



CTU training solutions

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Faculty of Information Technology								
<p>I declare that I am familiar with, and will abide to the Examination rules of CTU</p> <hr/> <p>Signature</p>	<p align="center">SUBJECT NAME: BEGINNER JAVA</p> <p align="center">SUBJECT CODE: JD521</p>							
	<p>Formative Assessment 3</p> <p>Duration:</p> <p>Date: -</p> <p>Total Marks: 125</p> <p>Total pages: 5</p>				<p>Examiner: Mr. Isaac L</p> <p>Moderator: Mr. Thaveshan</p>			
	Student number							
	Surname:				Initials:		/	%

Instructions:

- Recall to keep a copy of all submitted assignments.
- All work must be typed using Microsoft Word and convert the word document to PDF before uploading to COLCampus.
- Kindly note that you will be evaluated on your writing skills in all your assignments.
- Negative marking will be applied if you are found guilty of plagiarism, poor writing skills or if you have applied incorrect or insufficient referencing.
- Each assignment must include a cover page, table of contents and full bibliography, based on Harvard referencing style.
- Students are not allowed to offer their work for sale or to purchase the work of other students. This includes the use of professional assignment writers. If this should happen, CTU training Solutions reserves the right not to accept future submissions from a student.

Spelling, style, fonts, font size, line spacing

- Please copy the questions onto your answer sheet (single space the questions), and make sure to use numbers to indicate the answers to each question.
- Always use a spell checker before you submit assignments! We reserve the right to deduct point for each obvious misspelling.
- Always double-space your answers.
- Please use Arial (or Calibri (Body)), 12 point as the font for your assignments. Certain fonts have been known not to come across in the PDF files.
- Use only black or blue font face colors. Do not use red!

Question 1**40 MARKS**

Design a program using Java NetBeans (Console application). With the following enum class:

```
public enum Day {  
    SUNDAY, MONDAY, TUESDAY, WEDNESDAY,  
    THURSDAY, FRIDAY, SATURDAY  
}
```

Create a second class called enumDayMood with a void method call telDayMood ().

This method contain a switch case as follows:

```
switch (day) {  
    case MONDAY:  
        JOptionPane.showMessageDialog (frame, "Mondays are bad.");  
        break;  
    case FRIDAY:  
        JOptionPane.showMessageDialog (frame, "Fridays are better.");  
        break;  
    case SATURDAY: case SUNDAY:  
        JOptionPane.showMessageDialog (frame, "Weekends are best.");  
        break;  
    default:  
        JOptionPane.showMessageDialog (frame, "Midweek days are so-so.");  
        break;  
}
```

Create a method that will ask the user to enter a day of a week and the program should tell the mood of the day. If the user enter a wrong value the program should exit with 0.

Question 2**85 MARKS**

Sanchez Construction Loan Co. makes loans of up to R100,000 for construction projects. There are two categories of Loans—those to businesses and those to individual applicants. Write an application that tracks all new construction loans. The application also must calculate the total amount owed at the due date (original loan amount + loan fee). The application should include the following classes:

- • Loan—A public abstract class that implements the LoanConstants interface. A Loan includes a loan number, customer last name, amount of loan, interest rate, and term. The constructor requires data for each of the fields except interest rate. Do not allow loan amounts greater than R100,000. Force any loan term that is not one of the three defined in the LoanConstants class to a short-term, 1-year loan. Create a toString() method that displays all the loan data.
- • LoanConstants—A public interface class. LoanConstants includes constant values for short term (1 year), medium-term (3 years), and long-term (5 years) loans. It also contains constants for the company name and the maximum loan amount.
- • BusinessLoan—A public class that extends Loan. The BusinessLoan constructor sets the interest rate to 1% more than the current prime interest rate.
- • PersonalLoan—A public class that extends Loan. The PersonalLoan constructor sets the interest rate to 2% more than the current prime interest rate.
- • CreateLoans—An application that creates an array of five Loans. Prompt the user for the current prime interest rate. Then, in a loop, prompt the user for a loan type and all relevant information for that loan. Store the created Loan objects in the array. When data entry is complete, display all the loans.

Save the files as Loan.java, LoanConstants.java, BusinessLoan.java, PersonalLoan.java, and CreateLoans.java.

NB

Use NetBeans to create this program and submit all screenshots of your program output and the java code

Completed Declaration of Authenticity

I _____ hereby
(FULL NAME)

declare that the contents of this assignment _____ is entirely my own work except for the following documents: (List the documents and page numbers of work in this portfolio that were generated in a group)

Activity	Date

Signature: _____ Date: _____