# Part III – Statistics for Exploring and Describing Data

Instructions: Type your responses, using a different colored font, for each task by pressing RETURN at the end of the line. **Use complete sentences whenever possible.** Save your completed document as a Word (.doc or .docx) file and upload to the appropriate D2L Assignments/Dropbox folder.

## Task 1

Use StatDisk to get the descriptive statistics for oral exam, written exam and combined score and insert these results into the table below.

|  |  |  |
| --- | --- | --- |
| Oral Exam Data | Written Exam Data | Combined Exam Data |
| *[Delete this text and paste here]* | *[Delete this text and paste here]* | *[Delete this text and paste here]* |

## Task 2

Determine the most appropriate **measure of center** (mean, median, or mode) for each the variables in the dataset. In the *Explanation* column below, provide a brief – one sentence – justification for your selection. You may want to refer to the flow chart created in your notes from section 3-2.

|  |  |  |
| --- | --- | --- |
| **Variable** | **Measure of Center** | **Explanation** |
| Race |  |  |
| Position |  |  |
| Oral exam |  |  |
| Written exam |  |  |
| Combined score |  |  |

## Task 3

* Sort the data according to position and create a **modified, side-by-side boxplot** of the combined score data for the positions. Copy and paste the boxplots below.
* Analyze the side-by-side modified boxplots and summarize the differences you see between the two groups. Explain why these results are reasonable.

## Task 4

* Outliers in a modified boxplot are shown with an asterisk. To determine if there are outliers, and what are the highest and lowest boundary data values, complete the calculations below.
  + Interquartile Range
  + Lowest boundary value
  + Highest boundary value
* Any data value outside these boundaries is an outlier in the modified boxplot. List data below for outliers in either position.