Radio GUI Project

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# Assignment 4: RadioGUI Project

This paper discusses the development and configuration of the RadioGUI project using Visual Studio and C#. The assignment focused on creating a functional GUI application that simulates a radio interface while demonstrating the use of Windows Forms, properties, controls, and layout management.

## Manipulating the Form’s Properties

The form’s properties were customized to improve usability and visual appeal. Specifically, the Font property was modified to make text more legible, and the Text property of the form was updated to display the project’s name, 'RadioGUI'. These adjustments ensured that the application met the required specifications.

## Pre-Set Stations

Pre-set radio stations were added to the form using RadioButton controls. Each button corresponds to a different frequency, allowing the user to quickly switch between predefined stations. This implementation highlights the use of grouped controls for functionality and ease of use.

## GroupBox and CheckBoxes

A GroupBox labeled 'Speakers' was included to organize speaker options. Within this GroupBox, CheckBox controls were added for the left and right speakers. This design allows users to toggle speaker output conveniently, demonstrating how grouped controls can organize related settings.

## Power On/Off Button

A Button control was implemented to serve as the Power On/Off switch. Clicking this button toggles the radio’s state, visually indicating whether the application is on or off. This feature demonstrates handling events in a Windows Forms application.

## Volume Control

A GroupBox was created for volume control, containing a Mute CheckBox and a TrackBar. The Mute option instantly silences the output, while the TrackBar allows dynamic adjustment of volume levels. These elements provide an interactive way to control audio settings.

## Tuning GroupBox

The Tuning GroupBox was designed to simulate adjusting radio frequencies. It includes a Label that displays the current station and RadioButtons to switch between AM and FM modes. This section reinforces the importance of grouping related controls for clarity and functionality.

## Adding the Image

A PictureBox was used to add an image of a musical note to the form. This feature enhances the visual design of the interface and demonstrates incorporating multimedia into Windows Forms applications.

## Conclusion

The RadioGUI project successfully demonstrates core skills in C# Windows Forms programming, including property manipulation, event handling, and the use of common controls. The final application integrates visual design with functional interactivity, meeting the assignment requirements while reinforcing fundamental concepts of GUI development in C#.