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**19BCE1027**

**LAB 04**

**Consider the below sample Bank dataset**

Age Group	Number of Loans	Bad Loans	Good Loans	Bad Rate
21-24	310	14	296	4.5
24-27	511	20	491	3.9
27-30	4000	172	3828	4.3
30-33	4568	169	4399	3.7
33-36	5698	188	5510	3.3
36-39	8209	197	8012	2.4
39-42	8117	211	7906	2.6
42-45	9000	216	8784	2.4
45-48	7600	152	7448	2
48-51	6000	84	5916	1.4
51-54	4000	64	3936	1.6
54-57	2000	26	1974	1.3
57-60	788	9	779	1.1

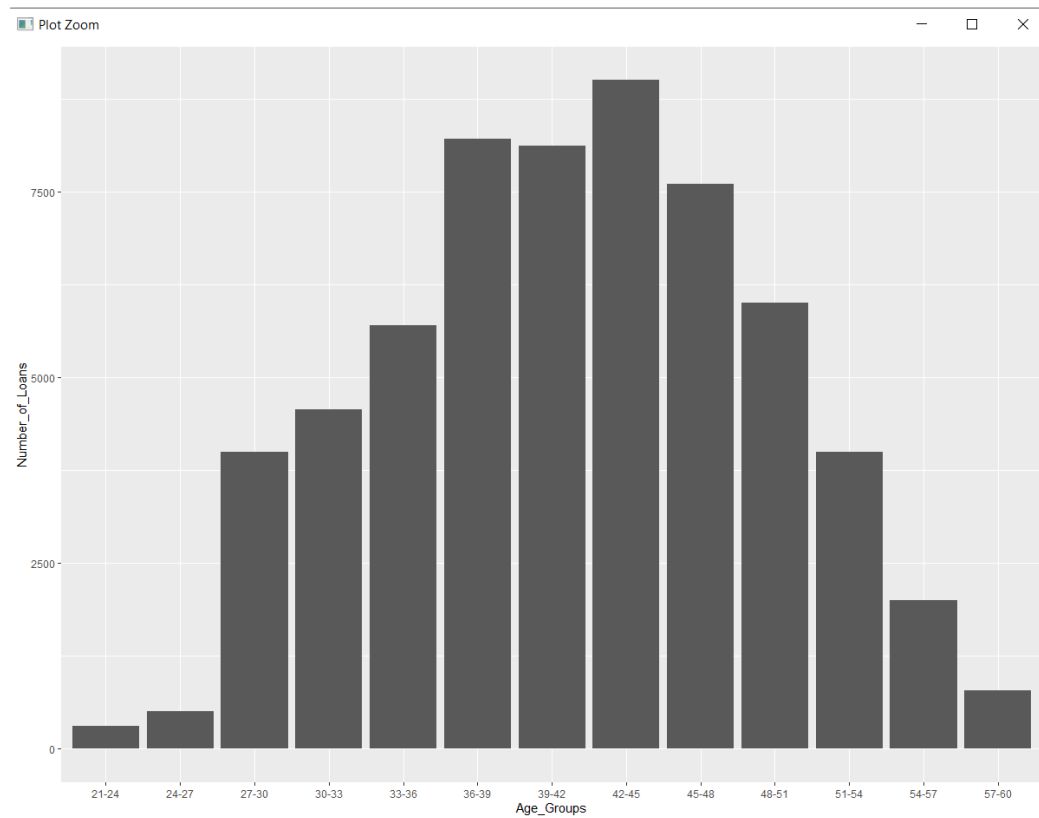
**And Construct the following charts using “ggplot2 and ggvis” packages**

```
library(ggplot2)
```

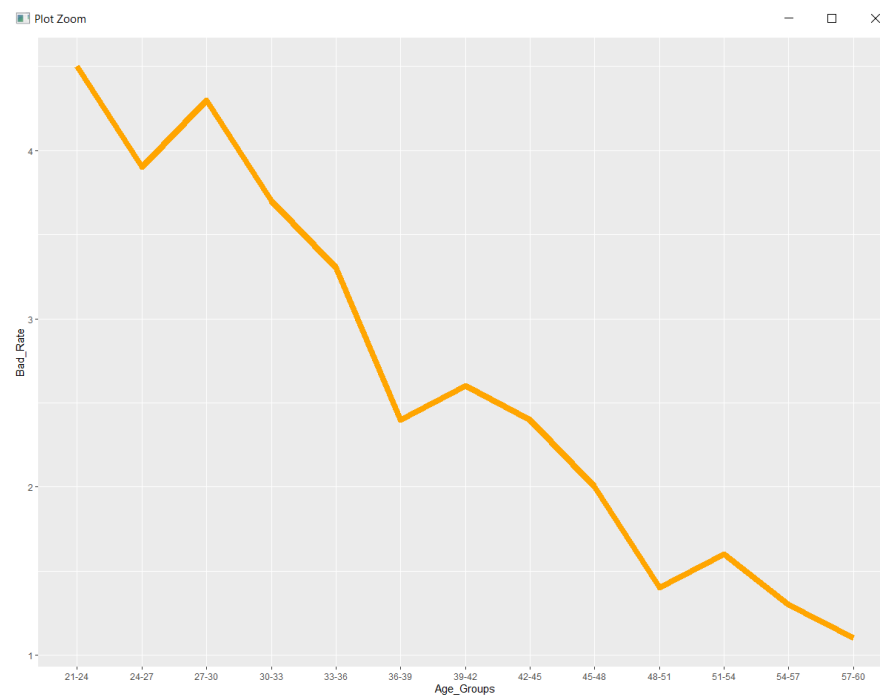
```
library(ggvis)
```

```
df=read.csv("C:\\Users\\aryam\\Desktop\\Fall Sem 2021\\Data Visualization Lab\\LAB 4 24-8-21\\Book1.csv")
```

```
ggplot(df, aes(x = Age_Groups,y = Number_of_Loans))+ geom_bar(stat='identity')
```



```
ggplot(df, aes(x = Age_Groups, y = Bad_Rate, group = 1)) + geom_line(color = "orange") +  
  geom_line(aes(y = Bad_Rate), size = 3, color = "orange")
```



```

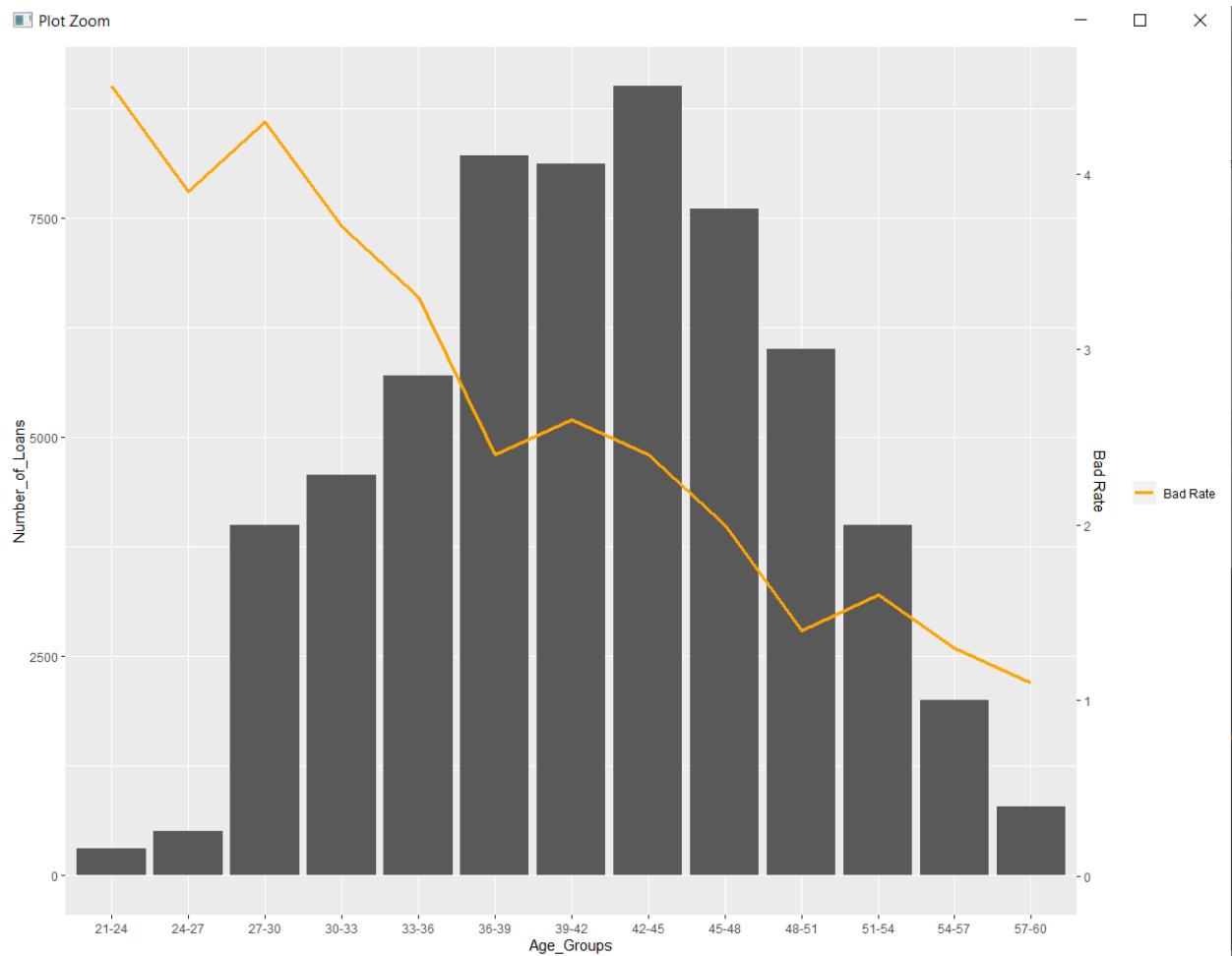
ggplot(df) + geom_bar(aes(x=Age_Groups, y=Number_of_Loans),stat="identity")+

  geom_line(aes(x=Age_Groups, y=Bad_Rate*2000,color="Bad Rate"),stat="identity",group = 1,
size=1.3)+

  scale_colour_manual("", breaks = c("Bad Rate"), values = c("orange")) +

  scale_y_continuous(sec.axis = sec_axis(~ . / 2000, name = "Bad Rate"))

```



## Practical Exercise - II

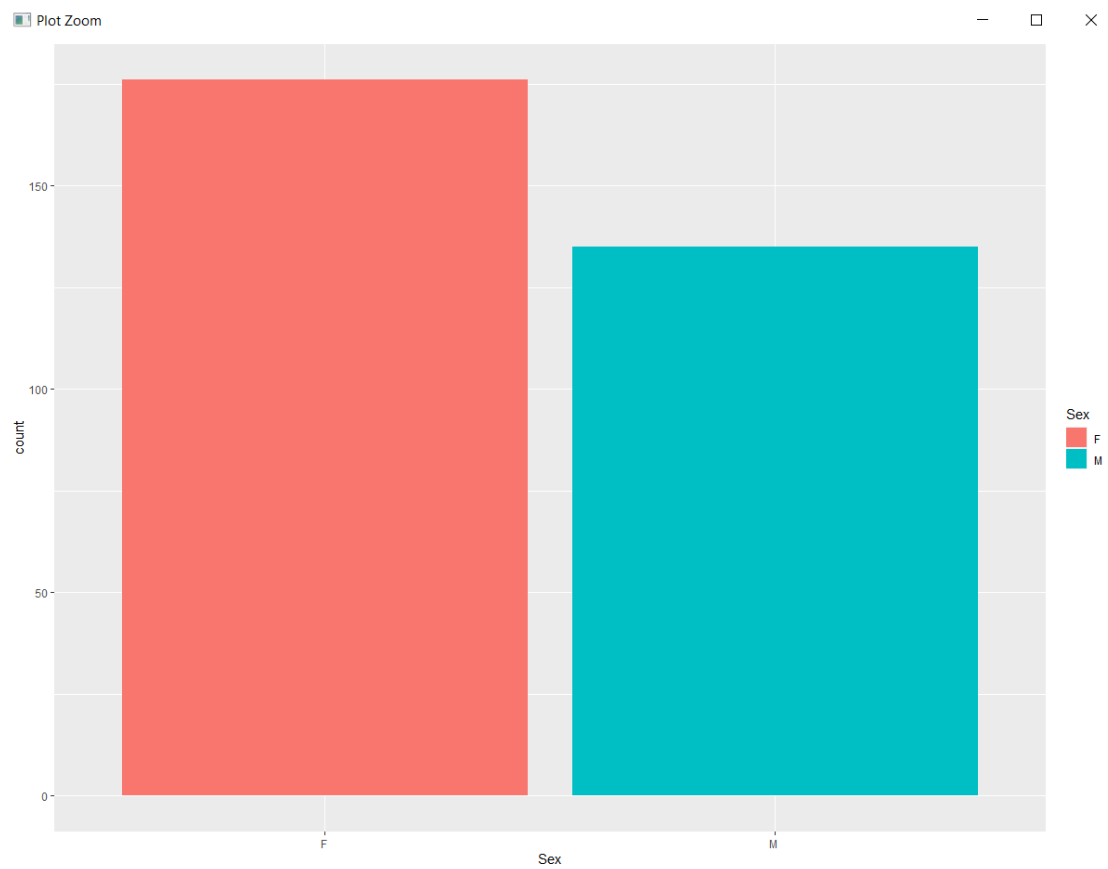
Use the HR dataset to do the visual analytics with respect to the following points.

1. Plot the number of employees belong to male and female category
2. Plot the number of employees recruited through various recruitment sources
3. Plot the no. of employees under each marital categories
4. Plot the no. of employees under each marital categories with different colours
5. Plot the no. of employees under each marital categories in horizontal manner
6. Plot pie chart to represent employees belongs to various departments
7. Use histogram and density to plot employment status

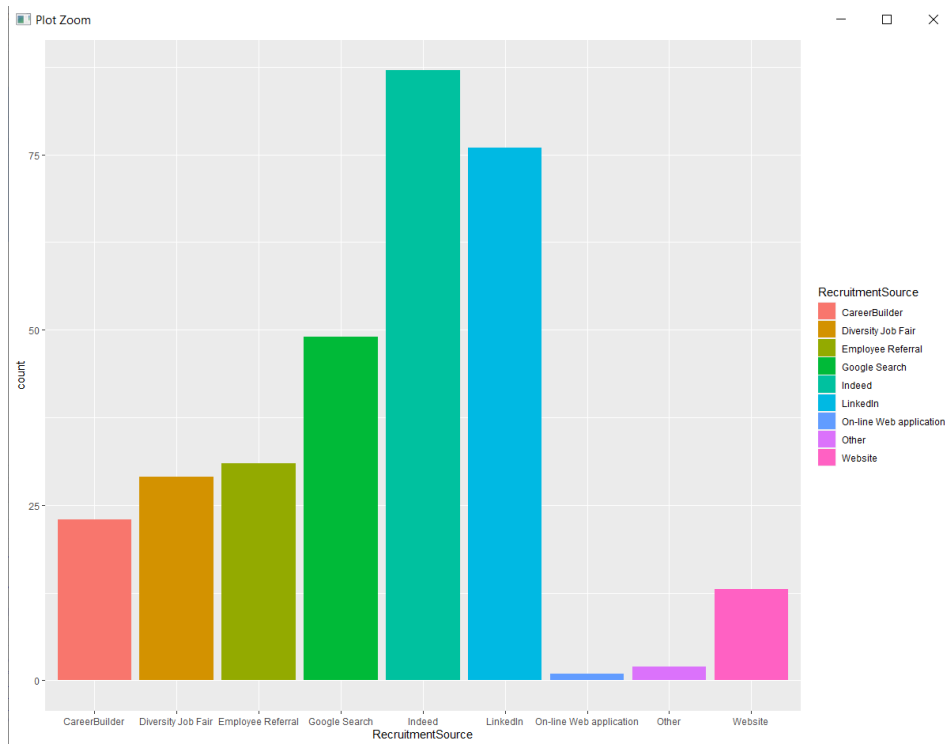
```
library(ggplot2)
```

```
df=read.csv("C:\\Users\\aryam\\Desktop\\Fall Sem 2021\\Data Visualization Lab\\LAB 4 24-8-21\\HRDataset_v14.csv")
```

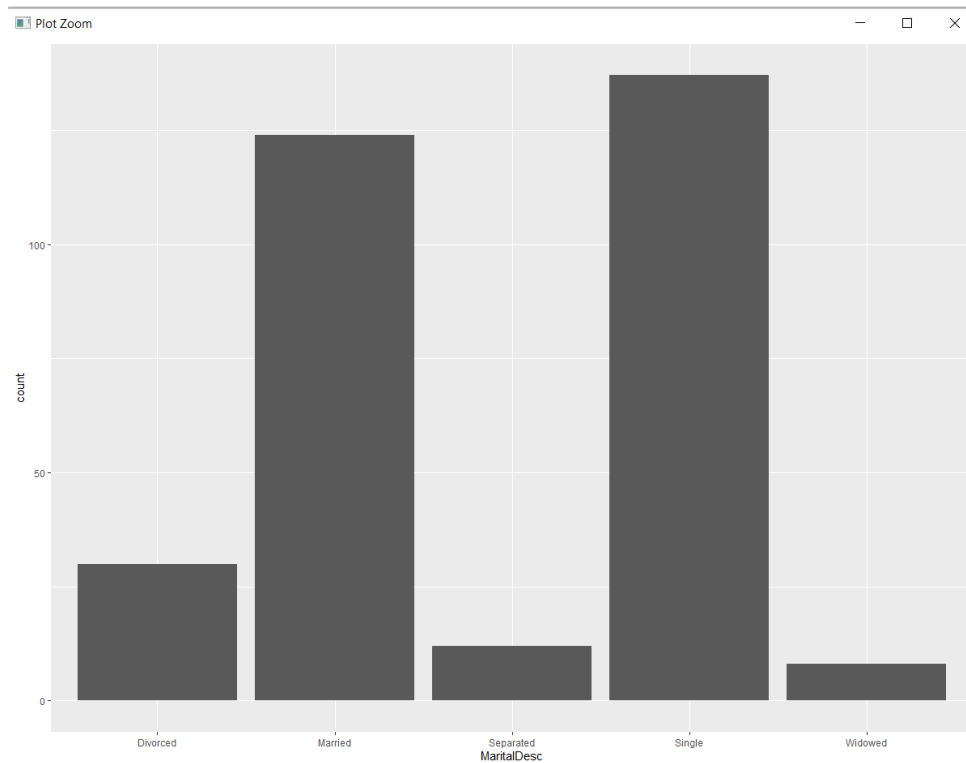
```
ggplot(df, aes(x= Sex,fill=Sex)) + geom_bar()
```



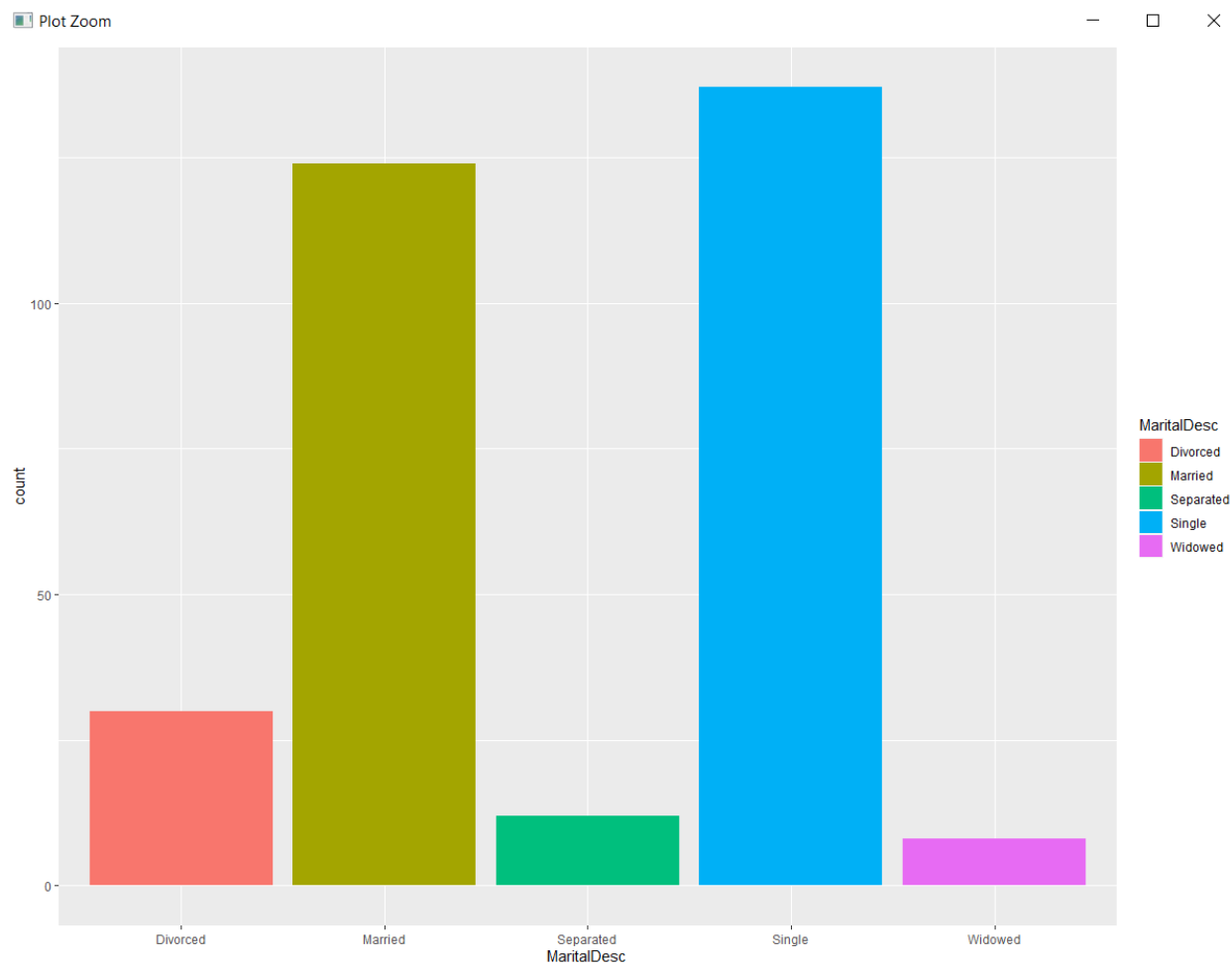
```
ggplot(df, aes(x= RecruitmentSource,fill=RecruitmentSource)) + geom_bar()
```



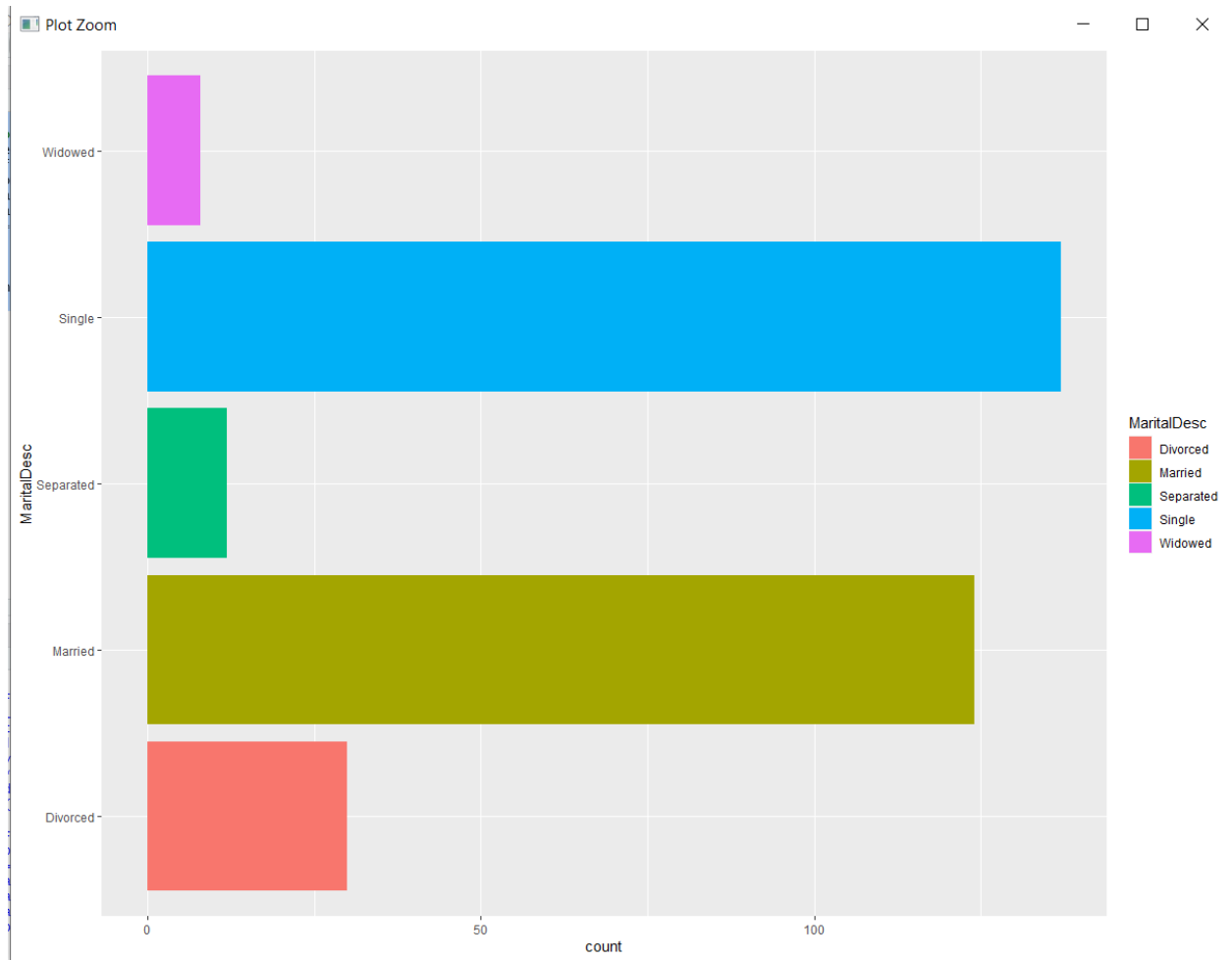
```
ggplot(df, aes(x= MaritalDesc)) + geom_bar()
```



```
ggplot(df, aes(x= MaritalDesc,fill=MaritalDesc)) + geom_bar()
```



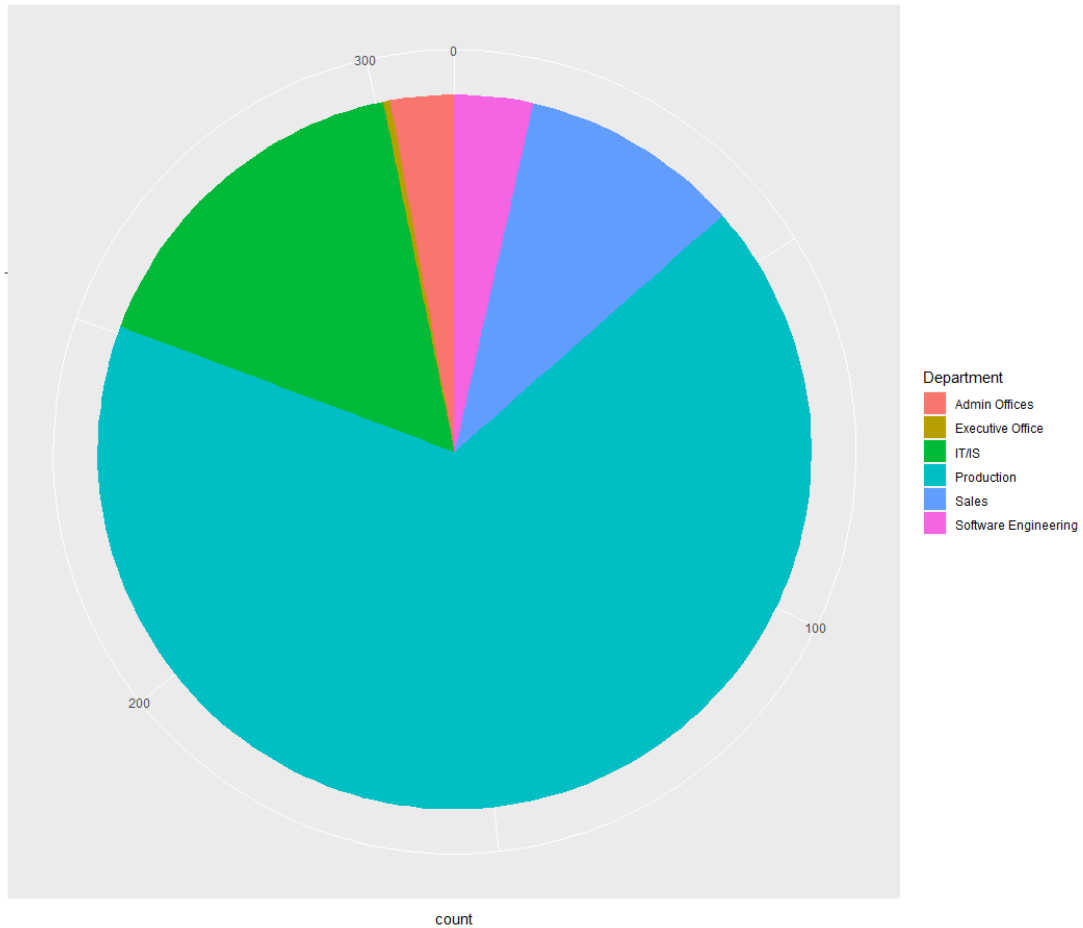
```
ggplot(df, aes(x= MaritalDesc,fill=MaritalDesc)) + geom_bar()+ coord_flip()
```



```
ggplot(df, aes(x = factor(""), fill = Department))+ geom_bar()+  
coord_polar(theta = "y") +  
scale_x_discrete("")
```

Plot Zoom

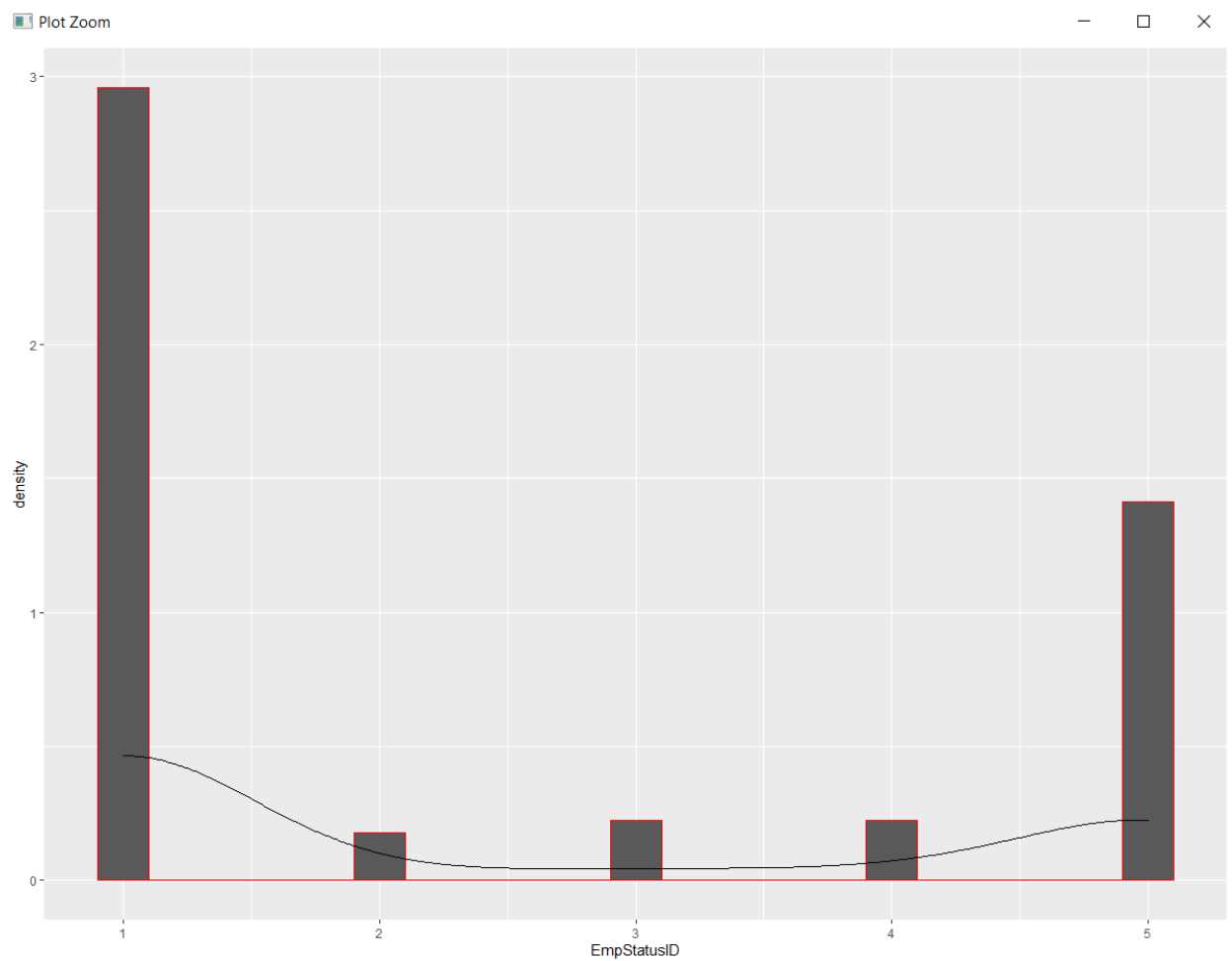
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```
ggplot(df, aes(EmpStatusID) ) +
```

```
  geom_histogram(color="red",binwidth = 0.2, aes(EmpStatusID, ..density..))+ geom_density()
```



**CONCLUSION:ALL PRACTICAL EXERCISES HAVE BEEN SUCCESSFULLY EXECUTED.**