R coding for public policy

Final Part II

[Name removed]

###This is my own work and intellectual property

Instruction:

Design an R function for policy analysis.

#Import and clean your dataset of choice

```
recycling<- read.csv("C:/Users/jam43/Downloads/Recycling_Diversion_and_Capture_Rates.csv")
names(recycling) <- c("ZONE", "DISTRICT", "FISC_MO_NUM", "YEAR", "MONTH", "DIVERTED_TOTAL", "PAPER", "METAL_GLASS_PLASTIC", "CAPTURE_TOTAL")

recycling<-na.omit(recycling)
```

#what is the goal of the function

#Find the average capture rate of a specified zone, year and month for recycling in New York City

#function script Step 1. name the function Step 2. calling function() with "{ }" Step 3. Start programming the expressions within the "{ }" Make sure to have a returned value Step 4. fill out the formals Step 5. run the function script Step 6. test the function

```
mean_capture<-function(data, a,b,c) {
    attach(data)
        data_subset<-data[ZONE==a & YEAR==b & MONTH==c,]
        paper<-mean(data_subset$PAPER)
        mgp<-mean(data_subset$METAL_GLASS_PLASTIC)
        total<-mean(data_subset$CAPTURE_TOTAL)
        list_output<-list(paper,mgp,total)
        names(list_output)<-c("Mean Paper", "Mean MGP", "Mean Total")
        return(print(list_output))
        detach(data)
}
```

#function test

```
mean_capture(recycling, "Bronx", 2019, "May")
```

```
## $`Mean Paper`
## [1] 31.70833
##
## $`Mean MGP`
## [1] 58.46667
##
## $`Mean Total`
## [1] 42.48333
```

#did your function meet the goal of your design? #Yes. I double checked it by calling the code separately and got the same numbers.