More ggplot Figures Peer Review

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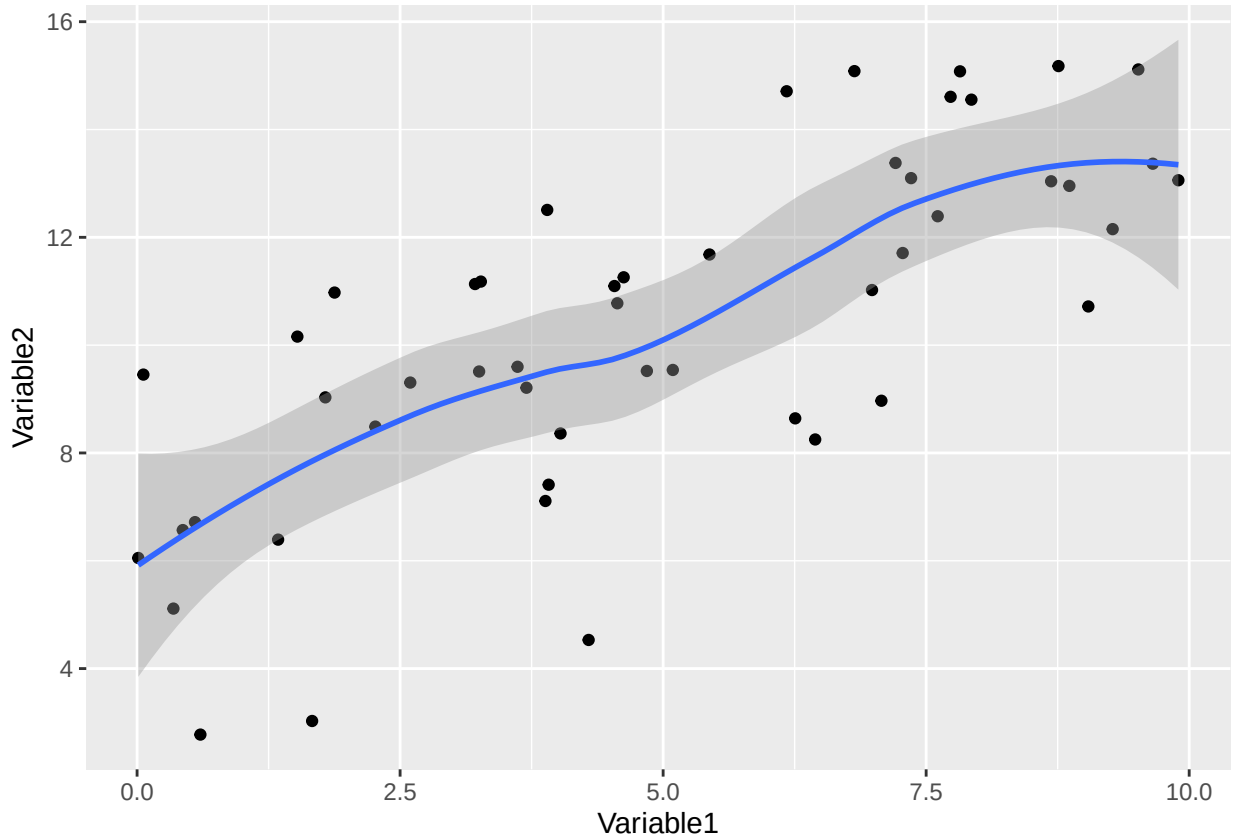
Problem 1

Create the figure in the solution for Problem 1, using the data included in the R Markdown file.

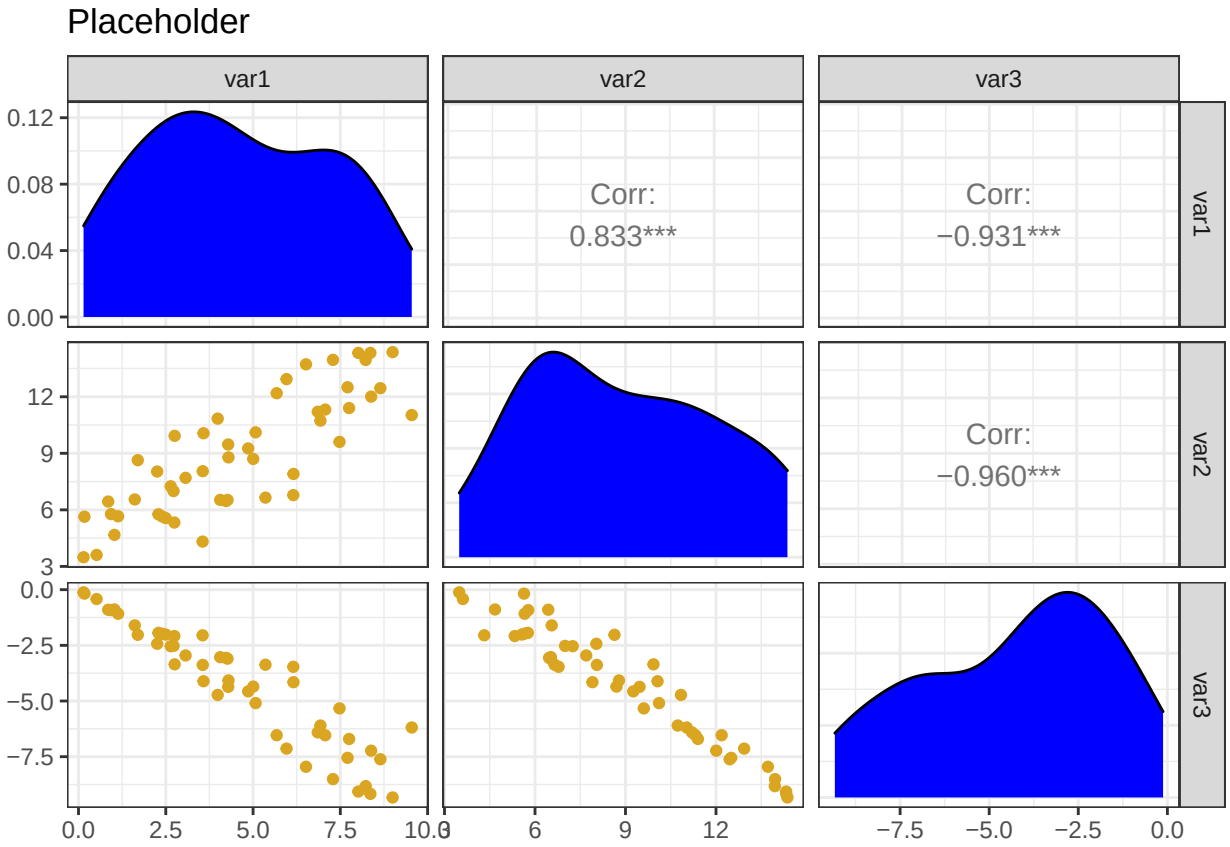
```
####Make sure you install any necessary libraries
#install.packages("ggplot2")
library(ggplot2)
####PUT YOUR CODE HERE
ggplot(data=dat1, mapping=aes(x=var1, y=var2))+
  geom_point()+
  geom_smooth()+
  labs(x="Variable1",y="Variable2")
```



Problem 2

Create the figure in the solution for Problem 2, using the data included in the R Markdown file.

```
####Make sure you load any necessary libraries
library("GGally")
####PUT YOUR CODE HERE
#var2 <- as.factor(var2)

#modified_density = function(data, mapping, ...) {

# custom function for density plot
my_density <- function(data, mapping, ...){
  ggplot(data = data, mapping = mapping) +
    geom_density(alpha = 1,
                 fill = "blue", ...)
}

# custom function for scatterplot
my_scatter <- function(data, mapping, ...){
  ggplot(data = data, mapping = mapping) +
    geom_point(alpha = 1,
               color = "goldenrod") #+
    #geom_smooth(method=lm,
              #  se=FALSE, ...)
}
ggpairs(dat2,
        lower=list(continuous = my_scatter),
        diag = list(continuous = my_density)) +
  labs(title = "Placeholder") +
  theme_bw()
```


Placeholder
var1
var2
var3
var1
var2
var3
Corr:
0.833***
Corr:
−0.931***
Corr:
−0.960***
0.12
0.08
0.04
0.00
12
9
6
3
0.0
−2.5
−5.0
−7.5
0.0
2.5
5.0
7.5
10.0
6
9
12
−7.5
−5.0
−2.5
0.0

Problem 3

Create the figure in the solution for Problem 3, using the data included in the R Markdown file.

```
####Make sure you load any necessary libraries
#install.packages("ggcorrplot")                    # Install ggcorrplot package
library(ggcorrplot)                                # Load ggcorrplot
####PUT YOUR CODE HERE

corr <- round(cor(dat3), 1)
corr
```

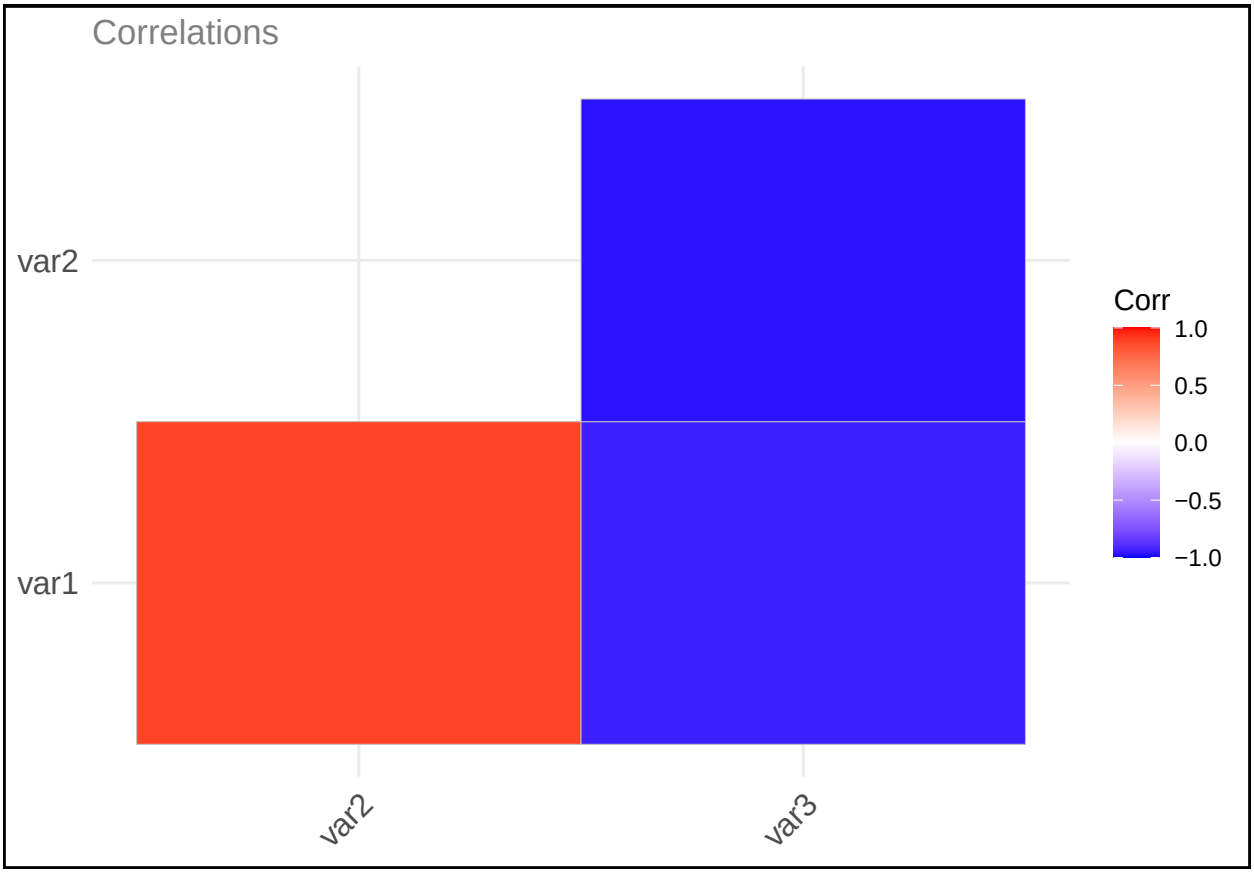
```
##      var1 var2 var3
## var1  1.0  0.9 -0.9
## var2  0.9  1.0 -1.0
## var3 -0.9 -1.0  1.0
```

```
# Compute a matrix of correlation p-values
p.mat <- cor_pmat(dat3)
p.mat
```

```
##              var1         var2         var3
## var1 0.000000e+00 5.106500e-17 8.642971e-25
## var2 5.106500e-17 0.000000e+00 1.439856e-29
## var3 8.642971e-25 1.439856e-29 0.000000e+00
```

```
# Visualize the correlation matrix
# --------------------------------
# method = "square" or "circle"

ggcorrplot(cor(dat3), type = "upper")+#, lab = TRUE)+
  xlab("Correlations")+
  ggtitle("Correlations")+
  coord_flip()+
  theme(plot.background = element_rect(colour = "black", fill=NA, size=1),
        plot.title = element_text(colour = "#808080"))
```

```
## Coordinate system already present. Adding new coordinate system, which will replace the existing one
```

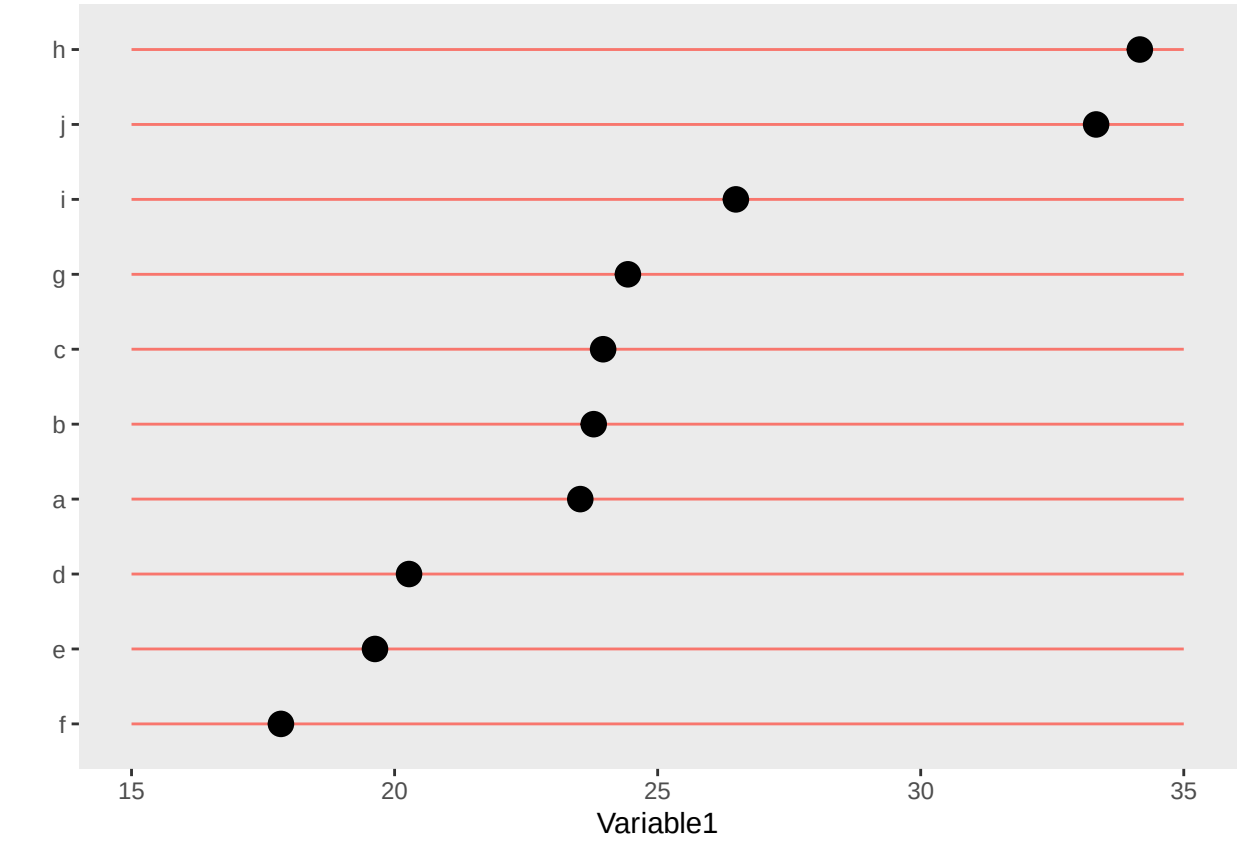


Problem 4

Create the figure in the solution for Problem 4, using the data included in the R Markdown file.

```
####Make sure you load any necessary libraries
#install.packages("ggthemes")
library(ggplot2)
library(ggthemes)
####PUT YOUR CODE HERE

dat4$names <- reorder(names, var1)

ggplot(dat4,mapping=aes(x=var1, y=names))+
  xlab("Variable1")+
  ylab("")+
  theme(panel.grid.major = element_blank(), panel.grid.minor = element_blank())+
  theme(legend.position = "none")+
  scale_x_continuous(limits=c(15,35))+
  geom_segment(aes(x=15,xend=35,y=names,yend=names, color="red"))+
  geom_line(linetype="dotted")+
  geom_point(size=4)
```

```
## geom_path: Each group consists of only one observation. Do you need to adjust
## the group aesthetic?
```



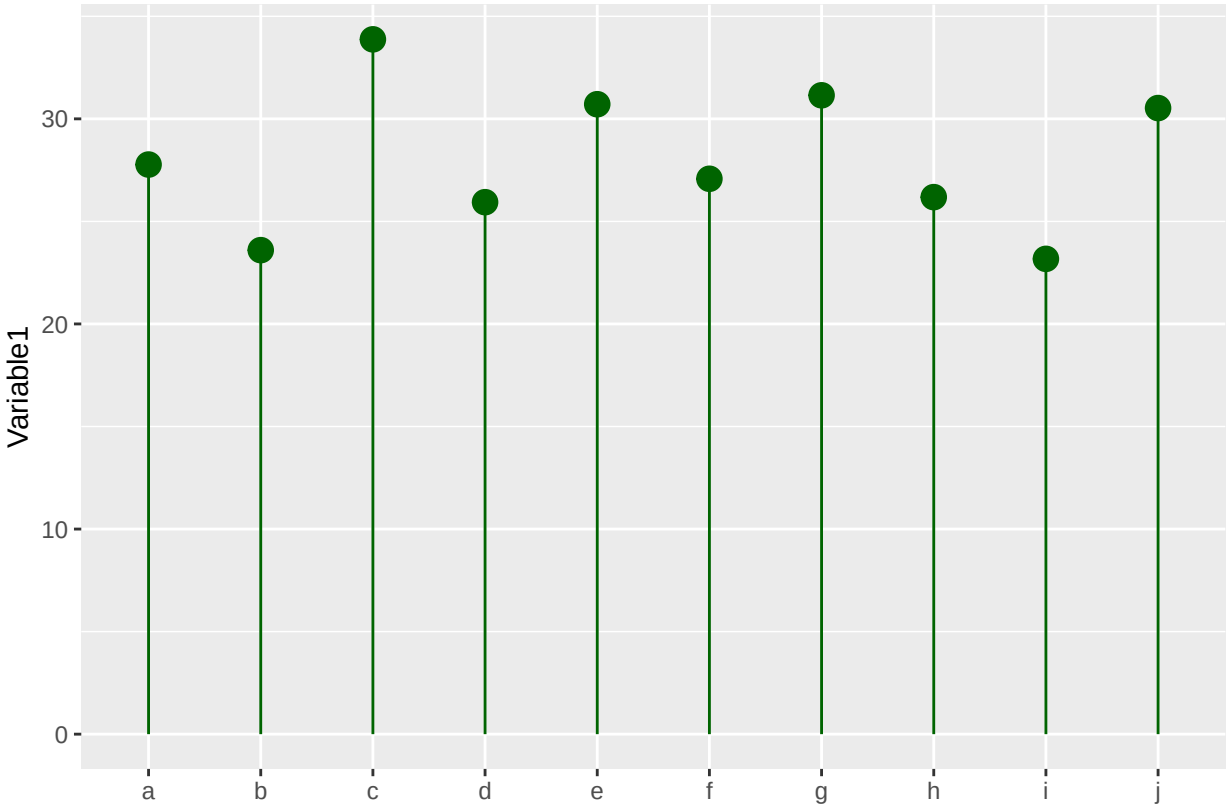
Problem 5

Create the figure in the solution for Problem 5, using the data included in the R Markdown file.

```
####Make sure you load any necessary libraries

####PUT YOUR CODE HERE



dat5
```

```
## # A tibble: 10 x 2
##    names  var1
##    <chr> <dbl>
##  1 a      27.8
##  2 b      23.6
##  3 c      33.9
##  4 d      25.9
##  5 e      30.7
##  6 f      27.1
##  7 g      31.1
##  8 h      26.2
##  9 i      23.2
## 10 j      30.5
```

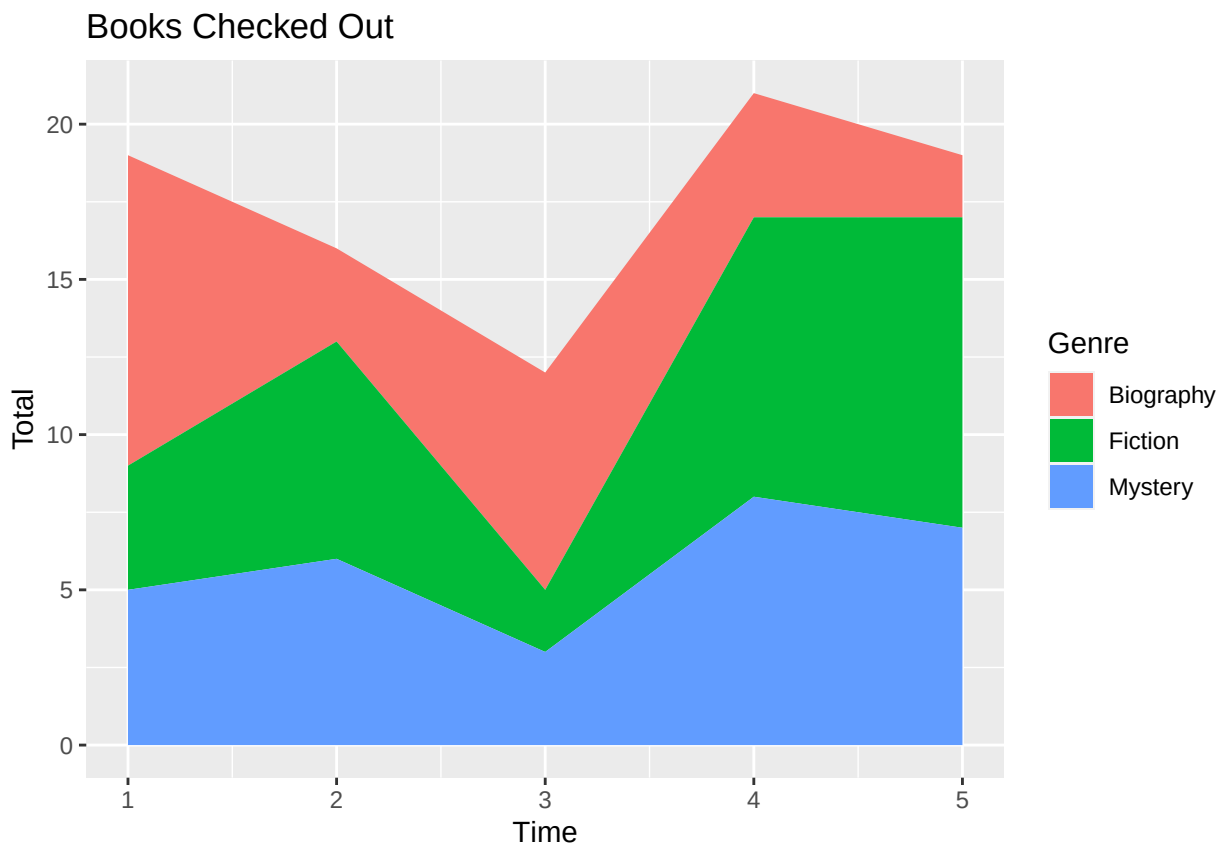
```
library(dplyr)

# create a vector with letters in the desired order
x <- c("i", "b", "d","h","f","a","j","e","g","c")

dat5a <- dat5 %>%
slice(match(x, names))

dat5$names <- reorder(names,var1)

  ggplot(dat5a, aes(x=names, y=var1))+ # reorder(names,var1))) +
    geom_segment( mapping=aes(xend=names, yend=0),col="#006400"  ) +
    geom_point( size=4,color="#006400" ) +
    xlab("")+
    ylab("Variable1")+
    theme(legend.position = "none")
```



Problem 6

Create the figure in the solution for Problem 6, using the data included in the R Markdown file.

```
####Make sure you load any necessary libraries

####PUT YOUR CODE HERE
ggplot(books_checked_out)+
  geom_area(mapping=aes(x=Time,y=Total,fill=Genre))+
  ggtitle("Books Checked Out")
```



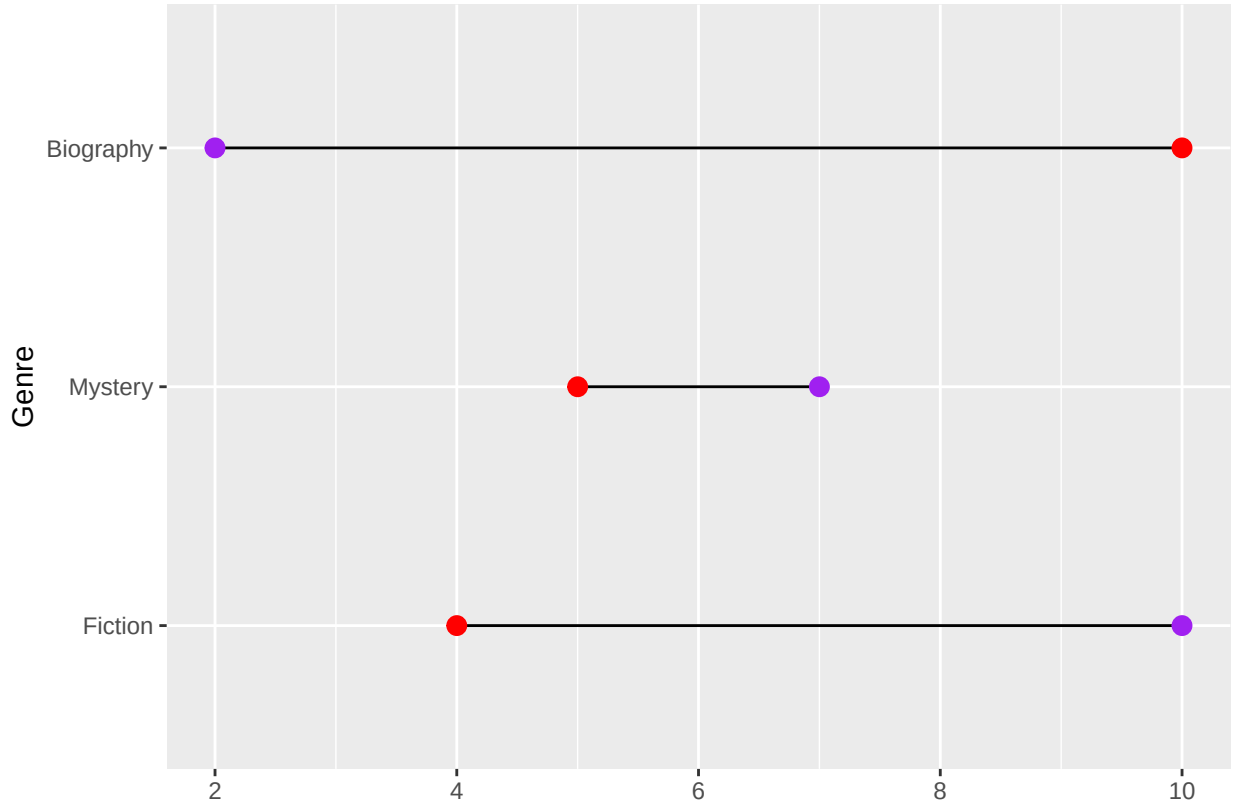
Problem 7

Create the figure in the solution for Problem 7, using the data included in the R Markdown file.

```
####Make sure you load any necessary libraries
#install.packages("SciencesPo")
library(ggalt)
#library(SciencesPo)
####PUT YOUR CODE HERE

# create a vector with letters in the desired order
x <- c("Biography", "Mystery", "Fiction")

books_checked_out2 <- books_checked_out2 %>%
  slice(match(x, Genre))


books_checked_out2
```

```
## # A tibble: 3 x 3
##   Genre     Time1 Time5
##   <chr>     <int> <int>
## 1 Biography    10     2
## 2 Mystery       5     7
## 3 Fiction       4    10
```

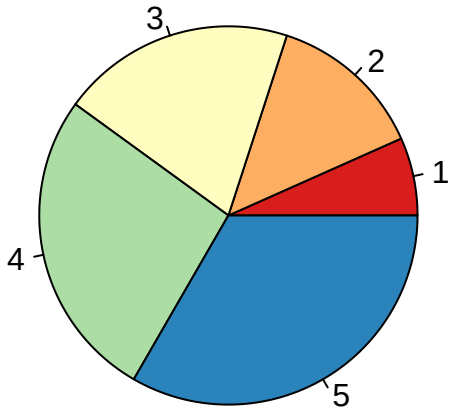
```
ggplot(books_checked_out2, aes(x=Time1, xend=Time5,y= reorder(Genre,Time1-Time5))) +
 #geom_point(size=5)+
   geom_dumbbell(colour_x = "red",
                 colour_xend = "purple",
                 size_x=3,
                 size_xend=3,
                 dot_guide=FALSE,
                 dot_guide_size=0)+

   ylab("Genre")+
  xlab("")
```



Problem 8

Create the figure in the solution for Problem 8, using the data included in the R Markdown file.

```
###HINT: check the Help file for pie to see how to specify the color to the my_color palette

library(RColorBrewer)

my_color<-brewer.pal(5,"Paired")

pie(pie_dat, col=c("#d71e1d","#fdae61","#fffdbf","#abdda4", "#2a83ba"))
```




```
####Make sure you load any necessary libraries

####PUT YOUR CODE HERE
```