**Can someone please provide some assistance with a question. It’s for an MBA course. The question was: How can binary variables be used to model logistical conditions. Provide examples. Can someone please provide some assistance with how to restate (restating) the information below.**

Logistic regression is used to model the binary variables. Binary logistic regression is typically used when the dependent variable / predictor is dichotomous in nature and the independent variables are either continuous in nature or categorical variables. In this, the log odds of the outcome are modeled as a linear combination of the predictor variables. Binary variable is use to record one of two possible conditions or outcomes. In this case, the dependent variable takes the values 0 or 1 to indicate the failure or success of some categorical effect which may be expected to shift the outcome of the regression model. If a particular observed outcome for the dependent variable is the crucial possible outcome (known as a "success" or a "case") it is usually coded as "1" and the contrary outcome (referred to as a "failure" or a "noncase") as "0". The odds is basically identified and defined as the probability that a particular outcome is a success divided by the probability that it is a failure.

Examples:

1. Consider a study whose goal is to model the response towards drug as a function of the dose of the drug administered. The target (dependent) variable, Response, has a value 1 if the patient is treated successfully with that drug and 0 if the treatment is unsuccessful. Thus, the general form of the model is: Response = f(dose)
2. Another example is to predict whether an Australian voter vote for a Democratic or a Republican, based on age, gender, income, race, votes in previous elections, state of residence, etc.
3. Suppose that we are interested in the factors that influence whether a political candidate wins an election. The outcome (response) variable is binary (0/1); win or lose. The predictor variables of interest are the amount of money spent on the campaign, the amount of time spent campaigning negatively and whether or not the candidate is an incumbent.