```
/*Import the given data*/
Title 'Original Data';
data shoesize;
    INFILE '/folders/myfolders/StatsII Final Project/shoesize.txt' dsd dlm='    ' truncover Firstobs= 2;
    INPUT Size Height Sex $;

PROC PRINT data=shoesize;
    RUN;

/* A. Seperate Male and Female data into two tables.*/
Title 'Mens Data';
data shoesizeMen;
    SET shoesize;
    If Sex = "F" then Delete;

Proc PRINT data= shoesizeMen;
    RUN;

Title 'Females Data';
data shoesizeFemale;
    SET shoesize;
    If Sex = "M" then Delete;

Proc PRINT data= shoesizeFemale;
    RUN;

/* B. Determine the sample regression equation with shoe size as the predictor variable for height.*/
Title 'Mens Regression Line';
ods graphics on;
   proc reg data=shoesizeMen plots=residualbypredicted;
      model Height = Size / r clm cli;
      Footnote 'ŷ = 61.67176 + 0.89313x'; /*Added After Calculation for write up*/
   run;

/* C. Find and interpret the standard error of the estimate.*/
/*This portion of the assignment has been completed using the SSE which we were given in
part B's Calculations and used in excel to calculate Se = sqrt(SSE/(n-1))*/
/*Roughly speaking, the predicted height of a male in the sample differs, on average,
from the observed height by 2.155 .*/

/* D. Test whether shoe size is useful for predicting height.*/

/*I.Correlation*/
Title 'Correlation between Height and Size';
PROC CORR DATA= shoesizeMen fisher;
    VAR Size Height;
RUN;

/*Repeating b-j for Female Data Set.*/

Title 'Womens Regression Line';
ods graphics on;
   proc reg data=shoesizeFemale plots=residualbypredicted;
      model Height = Size / r clm cli;
      footnote 'ŷ = 55.725 + 1.267x'; /*added after calculation*/
   run;

/*I.Correlation*/
Title 'Correlation between Height and Size';
PROC CORR DATA= shoesizeFemale fisher;
    VAR Size Height;
```