TECHNICAL UNIVERSITY OF KENYA
SCHOOL OF COMPUTING
STATISTICAL AND FINANCIAL ACCOUNTING SOFTWARE
C.A.T ONE
INSTRUCTIONS: attempt all questions
: CRYING IS PERMITTED, BUT DO IT QUIETLY

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a) Define the following terminologies as they relate to statistical and accounting software giving an example in each case (6 marks)

i. Kurtosis
ii. OLAP
iii. Statistics

b) Describe the main data types available within R and give an example of each (4 marks)

c) Make the matrix A equal to the one below in R (4 marks)

1 2 4 4
3 5 3 4

i. Add 3 to each element in the matrix and call this matrix B (2 marks)

ii. Write an R command to create the matrix B in a csv file under the name "matrixB.csv" (2 marks)

d) Describe any four goals of security within A.I.S giving an example on how each could be enforced (4 marks)

e) Describe any 4 types of reports generated by MIS (4 marks)

f) Describe the procedure of creating a new User account within QuickBooks (3 marks)

g) Write an R command that allows us to create a plot of the students performance in mathematics versus programming from a dataset called "students" (4 marks)

h) Describe the expenditure transaction cycle when modeling financial systems clearly outlining its steps (5 marks)

i) Differentiate between nominal, ordinal, interval and ratio scales as used in SPSS (2 marks)

j) Write the equivalent python command that we can use to select rows 5 through 10 and the first third and fifth column from a data frame called staffData. (5 marks)

k) How do we check the datatype for a column called "names" for a dataframe called "dfStudents (3 marks)

l) How do we check the data types for all the columns within the dataframe dfStudents (2 marks)