Report lab1

Subject

Trnag giới thiệu

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# **TEACHER’S COMMMENTS**

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# **WORK DISTRIBUTION**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Tran Hoang Phuc  (Leader) | Le Ba Nhat Long | Nguyen Viet Hoang | Le Anh Duy | Nguyen Hung Tuan |
| Problem statement |  |  |  |  |  |
| Build the report template |  |  |  |  |  |
| Do all exercise with Excel |  |  |  |  |  |
| Do all exercise with R |  |  |  |  |  |
| Do all exercise with Python |  |  |  |  |  |
| Summarize and edit reports |  |  |  |  |  |
| Completion(%) | 100% | 100% | 100% | 100% | 100% |

# **MEANING OF VALUES**

# **A. GDP OF VIETNAM**

## **1.USING MS EXCEL, R AND PYTHON PROGRAMMING LANGUAGE:**

### **1.1 Analyzing by using Excel**

Data:

A table with numbers and numbers

Description automatically generated

If Excel doesn't have the Data Analysis function, add it by following these steps:

File -> Options -> Adds-in -> Go -> Analysis ToolPak -> OK.

Ảnh có chứa văn bản, ảnh chụp màn hình, phần mềm, Phần mềm đa phương tiện

Mô tả được tạo tự động

Ảnh có chứa văn bản, ảnh chụp màn hình, màn hình, phần mềm

Mô tả được tạo tự động

Perform Descriptive Statistics by following these steps:

**Step 1:** Select Data -> Data Analysis.

Ảnh có chứa văn bản, ảnh chụp màn hình, màn hình, phần mềm

Mô tả được tạo tự động

**Step 2:** Select Descriptive Statistics -> OK

**Step 3:** The Descriptive Statistics dialog box appears:

3.1: **Input Range**: Select the cells that you want to analyze.

3.2: **Output Range**: Select the cell where you want the results to appear.

3.3: Select **Summary Statistics** to perform the calculations.

3.4: Click OK.

A screenshot of a computer

Description automatically generated

Result:

A screenshot of a data

Description automatically generated

### **1.2 Analyzing by using R**

Import data:

A screenshot of a computer

Description automatically generated

A screenshot of a computer program

Description automatically generated

To calculate the Skewness and Kurtosis values, you need to add the **‘e1071’** library.

To add the library, use the **require(<Library name>)** function.

### **1.3 Analyzing by using Python**

**Step 1:** Import the necessary library

A screenshot of a computer code

Description automatically generated

**Step 2:** Import data and show data

A screenshot of a computer

Description automatically generated

**Step 3:** To calculate values like mean, median, mode, variance, and standard deviation, we use the **statistics** library.

A screenshot of a computer

Description automatically generated

**Step 4:** To calculate quantile we use the **numpy** library.

A close-up of a web page

Description automatically generated

**Step 5:** To calculate values like skewness and kurtosis, we use the **scipy.stats** package of the **scipy** library.

A screenshot of a computer

Description automatically generated

## **2. DATA VISUALIZATION**

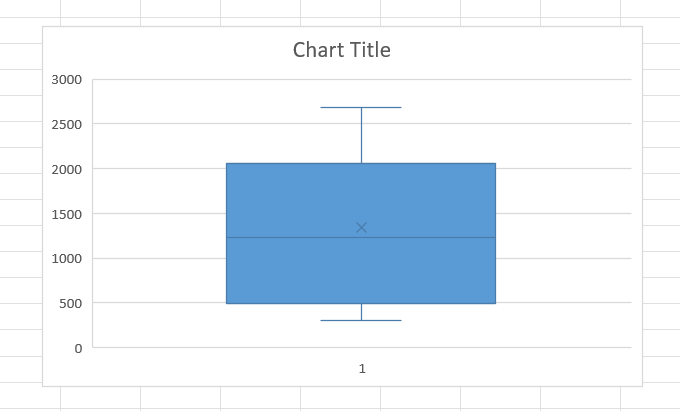
### **2.1 Using Excel**

Box Plot

**Step 1:** Select the values to plot in the boxplot.

**Step 2:** Choose Insert -> Charts -> All Charts -> Box and Whisker -> OK.

Result:



Histogram

**Step 1:** Choose Data -> Data Analysis -> Histogram.

**Step 2:** Select the values to plot in the Input Range.

**Step 3:** Select the cell where you want the results to appear.

**Step 4:** Select Chart Output to display the chart.

A screenshot of a computer

Description automatically generated

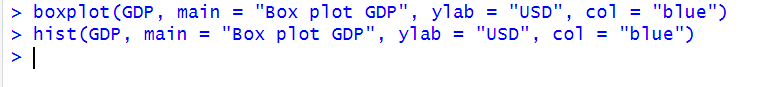
**Step 5:** Click OK. The chart appears:

A graph with blue bars and black text

Description automatically generated

### **2.2 Using R**

Command to draw Box Plot and Histogram.



Box Plot

A blue box with black lines

Description automatically generated

Histogram

A blue graph with white text

Description automatically generated

### **2.3 Using Python**

Import **matplotlib.pyplot** library.

A white rectangular sign with black text

Description automatically generated

Histogram

A graph with blue squares

Description automatically generated with medium confidence

Box Plot

A graph with lines and numbers

Description automatically generated

# **B. COMPUTER REPAIR TIMES**

## **1.USING MS EXCEL, R AND PYTHON PROGRAMMING LANGUAGE:**

### **1.1 Analyzing by using Excel**

### **1.2 Analyzing by using R**

### **1.3 Analyzing by using Python**

## **2. DATA VISUALIZATION**

### **2.1 Using Excel**

### **2.2 Using R**

### **2.3 Using Python**

# **C. COLLEGES AND UNIVERSITIES**

## **1.USING MS EXCEL, R AND PYTHON PROGRAMMING LANGUAGE IN EXAMPLE 4.21**

### **1.1 Analyzing by using Excel**

### **1.2 Analyzing by using R**

### **1.3 Analyzing by using Python**

## **2. MEANING OF CORRELATION AND COVARIANCE COEFFICIENTS IN EXAMPLE 4.22**

### **2.1 Analyzing by using Excel**

### **2.2 Analyzing by using R**

### **2.3 Analyzing by using Python**

# **D. HOME MARKET VALUE**

## **USING MS EXCEL, R AND PYTHON PROGRAMMING LANGUAGE IN EXAMPLE 4.23**

### **1.1 Analyzing by using Excel**

### **1.2 Analyzing by using R**

### **1.3 Analyzing by using Python**

# **E. STATISTICAL THINKING IN BUSINESS DECISIONS:**

## **1. DEFINITION: WHAT IS STATISTICAL THINKING IN BUSINESS DECISIONS?**

## **2. ILLUSTRATION EXAMPLE OF STATISTICAL THINKING IN BUSINESS DECISIONS**

# **F. REFERENCES**