**LAB REPORT – 1**

1. **Chosen dataset: Basketball Team Statistics**

**The dataset consists of 500 rows of various basketball teams in United States. After removing NaN from the dataset, the total number of rows were changed to 350 including total number of games played, games won, Participation competition name, Power rating of a team.**

1. **Tasks:**
2. Present a menu to allow users to select a variable and update chart

All the attributes of the basketball team were listed in the drop-down menu and upon selection of a particular attribute, corresponding graphs were displayed.

A picture containing screenshot

Description automatically generated

1. Draw a bar chart if a categorical variable is selected

As shown below, a bar graph is displayed after categorical variable is selected.

A picture containing screenshot

Description automatically generated

1. Draw a histogram if a numerical variable is selected (bin it into a fixed range (equi-width) of your choice)

For histograms, initially I’ve taken 12 number of bins which are of equal range and displayed the corresponding histogram as shown below.

A picture containing screenshot

Description automatically generated

1. On mouse-over display the value of the bar on top of the bar

As shown in the below figure, I’ve used tags to display the value of the bar (bar chart and histogram) on top of each bar.

A screenshot of a video game

Description automatically generated

1. On mouse-over also make the bar wider and higher to focus on it

The image is magnified on mouse-over and color of the selected bar is also changed. After the mouse is moved to different part of the graph, the bar returns to the original color and size.

A picture containing screenshot

Description automatically generated

1. mouse (with left mouse button down) move left (right) should decrease (increase) bin width/size (for numerical variables only)

As shown in the below figure, the number of bins get increased when mouse is moved right and bins get reduced when the mouse is moved left.

A screenshot of a social media post

Description automatically generated

A picture containing screenshot

Description automatically generated

Youtube Video Link : <https://www.youtube.com/watch?v=sUmlbXVH1BI>