Linear Regression HW: Due 10/3/19

Download dataset http://www.cse.sc.edu/~rose/587/CSV/MaunaLoa.csv The description of dataset is ftp://aftp.cmdl.noaa.gov/products/trends/co2/co2_mm_mlo.txt

Explore the first two columns which contain real numbers:

a. Plot the column labelled 'interpolated' (Y) against the column labelled 'DecimalDate' (X). **Save the plot to a pdf file.**
b. Try fitting these two columns with a linear model lm(). Hint: You might want to review the linear regression lab.
c. As in the linear regression lab, visualize the model with the commands, where **m** is the variable you used to hold the model:

```
par(mfrow=c(2,2))
plot(m)
```

Save this plot to a pdf file.

d. **Explain the top left figure.** What does this tell us about the fit of our model?
e. Visualize the predicted and observed y values similar to what we did in slide 6 of the linear regression lab. **Save this graph to a pdf file.**
f. Looking at the plot from 1.a, explain whether this data is *i.i.d*. **Justify your answer.**

Be sure to also submit your R code.