Project 1

This project is due on the deadline posted on edX. Please submit a .pdf file of your output and upload a .zip file containing your .Rmd file. Do NOT include your name or EID in your filenames.

Part 1: Demonstrate basic command of Markdown by creating a bulleted list with three items, a numbered list with three items, and a sentence that has one word in bold and one word in italics.

Your text goes here.

A bulleted list:

- One
- Two
- Three

A numbered list:

1. One
2. Two
3. Three

A sentence:

This is a sentence that has one word in **bold** and one word in *italics*.
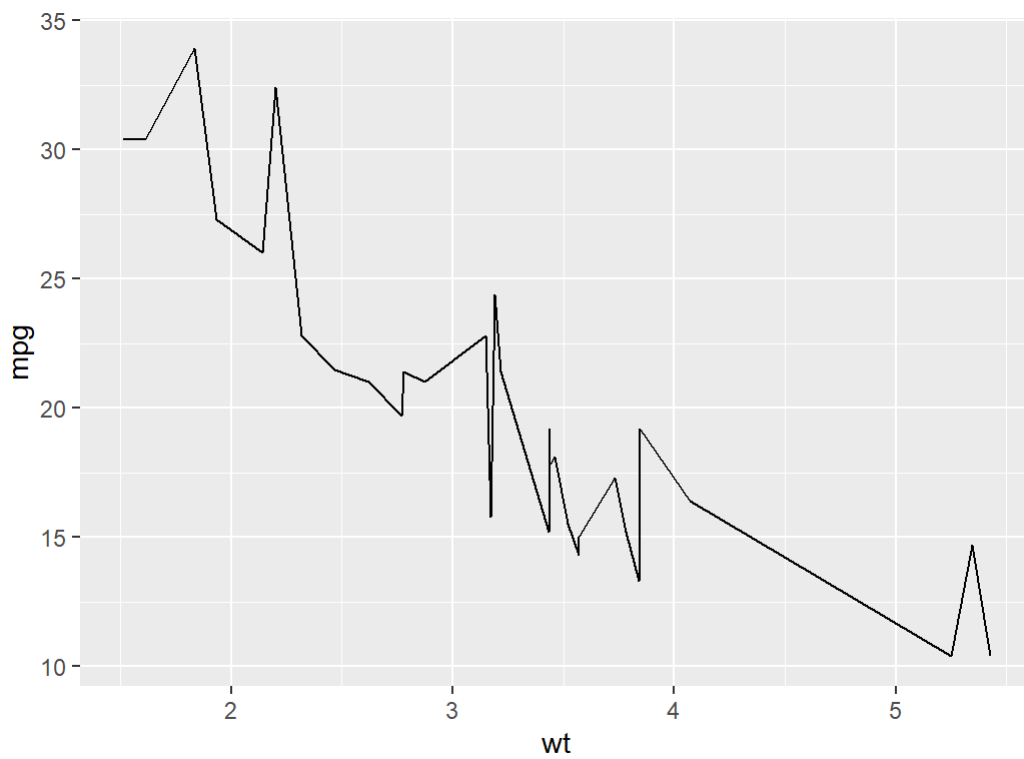
Part 2: The `mtcars` dataset contains information on car design and performance in 1974:

```
mtcars
```

```
##                      mpg cyl  disp  hp drat    wt  qsec vs am gear carb
## Mazda RX4            21.0   6 160.0 110 3.90 2.620 16.46  0  1    4    4
## Mazda RX4 Wag        21.0   6 160.0 110 3.90 2.875 17.02  0  1    4    4
## Datsun 710           22.8   4 108.0  93 3.85 2.320 18.61  1  1    4    1
## Hornet 4 Drive       21.4   6 258.0 110 3.08 3.215 19.44  1  0    3    1
## Hornet Sportabout    18.7   8 360.0 175 3.15 3.440 17.02  0  0    3    2
## Valiant              18.1   6 225.0 105 2.76 3.460 20.22  1  0    3    1
## Duster 360           14.3   8 360.0 245 3.21 3.570 15.84  0  0    3    4
## Merc 240D            24.4   4 146.7  62 3.69 3.190 20.00  1  0    4    2
## Merc 230             22.8   4 140.8  95 3.92 3.150 22.90  1  0    4    2
## Merc 280             19.2   6 167.6 123 3.92 3.440 18.30  1  0    4    4
## Merc 280C            17.8   6 167.6 123 3.92 3.440 18.90  1  0    4    4
## Merc 450SE           16.4   8 275.8 180 3.07 4.070 17.40  0  0    3    3
## Merc 450SL           17.3   8 275.8 180 3.07 3.730 17.60  0  0    3    3
## Merc 450SLC          15.2   8 275.8 180 3.07 3.780 18.00  0  0    3    3
## Cadillac Fleetwood   10.4   8 472.0 205 2.93 5.250 17.98  0  0    3    4
## Lincoln Continental  10.4   8 460.0 215 3.00 5.424 17.82  0  0    3    4
## Chrysler Imperial    14.7   8 440.0 230 3.23 5.345 17.42  0  0    3    4
## Fiat 128             32.4   4  78.7  66 4.08 2.200 19.47  1  1    4    1
## Honda Civic          30.4   4  75.7  52 4.93 1.615 18.52  1  1    4    2
## Toyota Corolla       33.9   4  71.1  65 4.22 1.835 19.90  1  1    4    1
## Toyota Corona        21.5   4 120.1  97 3.70 2.465 20.01  1  0    3    1
## Dodge Challenger     15.5   8 318.0 150 2.76 3.520 16.87  0  0    3    2
## AMC Javelin          15.2   8 304.0 150 3.15 3.435 17.30  0  0    3    2
## Camaro Z28           13.3   8 350.0 245 3.73 3.840 15.41  0  0    3    4
## Pontiac Firebird     19.2   8 400.0 175 3.08 3.845 17.05  0  0    3    2
## Fiat X1-9            27.3   4  79.0  66 4.08 1.935 18.90  1  1    4    1
## Porsche 914-2        26.0   4 120.3  91 4.43 2.140 16.70  0  1    5    2
## Lotus Europa         30.4   4  95.1 113 3.77 1.513 16.90  1  1    5    2
## Ford Pantera L       15.8   8 351.0 264 4.22 3.170 14.50  0  1    5    4
## Ferrari Dino         19.7   6 145.0 175 3.62 2.770 15.50  0  1    5    6
## Maserati Bora        15.0   8 301.0 335 3.54 3.570 14.60  0  1    5    8
## Volvo 142E           21.4   4 121.0 109 4.11 2.780 18.60  1  1    4    2
```

Use ggplot to make a line plot of the fuel economy of a car, measured in miles/gallon (column `mpg`), versus its weight (column `wt`).

```
# your code goes here
ggplot(mtcars, aes(x = wt, y = mpg)) + geom_line()
```

Now make a scatter plot (using `geom_point()`) of the horse power of a car (`hp`) versus its weight, and color points by its fuel economy.

```
# your code goes here
ggplot(mtcars, aes(x = wt, y = hp, color = mpg)) + geom_point()
```