

Workshop 3

READ THE FOLLOWING CASE STUDY AND ANSWER THE QUESTIONS.

You have been tasked to create an application to calculate the taxes and amount due on a DVD rental in Joe's rental shop.

This is how his rental works:

- Tax is 5% of the DVD Price for the Children's genre.
- Tax is 7% of the DVD Price for the comedy genre.
- Tax is 10% of the DVD Price for the Action, horror and even the Adventure genre.

A GUI has been given below. The purpose of the Rental form is to calculate the customer's cost for taking out a DVD. When a customer takes out a DVD, Joe enters the DVD Price into the system; and the taxes and amount due are calculated immediately. Use a method to calculate the tax amount and return a value to the calling procedure. Amount Due is calculated by adding the DVD Price to the tax.

The screenshot shows a Windows-style application window titled "Rental Form". Inside the window, there is a "Customer Name" label followed by a text box containing "Kemi". Below this is a "Genre type" section with four radio buttons: "Children", "Comedy", "Action" (which is selected), and "Adventure". To the right of the genre selection is a "Calculations" section containing three text boxes: "DVD Price" with the value "50", "Taxes" with the value "5.0", and "Amount Due" with the value "R 55,00". Below these text boxes are two buttons: "Calculate" and "Clear". At the bottom of the window is a "Customer Details" section, which is currently hidden, showing a yellow background with the text "Hi Kemi" and "Your total account accrued is R 55,00".

When the Rental Form starts up, the Customer Details **groupbox** should not be visible. When the Calculate button is clicked, the system should first check whether a Genre type has been selected. If not, notify the user to do so. If there is a selection, calculate the amount due and taxes. When the Calculate button is clicked, the Customer Details groupbox should be visible. To ensure that the customer cannot take out another DVD, immediately the calculate Button is clicked, the Genre type Groupbox should be disabled. The Clear button clears the contents of all text boxes. Ensure the program does not crash and is user friendly as possible. An executable program can be found on vula