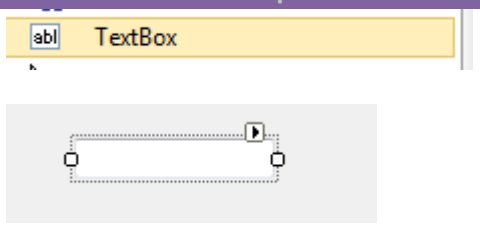
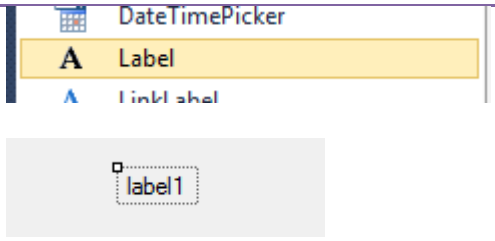
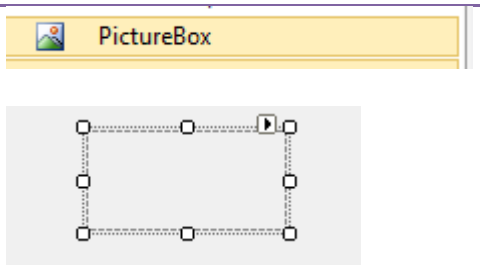
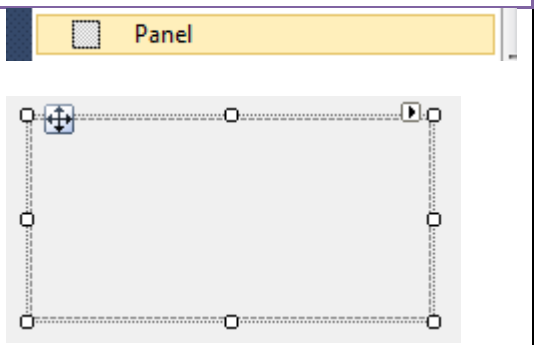
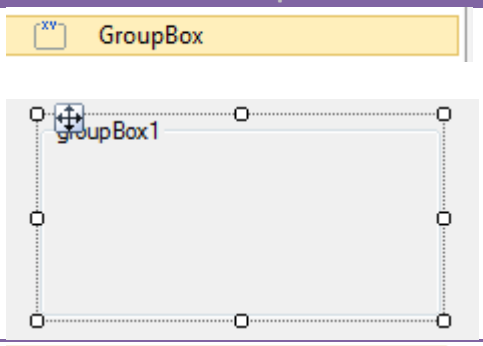
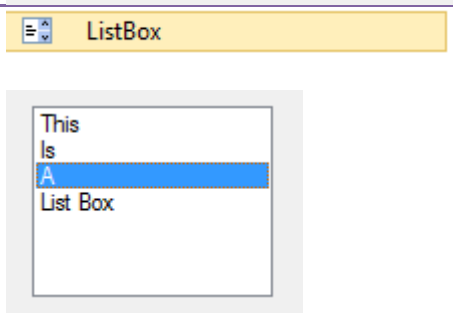
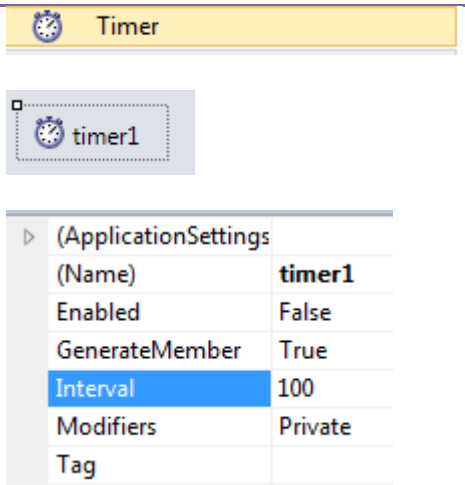
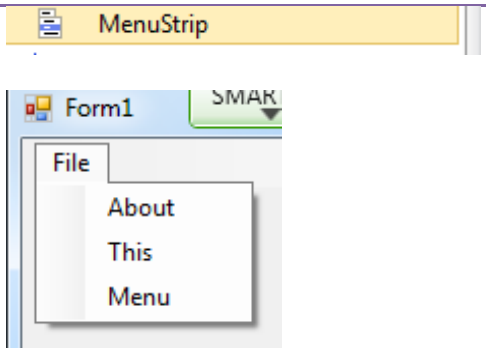
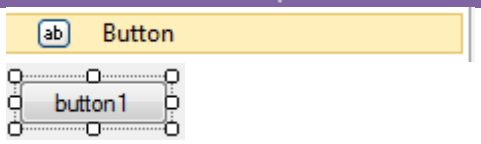
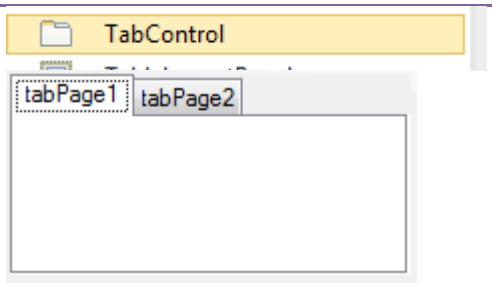
# Visual Studio Controls Explained

## Understand the system components in Visual Studio. All of the controls below can be found in the tool box of visual studio.

| Control | Description | Example |
|---|---|---|
| **Text Box** | Text box is a windows control which allows the developer to enter text, amend any texts, and enter a user name and password field by masking the characters in the text box.<br><br>This box can be used for multiple purposes which include entering user information, have the program read the information from a box, create a calculator where the users can enter two different numbers etc.<br><br>You can also turn the editing on or off through the enabled option in the properties menu.<br><br>Text boxes support multiline, font changing and colouring etc. |  |
| **Label** | Label is a system control used in visual studio which allows the user to display information such as text, numbers or symbols. Labels have multiple uses and also allow users to change the font, colour and size.<br><br>Labels have the same properties as other objects in the IDE which has its own height, width and bounds. |  |
| **Picture Box** | Picture boxes are used often as a tool to display images in Visual Studio. The best thing out picture boxes are we can dynamically load and change images as the program requires.<br><br>Picture boxes can play GIF files in the program, if you are making a game you can use GIF file to animate explosion or walking/running to save time.<br><br>Picture boxes can be used to create transparent and also has controls to add other picture boxes on top of them which is very useful during game programming such as backgrounds, player and platforms or enemies.<br><br>You can directly link the images through the code and load an image or you can import the files to the system resources. |  |
| **Panel** | Panel is a useful Visual Studio Control which allows us to group objects together in one small display. For example if I want to group 4 pictures of kittens and then move them as a group instead of individual using a panel would be a wise choice.<br><br>Panels also allow us to create small or large groups within visual studio.<br><br>You will have drag and drop the item inside the panel for it to be a group. |  |

| Control | Description | Example |
|---|---|---|
| **Group Box** | Group Box is similar to panels with the exception of it allows us to name the group. In Panels there any no way to name it except for in properties which is now displayed when the program is rendered. However, with group box it shows the name on top and it's easier for us to organise the objects on screen.<br><br>In game development often panels and group boxes are used as separate levels as they can contain other objects within themselves. More on that on later tutorials. |  |
| **List** | In a list box you can add multiple items and then those items can be selected by the user on run time.<br><br>Each item can have its own event or change a property such as asking the user if they are male or female, or asking them whether they live in a certain country from the list etc.<br><br>You can change the font style, colour and size thoughtthe properties also can enable and disable the item if you wish.<br><br>This control has multiple uses in programming and shall be explored more in the future. |  |
| **Timer** | Timer is an interesting and useful control in Visual Studio. It can be used to create visual Studio (C#, VB, C++)applications that are time related. For example, you can use timer to create a clock, a stop watch, a dice, animation and more. Timer is a hidden control at runtime, just like the engine of a car.<br><br>A Timer is the most important control you need to create a game. This control allows us to animate the objects and then check what rules we set for the game. We can change the interval of a timer and in between those intervals we can check whether the player has reached his goal, whether the enemy was hit with a bullet or whether to end the game if the objectives were met.<br><br>Notice the interval in the example screen is set to 100. This means this timer will run every 100 milliseconds. If you want to it run every second you will need to change that to 1000 so it runs every second. |  |
| **Menu Strip** | Menu strip will allow you to create w windows group like action buttons in the top of the application. This will allow you to create professional looking application in where you can do actions like File -> Save or About or even print. |  |

| Control | Description | Example |
| --- | --- | --- |
| **Button** | A button is an action control component in visual studio. A button is the most common of all components because we have seen it used everywhere in windows.<br><br>Buttons allow us to trigger an action or event such as calculate, close, show, save etc. We can use pictures on the buttons themselves or even change the font size or colour.<br><br>You can enable or disable a button if you require. |  <br> |
| **Tab Control** | This control allows the developers to create multiple screens inside a form and be controlled by the label show on top of each tab. Its kind of like having multiple tabs on chrome or fire fox browsers.<br><br>You can do many different things with this and even create a multi-functional system where different tabs do different things.<br><br>For example check out the Visual Basic System Information Viewer App Tutorial - http://www.mooict.com/visual-basic-tutorial-create-a-system-information-viewer-app/ This was created to different specifications of the system such as CPU, GPU and RAM by using the tab controls. |  |