CCS 4406: DECISION SUPPORT SYSTEMS ASSIGNMENTS

ASSIGNMENT ONE- (Hand in two week time)

a) Demonstrate your understanding of the following classification of decisions in organizations, where possible provide an example. [6marks]

i) Structured

ii) Unstructured

b) Explain the role of heuristics in decision making , hence provide a case based example of heuristics implementation in decision making [6marks]

c) Explain your understanding of decision making under uncertainty environments, hence illustrate an appropriate tool that can be used to make the decision. [4marks]

d) Illustrate how decision support systems can be used in the following areas, hence provide an appropriate tool/ algorithm that aids in the decision making. [6marks]

   i. Route optimization.
   ii. Agriculture Crop management.

e) Differentiate between prescriptive and Predictive data modeling in the context of decision making [4marks]

f) Demonstrate your understanding of the application of Business Intelligence Applications in a retail supermarket [4marks]

ASSIGNMENT TWO- (Hand in two week time)

a)You are part of a team tasked with transforming Mombasa city into a smart, sustainable, and efficient urban environment. The city faces challenges in various areas, including transportation, energy management, public services, and citizen engagement. To address these challenges, the city administration is planning to implement a Decision Support System. You are required to suggest decision making tools that can be used nto solve the existing problems. [10 Marks]

b)Differentiate between the following concepts in the context of decision making[6marks]

i. Over fitting
ii. Under fitting

c) Suggest a decision making technique that can be used to solve the following business problems [6marks]

i. Allocation problem,
ii. Classification problem,

d)Provide a predicate logic equivalent to the following natural language assertion" Every man respects his parent" [3marks]

g) Illustrate the application of the following Data Mining decision making techniques and provide a use Cases example of each. [5marks]

   i. Association rules
   ii. Classification