

**061006T4ICT**

**ICT TECHNICIAN LEVEL 6**

**ICT/OS/IT/CR/12/6/A**

**ICT/OS/IT/CR/12/6/B**

**Perform System Analysis and Design**

**July/August 2025**



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION  
COUNCIL (TVET CDACC)**

**PRACTICAL ASSESSMENT**

**DURATION: THROUGH UNIT TRAINING PERIOD**

**INSTRUCTIONS TO CANDIDATE**

1. You are required to perform the following tasks
  - Task 1: Draw a Data flow diagram
  - Task 2: Draw an Entity relationship diagram
  - Task 3: Draw a Structured English tool
  - Task 4: Draw a Decision tree
2. Create a folder with your name and save all your work in this folder.
3. You have been provided with the following resources for the practical tasks:
  - A computer with windows 7 or above and Microsoft Office 2010
  - Printer
  - Printing papers

### TASK 1: Data Flow Diagram

Bidii State Bank provides car and home loans to its banking customers. A potential loan customer meets with a bank loan officer, requests a loan for a certain amount and determines the type of loan. The loan officer checks the customer's credit standing then calculates the interest of the loan and duration. If the customer agrees with the calculation and duration they fill a loan application form.

Car loans for credit worthy customers can be authorized by the loan officer depending on the loan ability of the customer and type of Car. A loan committee must approve all the loans.

Required:

- a) Create a folder called **SAD PRACTICAL 2025** inside **YOUR NAME** folder.
- b) Using Microsoft word application draw a level 1 Data Flow Diagram depicting the information given above.
- c) Save the document as **LOAN** in the **SAD PRACTICAL2025** folder
- d) Print the saved document.

### TASK 2: Entity Relationship Diagram

Haraka transporters pride on having up-to date information on the processing and current location of each shipped item. To do this, transporters relies on a company-wide information system. Shipped items are the heart of the transporter product tracking information system. Shipped items can be characterized by item number (unique), weight, dimensions, insurance amount, destination and final delivery date. Shipped items are entered into the Haraka transporters system at a single retail center. Retail centers are characterized by their type, uniqueID and address. Shipped items make their way to their destination via one or more standard Haraka transportation methods (i.e., flights, truck deliveries). These transportation methods are characterized by a unique scheduleNumber, a type and a deliveryRoute.

Required:

- a) Using Microsoft word application draw Entity Relationship Diagram (ERD) to represent the logic in the narrative.
- b) Save the document as **TRANSPORT** in the **SAD PRACTICAL2025** folder.
- c) Print the saved document.

### TASK 3: Structured English Tool

A company process claims in this manner. First, it determines whether the claimant has ever sent in a claim before; if not, it set up a new record. The claim totals for the year are then updated. Next, it determines if a claimant has policy A or policy B, which differ in deductibles and copayments (the percentage of the claim claimants pay themselves). For both policies, it checks if the deductible has been met (100 for policy A and 50 for policy B). If the deductible has not been met, it applies the claim to the deductible. It then adjusts the copayment by subtracting the percentage the claimant pay (40 percent for policy A and 60 percent for policy B) from the claim. Then it issues a cheque if there is money coming to the claimant, print a summary of the transaction, and update our accounts.

Required:

- a) Write a Structured English to represent the logic in the narrative.
- b) Save the document as **CLAIM** in the **SAD PRACTICAL2025** folder.
- c) Print the saved document.

#### **TASK 4: Decision Tree**

There are mineral rights on a piece of land is only 10% chance that there is oil if drill receives 200,000. The alternative is not to

lieved might have oil underneath it. There lling cost is 10,000. If oil is strike, one he profit is 0.

Required:

- a) Draw a decision tree to represent the logic in the narrative.
- b) Save the document as **TREE** in the **SAD PRACTICAL2025** folder.
- c) Print the saved document.