Advanced Programming with R - Homework 1

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Titanic Disaster

In this section we load the **Titanic** dataset which contains the **survival data** of passengers from the **Titanic disaster**. It **summarizes** the counts of **passengers** based on **class**, **age**, **sex** and **survival status**. Lets see the **preview** of the data.

```
  Class    Sex   Age Survived Freq
1   1st   Male Child       No    0
2   2nd   Male Child       No    0
3   3rd   Male Child       No   35
4  Crew   Male Child       No    0
5   1st Female Child       No    0
6   2nd Female Child       No    0
```

We can see **top 6 values** of our data above. The data has **5 variables**. Now we will see the structure.

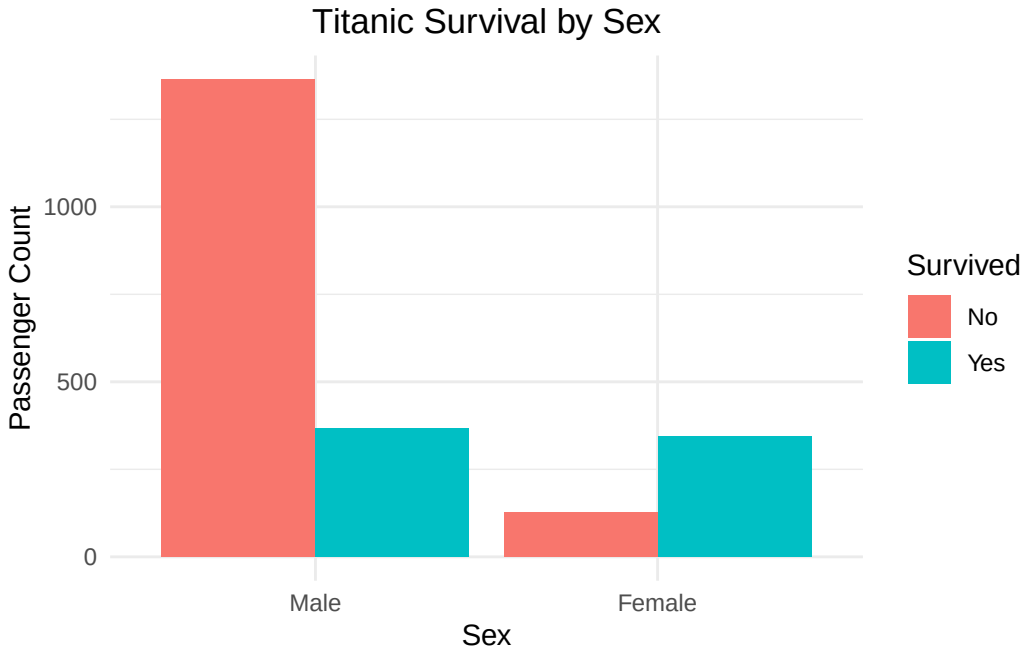
```
'data.frame':   32 obs. of  5 variables:
 $ Class   : Factor w/ 4 levels "1st","2nd","3rd",..: 1 2 3 4 1 2 3 4 1 2 ...
 $ Sex     : Factor w/ 2 levels "Male","Female": 1 1 1 1 2 2 2 2 1 1 ...
 $ Age     : Factor w/ 2 levels "Child","Adult": 1 1 1 1 1 1 1 1 2 2 ...
 $ Survived: Factor w/ 2 levels "No","Yes": 1 1 1 1 1 1 1 1 1 1 ...
 $ Freq    : num  0 0 35 0 0 0 17 0 118 154 ...
```

There are total **32 observations** of **5 variables** in the **Titanic dataset.** The variables are as follows:

- ***Class*** - It shows the **passenger class**. It is a **factor variable** with 4 levels: **"1st"**, **"2nd"**, **"3rd"** and **"Crew"**.

- ***Sex*** - It shows **passenger's sex**. It is also a **factor variable** with 2 levels: **"Male"** and **"Female"**.
- ***Age*** - It shows the **age group** of the **passenger**. It is also a **factor variable** with 2 levels: **"Child"** and **"Adult"**.
- ***Survived*** - It shows the **survival status** of the **passenger**. It is also a **factor variable** with 2 levels: **"Yes"** and **"No"**.
- ***Freq*** - It shows the **count** of the **passengers** that fall into the specific groups mentioned above. It is a **numeric variable**.

We will now show a simple **bar plot** which displays the **numbe**r of **male** and **female** passengers who **survived** or **did not survived** the incident. We will use the **Sex**, **Survived** and **Freq** column for the plot.



The **red bar** shows the passenger which **did not survived** the incident and the **blue bar** shows the **passenger** which survived. There are **2 bars** both for "**Male**" and **"Female"**. From the above graph we can interpret the following:

- There are aprrox **1350-1400 males** which **did not survived** the incident.
- There are approx **350-400 males** which **survived** the incident.
- There are approx **100-150 females** which **did not survived** the incident.
- There are approx **350-400 females** which **survived** the incident.