



School of Applied Sciences And Technology
Department of IST
Program: CNT

ICA 4 – Car Rental

You will create a Windows application consisting of a single form, as shown below. Set the Text property of the form to Car Rental. Add the controls shown below, and name the controls appropriately. Initially, all controls except for the Name label and the textbox are to be disabled. Ensure that the controls are aligned and centered within the form.

A screenshot of a Windows application window titled "Car Rental". The window has a blue title bar with standard Windows controls (minimize, maximize, close). The main area has a light beige background. At the top, there is a label "Name" followed by a text input field. Below this, on the left, is a group box titled "Car Type" containing three radio button options: "Small \$40.00/day" (selected), "Midsize \$50.00/day", and "Sports \$60.00/day". To the right of the group box are two unchecked checkboxes: "Insurance \$15.00/day" and "AMA Discount -10%". Below these is a label "Number of Days" followed by a spinner box showing the value "1". At the bottom center of the form, the text "Total \$0.00" is displayed.

After the contents of the textbox have been modified (a name was entered), the controls will be enabled, and the current total cost for the rental will be displayed. Initially, a Small Car will be selected, Insurance and AMA Discount will **not** be checked, and the number of days for the rental will be set to 1.

Car Rental

Name: Meat

Car Type:

- ☒ Small \$40.00/day
- ☐ Midsize \$50.00/day
- ☐ Sports \$60.00/day

Insurance ☐ \$15.00/day

AMA Discount ☐ -10%

Number of Days: 1

Total \$40.00

If the user selects a different Car Type, Insurance, AMA Discount or Number of Days the Total will immediately be recalculated to reflect the new settings. Create a method called Calculate to perform these calculations. Use event consolidation for the radio buttons and Number of days.

Add the event handlers for the checkboxes manually in the code (without using the designer) and redirect it to the consolidated event.

An example calculation is shown below:

Car Rental

Name: Meat

Car Type:

- ☐ Small \$40.00/day
- ☒ Midsize \$50.00/day
- ☐ Sports \$60.00/day

Insurance ☒ \$15.00/day

AMA Discount ☒ -10%

Number of Days: 4

Total \$234.00

The range for the Number of Days will be 1 to 7, as an integer value.

All controls that are used to interact with the user, or display results, will be named. The naming convention that we will use will be UI_ followed by a combination of the purpose of the control and the control type. For example, the textbox to input the Name would be named UI_Name_Tbx.

The Tab Order for the controls in the form will set to start with the Name textbox, and allow the user to tab to any controls that perform input.

Item	Marks	Penalties
UI Design (40%) <ul style="list-style-type: none"> • UI is as directed. • Tab Order is Correct. • Format for total is correct. • Controls disabled/enabled as required 		
Code Design and Implementation (60%) <ul style="list-style-type: none"> • Total being calculated according to radio buttons, checkboxes and number of days • Separate calculation method • Event handlers for checkboxes added manually in code • Event consolidation for radio buttons 		
Documentation: <ul style="list-style-type: none"> • Programmer Block • Well commented code • Appropriate Variable Names • Proper spacing between blocks of code • Control names are consistent and appropriate. 		Penalties: -1 to -6 based on instructor's judgement