Lesson 9 Hands-On
Answers are at the BOTTOM of this document.

Directions
For your Lesson 9 Hands-On, you will choose the most appropriate analysis for the scenarios below, in which a store determines the best way to utilize a new club card system. When you are done, please submit one document with all of your findings for grading.
Caution!
Do not submit your project until you have completed all requirements, as you will not be able to resubmit.
For all scenarios, please identify the following:
1. The independent variable(s) and its data type
    - The independent variable, also known as the predictor variable, it is the variable or variables that influence your dependent variable. They are causing some sort of effect.
2. The levels of the independent variable, if appropriate
3. The dependent variable(s) and its data type
    - The dependent variable, also known as the outcome variable, is what you are influencing. It's what you're predicting. It is the effect that is being caused by your independent variable. The dependent variable depends on the independent variable.
4. The levels of the dependent variable, if appropriate
5. The most appropriate analysis
    - The most appropriate analysis can be found by following the flow charts on either of pages 5, 6 & 7 once you identified the IV(s), DV(s), their data types and levels.

Scenario 1
A store is investigating the influence of gender upon whether customers sign up for a discount club card. Options for gender are male and female, and options for signing up for the club card are signed up and not signed up.

Scenario 2
This same store has just expanded their club card system. They now have three different tiers - silver, gold, and platinum. They would like to know whether the type of club card the customer has dictates how much money the customer spends.

Scenario 3
Now, the store manager would like to know: Do people spend more money before or after they get a club card?

Scenario 4
Lastly, the store manager would like to know if the age of a customer predicts whether that customer will sign up for a club card or not.

A store is investigating the influence of gender upon whether customers sign up for a discount club card. Options for gender are male and female, and options for signing up for the club card are signed up and not signed up.
Independent variable = gender
Levels = 2, categorical
Dependent variable = signing up for the club card or not
Levels = 2
Most appropriate analysis = Independent Chi-Square

This same-store has just expanded their club card system. They now have three different tiers - silver, gold, and platinum. They would like to know whether the type of club card the customer has dictates how much money the customer spends.
Independent variable = type of club card
Levels = 3
Dependent variable = $$ spent
Most appropriate analysis = ANOVA

Now, the store manager would like to know: Do people spend more money before or after they get a club card?
Independent variable = before or after, continuous
Levels = 2
Dependent variable = money spent
Most appropriate analysis = Dependent t-test

Lastly, the store manager would like to know if the age of a customer predicts whether that customer will sign up for a club card or not.
Independent variable = customer's age, continuous
Dependent variable = sign up or not, categorical
Levels = 2
Most appropriate analysis = Binary Logistic Regression