061306T4CSC

COMPUTER SCIENCE LEVEL 6

ICT/OS/CS/CR/04/6/A

Understand Fundamentals of Programming

Nov/Dec 2024

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

PRACTICAL ASSESSMENT

Time: 3 HOURS

INSTRUCTIONS TO CANDIDATE:

1. You are required to perform the following tasks
    i. TASK 1 : Develop a student fee calculator
    ii. TASK 2: Develop a Water Billing application
2. You have been provided with the following resources for the practical tasks:

- *Computer installed with Java IDE*
- *Separate booklet*

TASK 1: Develop a student fee calculator

M and Y College is a technical institution that offers diploma in computer science. Every student pays a total fee of Ksh. 90000 per year. The government awards scholarship and loan to cater for part of student's fees, while the remainder of the fees is paid by the student.

The scholarship and loan are allocated to the student depending on the band as indicated in the table below.

Band	Scholarship	Loan
1	15000	22000
2	25000	25000
3	35000	27000
4	45000	29000
5	55000	31000

You are requested to develop Java application that will enable the user to enter student admission number, Name, Band (Integers between 1 and 5). The program should then calculate the total amount of fees paid by the government and the fees to be paid by the student.

The application should display the student details, scholarship, loan and total fees by the government and fees to be paid by the student.

TASK 2:
Develop a Water Billing Application

Mango is a company that supplies water to individuals and organizations. Being a graduate of Computer science, you have been contracted to develop a Water Billing Application that prompts the user to input identification number, previous and current meter readings. The program then calculates the units, litres of water consumed in a month and the bill to be paid by the customer.

Units of water consumed are calculated by subtracting previous reading from the current reading.

1 unit is equivalent to 1000 Litres.

Customers pay a standing charge of Ksh.150 and Ksh.15 per unit of water consumed.

The program should display customer identification number, previous reading, current reading, units, litres, standing charge and total amount to be paid.

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