Interquartile Range(IQR)

• What is the purpose of IQR?

To know the outlier range present in the dataset.

IQR = Q3-Q1

Less Than
Outlier range= Q1- 1.5*IQR

Greater Outlier
Greater Than
Outlier range= Q3+ 1.5*IQR

Reason for multiplying 1.5 with IQR to find the lesser outlier, and greater outlier

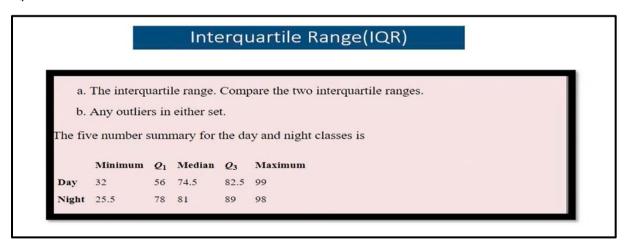
Multiplying the IQR by 1.5 helps us decide which numbers in a dataset are much smaller or much larger than most of the numbers. This factor of 1.5 was chosen because it usually does a good job of finding unusual numbers without incorrectly flagging normal numbers as unusual. It's a simple and effective way to spot outliers.

Important points to note:

The 1.5 multiplier is a rule of thumb, and it might not be suitable for all datasets, especially those with a significant number of outliers or non-normal distributions.

There are other, more robust methods for outlier detection, and the IQR rule is a simple starting point.

Q) 2



How to identifies outliers:

• Lower Bound: Q1 - (1.5 * IQR) - Any data point below this value is considered a lesser outlier.

• **Upper Bound:** Q3 + (1.5 * IQR) - Any data point above this value is considered a greater outlier.

To find IQR

Solution-

Day

= 122.25 No outlier found because maximum number is within the outlier limit

Night