HUDM 5026 - Introduction to Data Analysis and Graphics in R
POTD 02 – Data Visualization

General instructions for POTDs:

- Write up your solutions and examples in a .Rmd file.
- Clearly label each part by number and letter, if applicable.
- Include plenty of comments in your code.
- The file should run without any errors from top to bottom.
- The write-up is due before the next class meeting.
- Although you may work collaboratively with others in your assigned breakout room, each individual will turn in their own assignment.

Task 1 *Access the help on the data set* `state.x77` *and briefly describe the data. Convert it to a data frame (tibble) with* `as_tibble()`*. For example,* `dat <- as_tibble(state.x77)`*. Now work with the data called* `dat`*.*

Task 2 *Make a scatterplot of murder rate (on x-axis) and life expectancy (on y-axis).*

Task 3 *Access the help on* `state.region` *and* `state.division` *and* `state.abb`*. Briefly describe them each.*

Task 4 *Building on the scatterplot you made above in (2), color the points by state region.*

Task 5 *Building on the scatterplot you made above in (2), create a faceted plot by state division.*

Task 6 *Building on the scatterplot you made above in (2), add a nonparametric regression (loess) curve with standard error bars.*

Task 7 *Building on the scatterplot you made above in (2), add a nonparametric regression (loess) curves by state region and also color the curves but not the points by state region.*

Task 8 *Flex your muscles :) In other words, do something creative wth the* `state.x77` *data (and possibly also the other variables like region, etc.) that demonstrates your new expertise in plotting with* ***ggplot2****.*