Homework problem:
Download the data set from Blackboard.

We want to predict if an NBA player will last 5 or more years in the league(TARGET_5Yrs) based on the statistics in the given data set. The data set you will be using contains 1340 observations and 19 numeric input variables. The variables are described below:

- Name: Name of player
- GP: Games Played
- MIN: Minutes Played
- PTS: Points per game
- FGM: Field Goals Made
- FGA: Field Goals Attempts
- FG%: Field Goal Percent
- 3P Made: 3 Point Made
- 3PA: 3 Point Attempts
- 3P%: 3 Point Attempts
- FTM: Free Throws Made
- FTA: Free Throw Attempts
- FT%: Field Throw Percent
- OREB: Offensive Rebounds
- DREB: Defensive Rebounds
- REB: Rebounds
- AST: Assists
- STL: Steals
- BLK: Blocks
- TOV: Turnovers
- TARGET_5Yrs: Outcome: 1 if career length >= 5yrs. 0 if < 5yrs

1. What are the necessary steps to take before running Neural Networks on our data set? Implement these steps. (Hint: You will have to do something with the first variable or you will get errors later on)

2. Build a neural network for this data set and report on the findings. Use TARGET_5Yrs as your predictor variable and games played, minutes, and points as the input variables. Whenever a seed is used in this problem, use a seed of 987 and a 75/25 training/testing split. NOTE: there are 11 NA's in one of the columns, so if you are getting an error message, this could be a reason why.

3. Build the model 2 more times using different input variables of your choice and fill in the table below. What model(x inputs) would you pick to predict the TARGET_5Yrs variable? Why?

X variables	**Accuracy**	**NN plot**
Games played, minutes, points (question 2)		

4. Apply another technique we learned in this class on the best chosen model from number 3 and compare the results. Which method worked best?