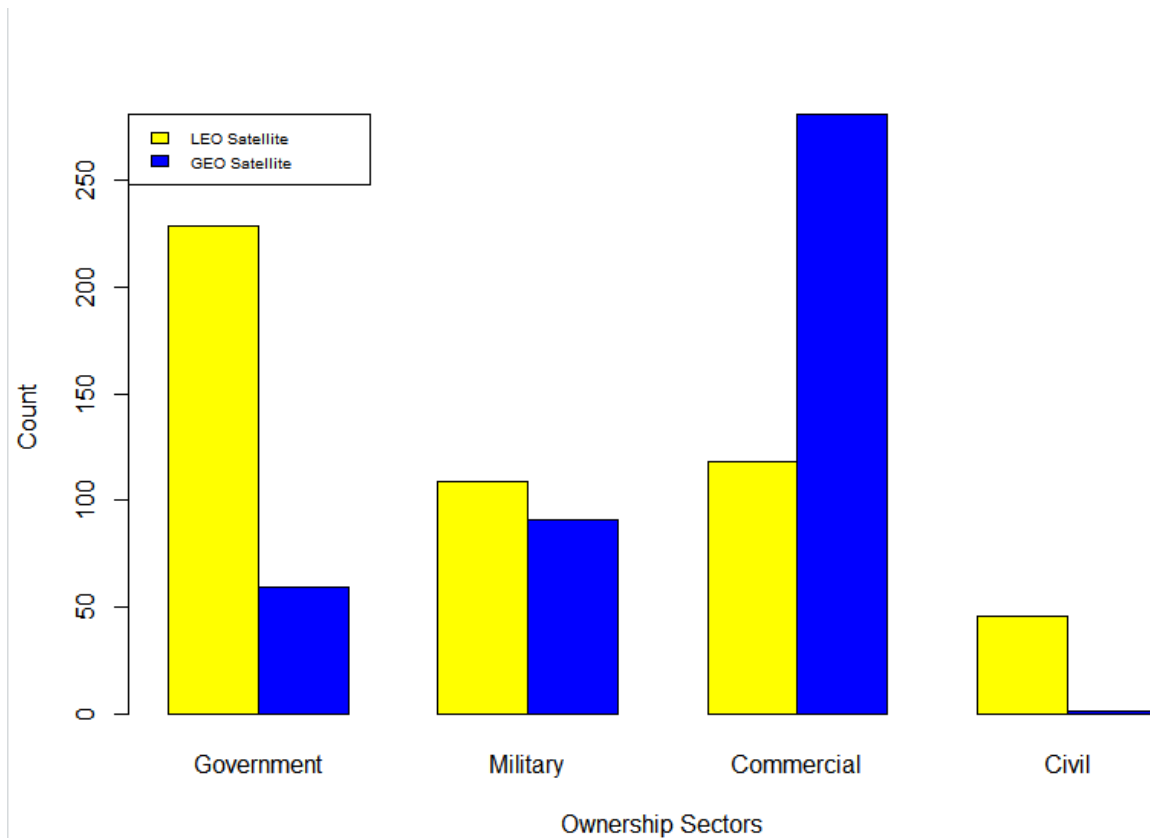


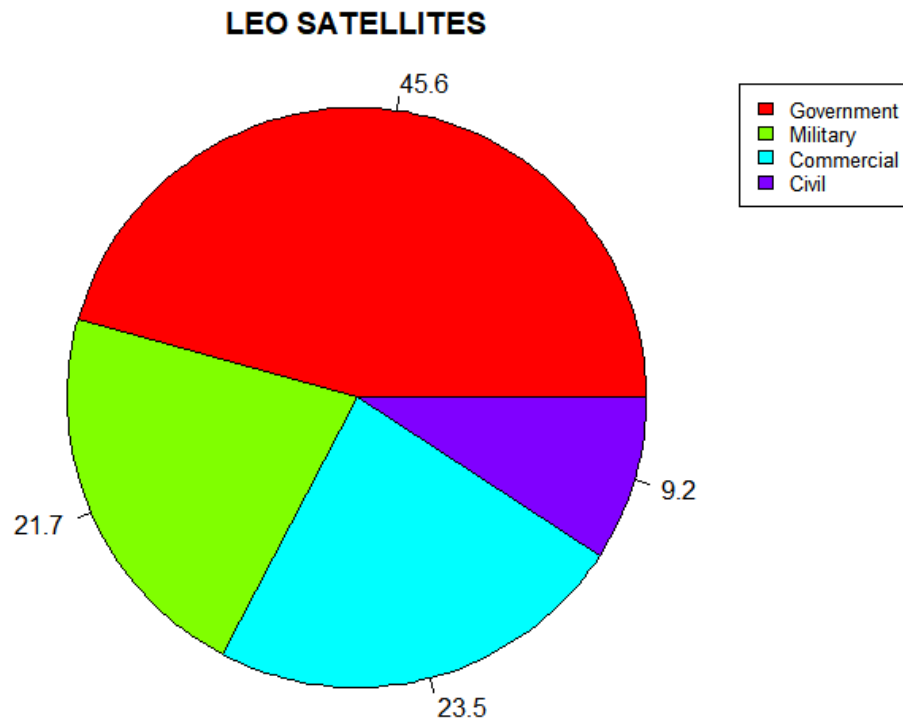
## Question 1:

### R Code and Graphs:

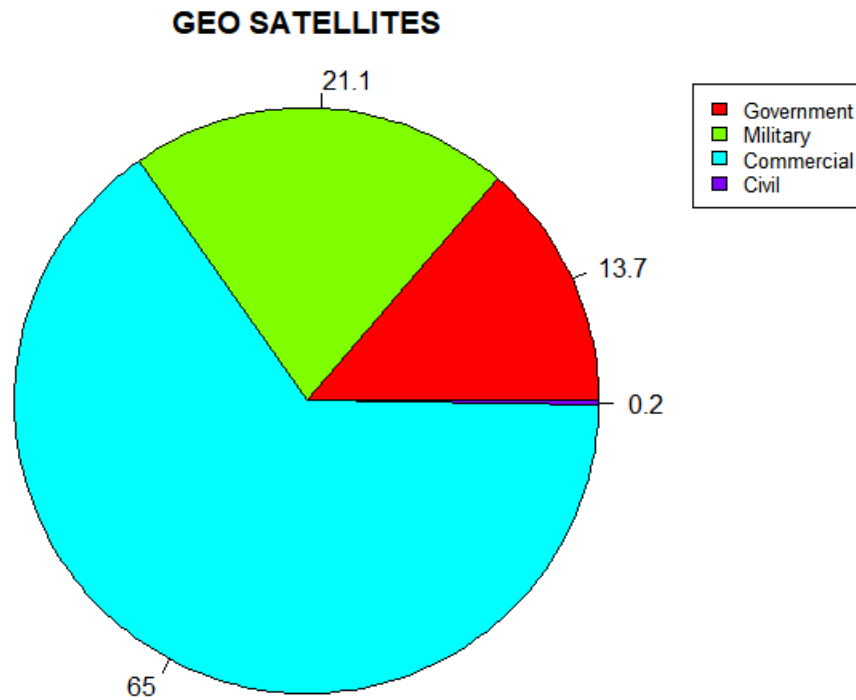
```
sectors = c("Government", "Military", "Commercial", "Civil");  
count_of_LEO = c(229, 109, 118, 46);  
count_of_GEO = c(59, 91, 281, 1);  
colours = c("yellow", "blue")  
top = c("LEO Satellite", "GEO Satellite");  
dm = matrix(c(count_of_LEO, count_of_GEO), nrow = 2, ncol = 4, byrow = TRUE)  
counts = rbind(count_of_LEO, count_of_GEO);  
barplot(counts, beside=TRUE, width=.3, names.arg = sectors, xlab = "Ownership Sectors",  
ylab="Count", col = colours)  
legend("topleft", top, cex = 0.6, fill = colours)
```



```
leo <- c(229,109,118,46);
labels <-c("Government","Military","Commercial","Civil");
piepercent<- round(100*leo/sum(leo), 1)
pie(leo, labels=piepercent, main = "LEO SATELLITES", col = rainbow(length(leo)),
radius = 1)
legend("topright", labels, cex = 0.8, fill = rainbow(length(leo)))
```



```
geo <- c(59,91,281,1);
labels <-c("Government","Military","Commercial","Civil");
piepercent<- round(100*geo/sum(geo), 1)
pie(geo, labels=piepercent, main = "GEO SATELLITES", col = rainbow(length(geo)),
radius = 1)
legend("topright", labels, cex = 0.8,fill = rainbow(length(geo)))
```



### Observations:

After analysis the data by using a pie chart, we observe that a large portion of Geo satellites are owned by the Government sector but most Geo Satellites are being used in the Commercial sector. But in the small portion of both Geo and Satellites are being used in the civil sector. This is mainly apparent from how they take considerable portions in the pie charts which give a good overview of the data.