment includes the following files.

- a) The Executive Summary file named as GroupXXX\_ProjectReport.docx,
- b) The final Excel file named as GroupXXX\_ProjectDatabase.xlsm (if your file contains macros, please ensure your file type supports macros)
- c) A single Zip folder named as GROUPXXX\_BA242CaptstoneProject.zip (containing the Word and Excel files listed above **as well as ANY EXCEL FILES needed for linking purposes**).

I. For help with zip folders, see this link: <https://support.microsoft.com/en-us/help/14200/windows-compress-uncompress-zip-files>

2 - **Submit one project per group** to the assignment folder link.

3 - **Each group member** must also individually submit a peer review in canvas (instructions forthcoming). Note: Projects are graded on an individual basis. Failure to participate in the project will impact your grade at the instructor's discretion. Please note that all projects are graded on deliverables, not on effort. While student grades can be lowered based on peer reviews, maximum scores are achieved based on deliverables.

4 – No late work is accepted. There are NO EXCEPTIONS to this policy. The instructor will grade FINAL submission into Canvas. ONLY FINAL submission will be considered for grading.

5 – Failure to complete a “Help Disclosure Statement” will result in a 10-point deduction. If you get help you MUST disclose it. **ADD A WORKSHEET TAB IN YOUR WORKBOOK CALLED HELP DISCLOSURE. PLACE THE FOLLOWING INFORMATION IN A TEXTBOX IN THAT WORKSHEET. You must have a help disclosure, even if you received no outside help.**

## **Help Disclosure Statement:**

*Example: Our group has received help on this project from Mr. Smith, CEO of ABC company – phone number (XXX)XXX-XXXX. We also attended office hours on Tuesday November 1 to discuss with GTAs and on November 3 to discuss with Professor King. Additionally for help we used the following websites (followed by web addresses).*

### **Assignment Details:**

Each team will be responsible for using both basic and advanced functions of Excel to create a spreadsheet model that processes and performs calculations on the data presented and/or entered by the user. The spreadsheet model must be well documented and tested, and it must be accompanied by a written analysis and communication of the assumptions and composition of your model. Your deliverable must be suitable for presentation to business professionals.

The minimum requirement is that your workbook function and be formatted in a professional manner. It is important that your work be easy to understand and helpful for a user who opens it for the first time.

**Executive Summary:** Please provide an Executive Summary which summarizes your findings. See deliverable (a) in above section. At a minimum, your Executive Summary should detail your answers to project questions. Additionally, please provide a narrative stating how you arrived at your solution. Include the following details to be included in your executive summary:

1. Thought process to answer questions posed by client
2. Findings for required questions
3. Detailed explanation of your Excel file (please explain each worksheet's design and purpose – please also include descriptions of hidden worksheets if applicable)
4. Additional data you would like to have for follow up questions you have encountered
5. Each team member's contribution

To help business executives with reviewing your project, please include relevant graphs and/or PivotTables in your executive summary findings.

**Excel File(s):** Please include a project workbook that contains your answers to the client questions. You are required to document your work so that a client opening it for the first time understands the purpose of each worksheet. There are a variety of ways to document (consider Macros or text boxes...) Having separate files for each question is acceptable but must be documented in Executive Summary.

Your spreadsheet model must include the following elements (at a minimum). All of these requirements must be used to answer the business questions.

- PivotTables and PivotCharts
- Nested IF function
- Database function
- Lookups
- Conditional formatting
- Recorded Macro
- A variety of charts – this is the single most effective way to communicate your findings to the client.

Additionally, points may be awarded for advanced thinking and Excel features.

Project grading will be based on:

- Accuracy of data analysis (is the product accurate and well defended/supported)
- Demonstrated evidence of critical thinking in analysis
- Completeness of data analysis (did student consider all relevant data)