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I have created a simple programme which can be used for displaying the time and prices of a certain journey between two bus stations in the south west of England.

I used 3 different classes in this programme, namely, GUI, StartHere and Dates, the GUI class deals with the design of the JFrame and the user interface, the StartHere class is where the main class is located, and is used for running the programme, and the Dates class is used to get the current date, and to check this against any dates inputted.

The GUI class is where the bulk of the coding is located, so I thought I’d start there.

The constructor class GUI(), is used to create the JFrame with all the panels and buttons etc. wanted. It is then called upon in the main method in order for it to look cleaner and less bulky, I used 2 comboboxes for the departing and arrival stations in order to reduce input errors, I then added buttons in correspondence to the coursework spec. I added a single button handler to all the buttons in the GUI, in order to reduce confusion. Firstly, I created the individual panels, and placed the buttons and text where appropriate, then I added the panels to the JFrame, therefore creating the gui itself.

The event handler class is placed withing the GUI class in order for easy reading of the code, it simply takes the value of the button clicked, and then tells the programme to run a method depending on which button was pressed. If END is pressed, the programme terminates immediately. There are 4 methods that are called depending on which button is pressed.

If the Price button is pressed, then the method getPrice() is called, and for this method I used switch and case statements in order to display every journey possible, then it makes the SingleTicket and ReturnTicket variables equal to the price that corresponds to the journey, also, if the day of the date inputted is equal to one, then a message displaying that a discount has been applied pops up, along with taking 20% of the prices, that is what the nD variable is used for. At the end of the method. I used 3 lines of code in order to change the double values of both prices to 2 d.p.

If the Time button is pressed it calls the method getTime() which simply uses switch case statements similar to the getPrice method, in order to determine the time between destinations. The first two lines of code are used in order to know which items are selected from the combobox.

If the Done button is clicked, it calls the checkDate() method which simply gets the text from within the text box, and calls the method isValidDate(dates) to check whether the date is of a correct format and not before the current date.

The isValidDate(dates) method uses try and catch in order to deal with any errors that might occur if an invalid date is entered, and the scenarios for such are covered with appropriate error messages.

If Admin is clicked then it will open up a separate JFrame, with 3 buttons: input route, save route and retrieve route. This is only the design, no functionality has been added.

The class StartHere, simply has the credentials of the programmer, myself, and also the calling of the constructor method GUI(), which then creates the required gui.

The class Dates uses the constructor class Dates, which retrieves the current date on the pc in use. The other three methods, are used in order to return the values for day, month and year which are then used later on in the GUI class, to determine whether the date inputted is valid or not.

The coursework overall was not difficult, I worked on the design of it firstly, creating the GUI and all the necessary design work, yet my programme only manages to determine the time and price between two bus stations and apply a discount, there is no functionality for the Sort, Admin or Route buttons.