The University of Portland
Donald P. Shiley School of Engineering

EGR361
Analysis of Engineering Data

HOMEWORK 2—Descriptive Statistics

<u>**Assigned:**</u>   Wednesday, January 25, 2017
<u>**Due:**</u>   Monday, January 30, 2017
<u>**Text:**</u>   2-1, 2-4

<u>**Problems:**</u>

1) The exam scores of 23 students taking a class are as follows:

   {86, 95, 87, 80, 76, 71, 97, 56, 88, 87, 57, 89, 60, 79, 93, 91, 89, 82, 87, 86, 85, 95, 62}

   Determine the following statistical parameters:

   a) MEAN; b) MEDIAN; c) MODE; d) MIN & MAX; e) RANGE;
   f) Q1 (first quartile); g) Q2 (second quartile); h) Q3 (third quartile);
   i) IQR (interquartile range);
   j) L-FENCE (lower fence); k) U-FENCE (upper fence);
   l) Sample Variance; m) Sample Std. Deviation.

   Also, provide a Box & Whisker Plot.

2) The following is a list of payments made by customers at Starbucks Coffee for their drinks over a period of ½ hour:

   {$2.75, $2.50, $2.25, $3.50, $2.25, $2.50, $3.50, $2.00, $5.00, $3.00, $2.25, $3.50, $2.00, $3.00}

   Determine the following statistical parameters:

   a) MEAN; b) MEDIAN; c) MODE; d) MIN & MAX; e) RANGE;
   f) Q1 (first quartile); g) Q2 (second quartile); h) Q3 (third quartile);
   i) IQR (interquartile range);
   j) L-FENCE (lower fence); k) U-FENCE (upper fence);
   l) Sample Variance; m) Sample Std. Deviation.

   Also, provide a Box & Whisker Plot.

3) In 1992 Portland Trail Blazers and Chicago Bulls played for the NBA finals and the following table provides the points made by all the players of both teams in Game #1:

Player name	Points scored
Terry Porter	13
Clyde Drexler	16
Jerome Kersey	7
Kevin Duckworth	7
Buck Williams	3
Clifford Robinson	16
Danny Ainge	8

Mark Bryant	10
Robert Pack	4
Ennis Whatley	4
Wayne Cooper	0
Alaa Abdelnaby	1
Michael Jordan	39
Scottie Pippen	24
Horace Grant	11
John Paxson	4
Bill Cartwright	5
B.J. Armstrong	11
Scott Williams	12
Cliff Levingston	8
Stacey King	1
Bob Hansen	5
Will Perdue	2

Determine the following statistical parameters:

a) MEAN; b) MEDIAN; c) MODE; d) MIN & MAX; e) RANGE;
f) Q1 (first quartile); g) Q2 (second quartile); h) Q3 (third quartile);
i) IQR (interquartile range);
j) L-FENCE (lower fence); k) U-FENCE (upper fence);
l) Sample Variance; m) Sample Std. Deviation.

Also, provide a Box & Whisker Plot.

Resources for further reading:

https://www.mathsisfun.com/data/quartiles.html

http://web.mnstate.edu/peil/MDEV102/U4/S36/S363.html