University of Khartoum
Faculty of Mathematical Sciences and informatics
Department of Statistics
Descriptive statistics
Project

Instructions:

1- Read the questions carefully before answering them
2- You can solve this project individually or in a group of no more than three members, and the group members must be in the same Lab group.
3- Convert the output file to PDF.
4- PDF should be sent to the email of lab teacher which will be send later
5- Deadline to this project will be on **Wednesday 7 September 2022**.
6- Each project submitted after that will not be accepted.

Now

Suppose you are the head of research unit in a certain company. You have this annual report about employees you should give at the end of the year to the company board. You've already collected the data and saved it in dataset called employee data.

Variables are:

Id	Employee Code
Gender*	Gender
Bdate	Date of Birth
Educ*	Educational Level (years)
Jobcat*	Employment Category
Salary*	Current Salary
Salbegin*	Beginning Salary
Jobtime*	Months since Hire
Prevexp*	Previous Experience (months)
Minority*	Minority Classification

You have several tasks to be done:

Task #1:

Summarize (describe) every starred variable numerically and graphically with an appropriate summarizing method.

Task#2:

Last year at the company board meeting, one of the members complains about the educational level categorization, he wanted to divide his employees into (high school degree, college degree, higher education degree), so he can see the distribution of his employees at each category. You have to do it this year.

High school degree: <=14 years

College degree: 15-17 years

Higher education degree: >17 years

Task#3:

Summarize (numerically) **employment category** (clerks, custodial and manager) with **minority classes** simultaneously.

Task #4:

At the end of the company board meeting, the manger decided to increase the current salary for all employees based on **Beginning Salary** and **Employment Category** as following:

- For each manager add 20% of his Beginning Salary.
- For each Clerical add 15% of his Beginning Salary.
- For each Custodial add 10% of his Beginning Salary

Summarize new salary numerically and graphically.

Task #5:

Calculate the Correlation coefficient between

a) Salary and employee's previous experience.
b) Beginning Salary and Educational Level Categories.

GOOD LUCK