

Data Analysis with Java

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# 데이터 분석 프로그래밍 05

# Objective of Today's Class

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## **IQR(Interquartile Range)**

- ▶ A Measure of Variability, Based on Dividing a Data Set into Quartiles

# IQR(Interquartile Range)

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## IQR

- ▶ A measure of statistical dispersion, being equal to the difference between 75<sup>th</sup> and 25<sup>th</sup> percentiles, or between upper and lower quartiles.

$$IQR = Q_3 - Q_1$$

$Q_1 = \text{Lower Quartile Part}$

$Q_3 = \text{Upper Quartile Part}$

$$\text{Minimum} = Q_1 - 1.5 \times IQR$$

$$\text{Maximum} = Q_3 + 1.5 \times IQR$$

# P1

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## Composing IQR Module

- ▶ Compose an IQR Module
- ▶ Input numbers : 1 2 5 6 7 9 12 15 18 19 27
- ▶ Calculate Q1, Q3, IQR, Minimum and Maximum numbers

# P2

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## Practicing RA

- ▶ Find any related data from the internet
- ▶ The sample size should be more than 100
- ▶ The number of independent variables should be more than 5

# P3

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## Practicing RA with IQR

- ▶ Before doing RA of #4, remove outliers through IQR
- ▶ Find any related data from the internet
- ▶ The sample size should be more than 100
- ▶ The number of independent variables should be more than 5