Question 1.

Is, Kobe’s shooting percentage is better at home than when he is away?

To answer this question, we first create a new variable “host” by taking the last N chars from the “matchup”, where N is the length of “opponent” variable. Than we create a variable “play\_home” which equals to 0 if “host” = “opponent” and equals to 1 otherwise.

After creating the “play\_home” variable, we create a logistic regression model *shot\_made\_flag = play\_home.* After fitting the model we get an equation:

**shot\_made\_flag = 0.2137 + 0.1492 \* paly\_home**

From the equation we see that if Kobe plays at home will have around 15% greater chance of making the shot.

1. PROC IMPORT DATAFILE='/home/iangelov0/project3/data.csv' replace
2. DBMS=CSV
3. OUT=data;
4. GETNAMES=YES;
6. data data;
7. set data;
8. host = substr(matchup, length(matchup)-length(opponent)+1);
9. if trim(host) eq trim(opponent) then play\_home = 0;
10. else play\_home = 1;
12. proc logistic datadata=data;
13. model shot\_made\_flag = play\_home;