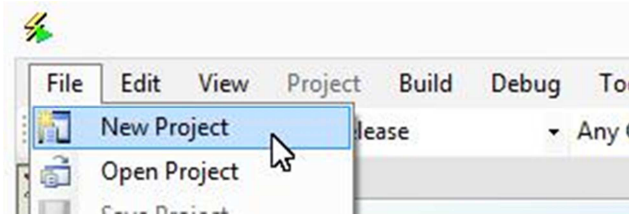# Kiosk Applications

## Contents

## Introduction

A kiosk computer makes a computer into a specific terminal device. The functionality of a kiosk computer is provided by kiosk software installed on the computer. A computer becomes a specific terminal device once kiosk software runs.

Limnor Studio makes it extremely easy to develop kiosk software. This document uses a sample kiosk project to show it.
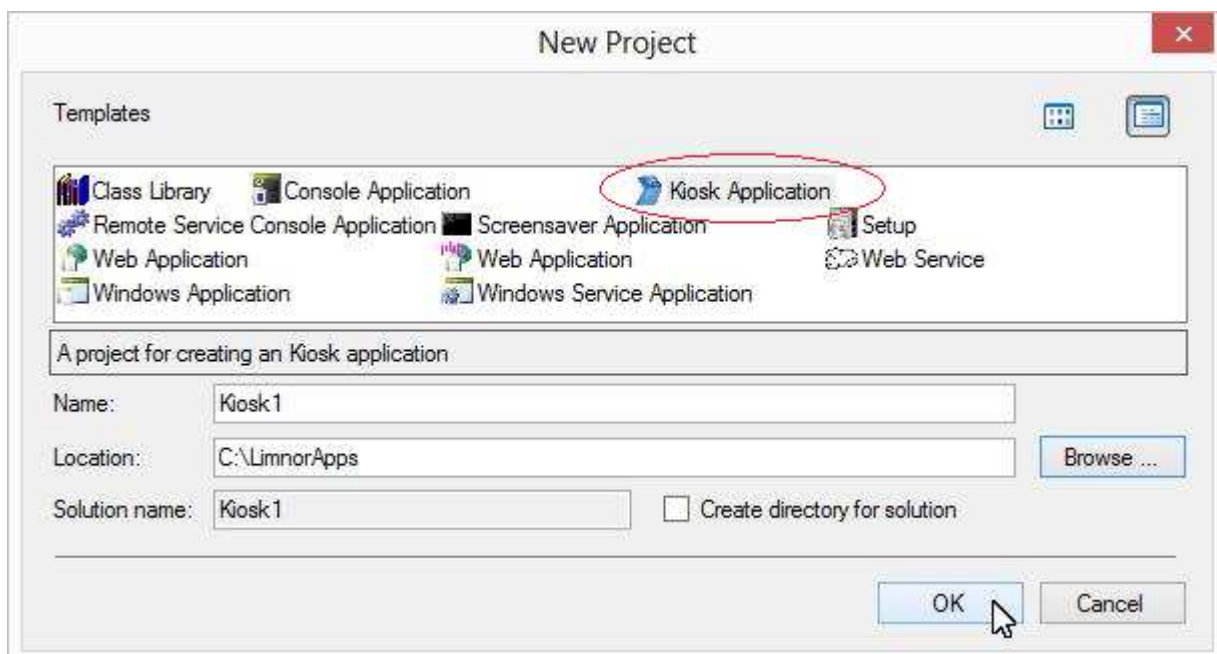
# Kiosk Project

## Create Kiosk Project

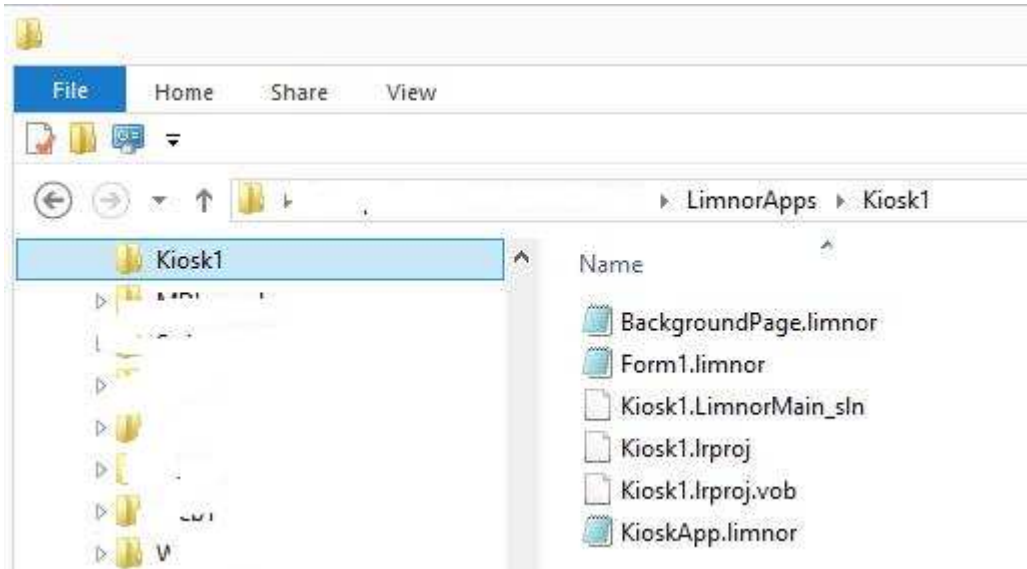We need to create a Kiosk project to start developing kiosk software.



Select Kiosk Application, choose project folder and click OK:



A kiosk project is created. The project files are created in the folder specified:
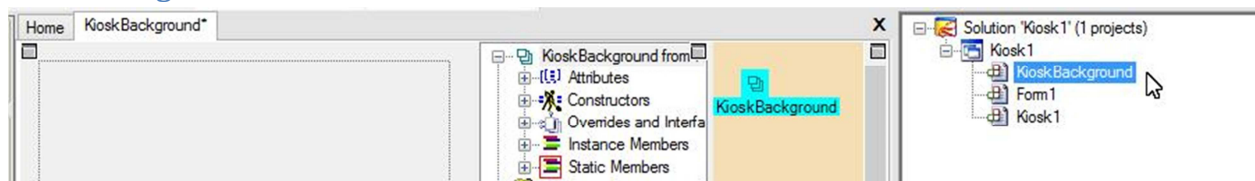
## Kiosk Project Components

When a kiosk project is created it creates some kiosk specific components.
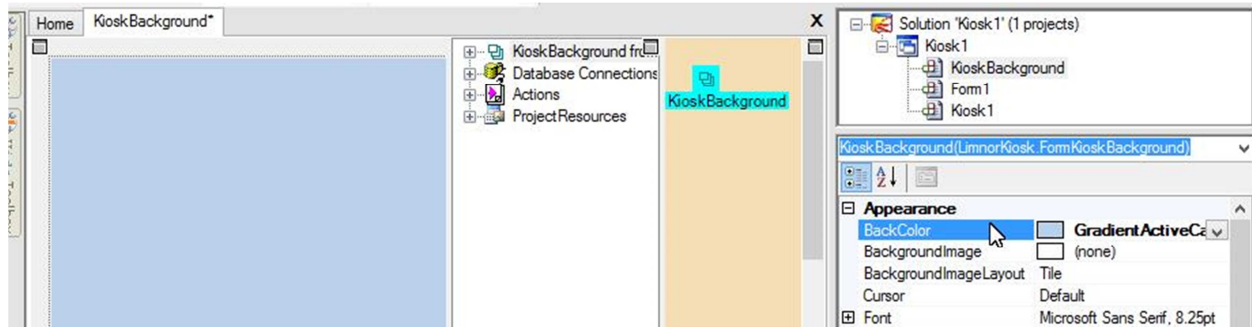
### Kiosk background



When a kiosk application runs, it uses a background form to cover the desktop so that the user cannot see desktop icons and only the kiosk application is available. KioskBackground component provides this functionality.

You may change properties of KioskBackground. For example, change its BackColor property:
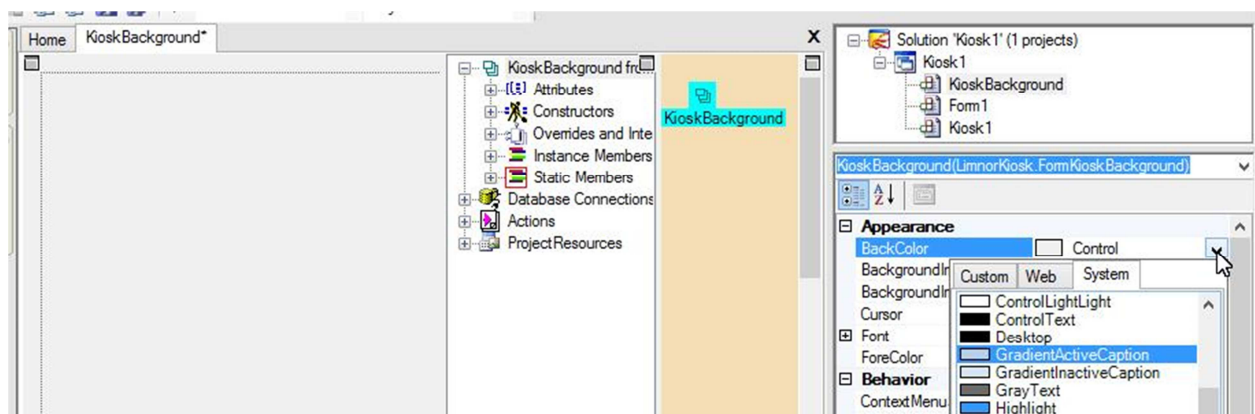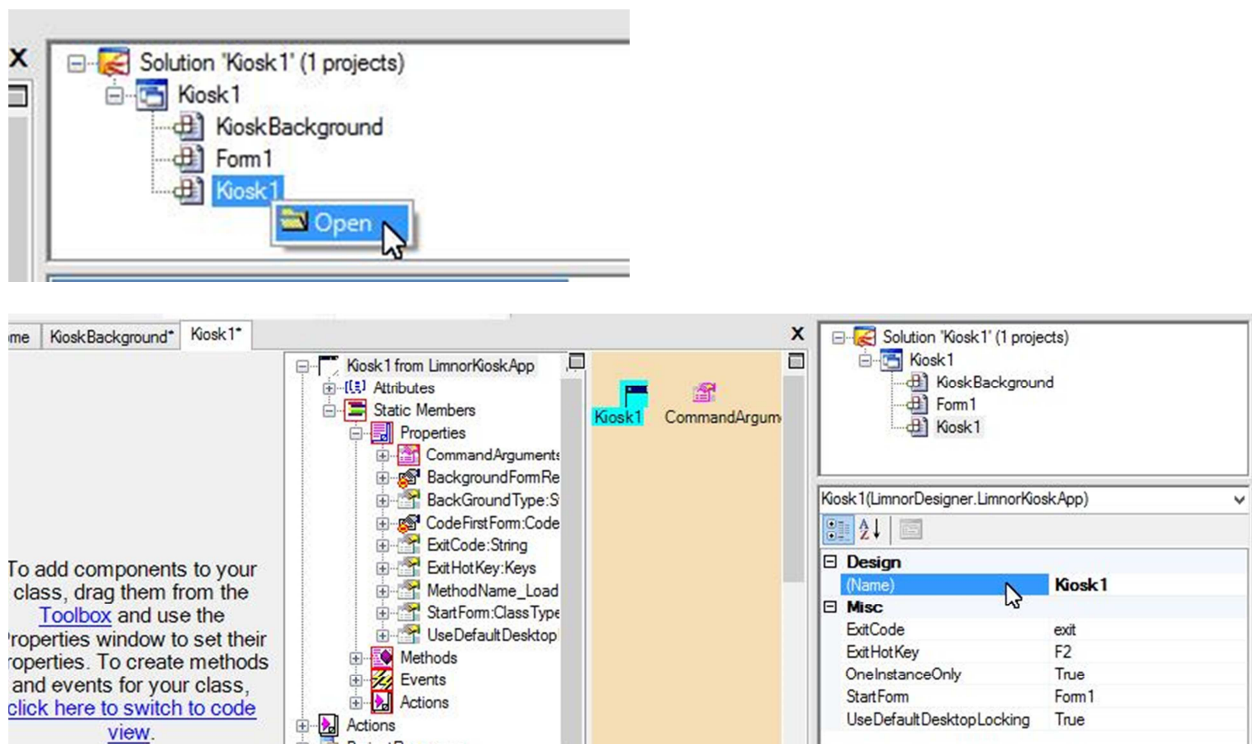
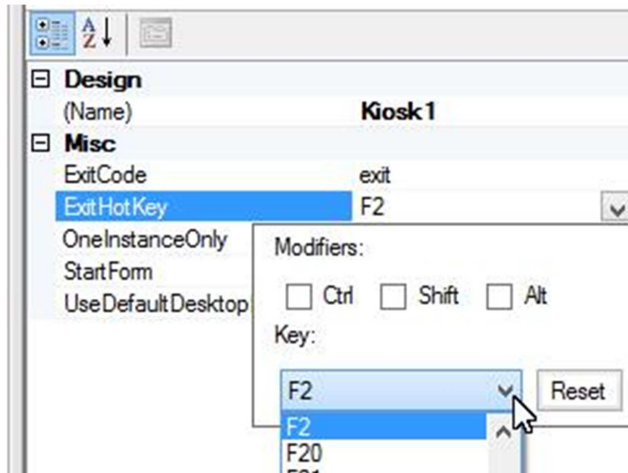## Kiosk Application

Kiosk1 represents the kiosk application. We may open it into designer:





The kiosk application object has following properties.

- ExitHotKey -  It represents a hot key. By default it is F2. At runtime when this key is pressed the kiosk application asks the user for ExitCode. If the user gives correct ExitCode then the kiosk application shuts down.

- ExitCode – It is a password for shutting down the kiosk application. When the user presses the key represented by ExitHotKey property, the kiosk application asks the user for ExitCode.
- OneInstanceOnly – It indicates whether only one instance of the application should be running. Usually you should keep it to True for a kiosk application.
- StartForm – It indicates the start form of the kiosk application. A form named Form1 is created and used as the start form.
- UseDefaultDesktopLocking – When a kiosk application is running, the Windows desktop should be locked so that no other applications can be accessed.  If UseDefaultDesktopLocking is True then Limnor Studio will compile desktop locking software into your kiosk application. When your kiosk application runs it automatically locks the desktop; when your kiosk application exits it automatically unlocks the desktop. If  UseDefaultDesktopLocking is False then no desktop locking is performed by your kiosk application.

  "Locking desktop" is to perform following tasks:
  - o The Explorer, Taskbar, and the Desktop will be removed. Thus, the user cannot access toolbar and the desktop; no other programs may show taskbar. Some popular programs, i.e., PDF reader, activate taskbar and show some notices. By removing the Taskbar, your kiosk computer may not be out of control.
  - o Disable Task Manager. If Ctrl-Alt-Del is not disabled then it still will not bring up the Task Manager. It also monitors the computer registry to watch for registry changes by other programs and prevent other programs to re-enable the Task Manager.
  - o Disable Log-off, Shut-down and Switch User
  - o Disable Alt-Tab
  - o Disable CTRL+ESC
  - o Disable ALT+ESC
  - o Disable Windows Key
  - o For Windows XP, disable screensaver
  - o Disable Lock Workstation
  - o Disable Change Password
  - o Hide Fast User Switching

### Start form

Form1 is the start form. You may open it into designers to design it:
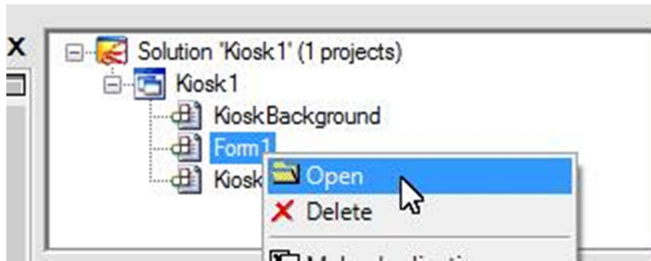


You may develop it as a normal form. For example, add a button to the form:
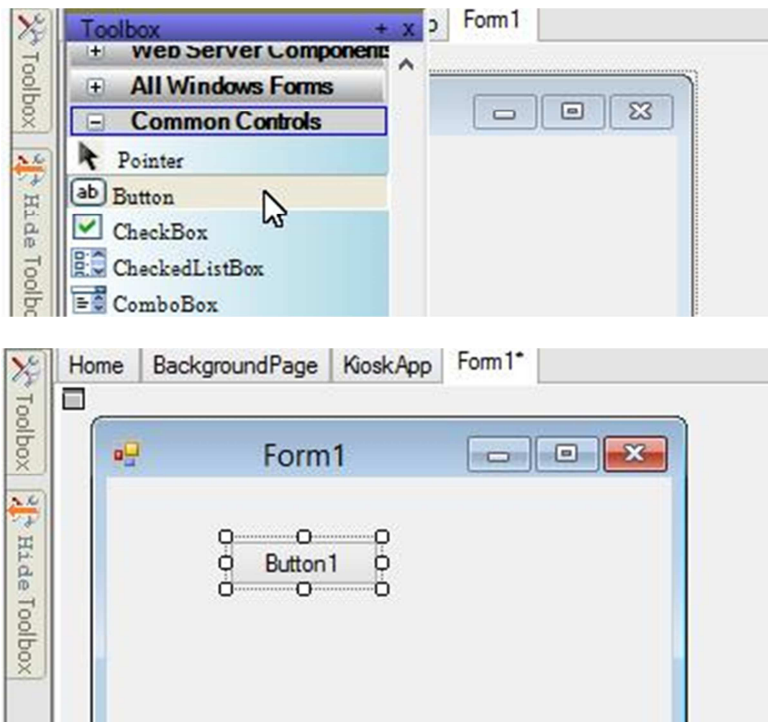




You may develop kiosk application as a normal Windows Forms application. See
http://www.limnor.com/support/UseDefaultFormInstance.pdf.
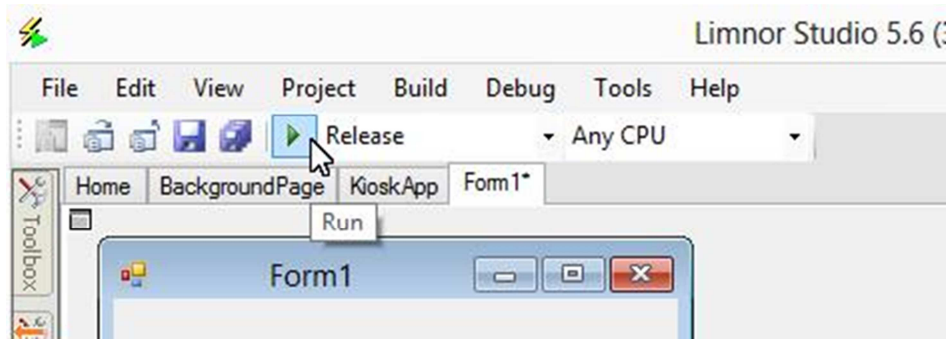
## Test Kiosk Application

## Disable Computer Locking

When you start testing your kiosk application, it will lock the Windows desktop if
UseDefaultDesktopLocking is True. It could be inconvenient when the desktop is locked. For test running
your kiosk application you may not want to lock the desktop. You may change
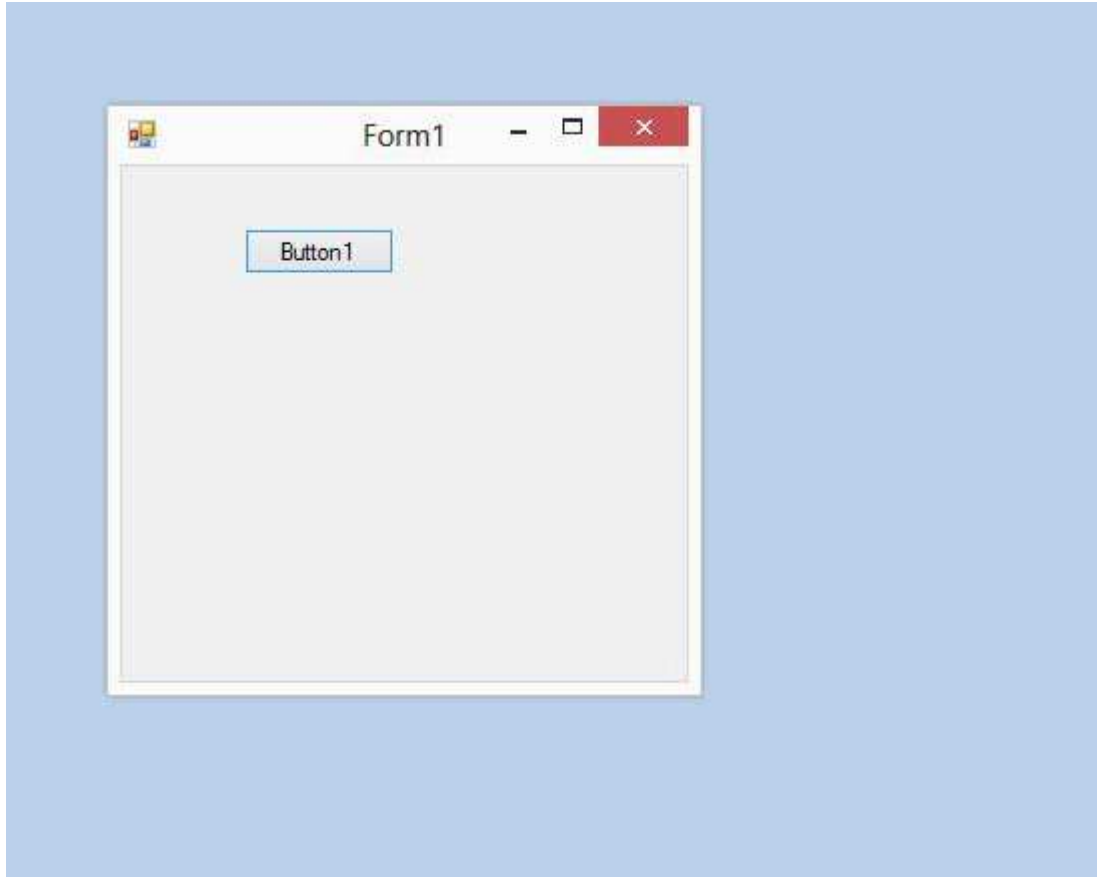UseDefaultDesktopLocking to False before testing:
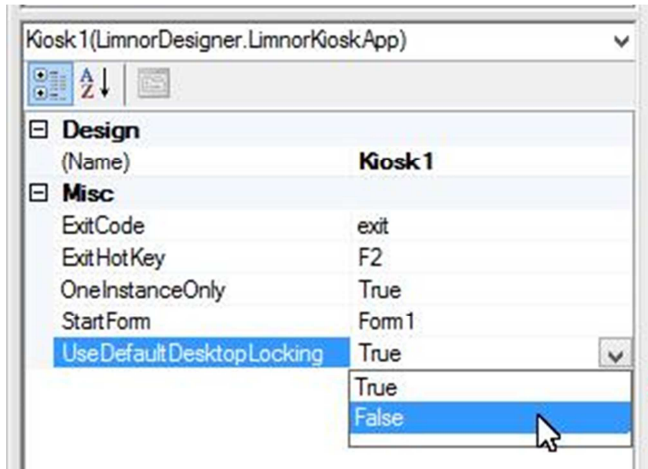
Set UseDefaultDesktopLocking to True only when you finish developing your kiosk application.

Click the Run button to start test your kiosk application:



The kiosk application runs:

To exit the kiosk application, press the hot key indicated by the ExitHotKey property; by default it is F2. A dialogue box appears to ask the Exit Code. Enter the code indicated by the ExitCode property:
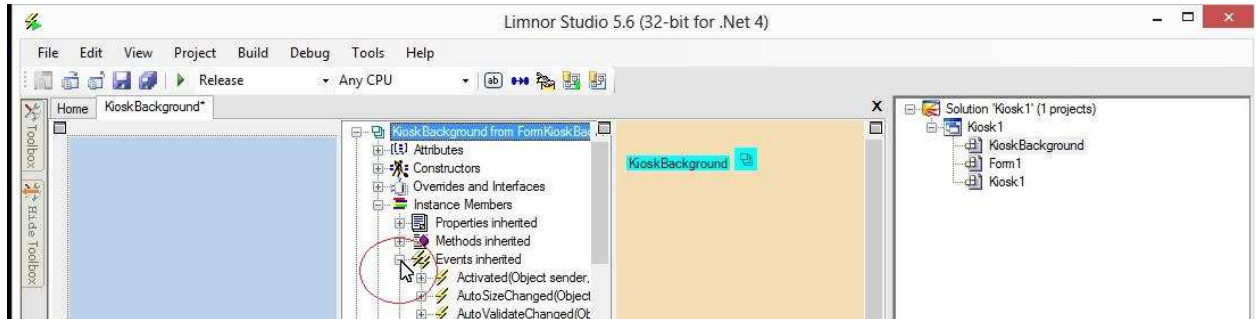


If you enter correct Exit Code then the kiosk application closes.

## Hide Desktop Cover
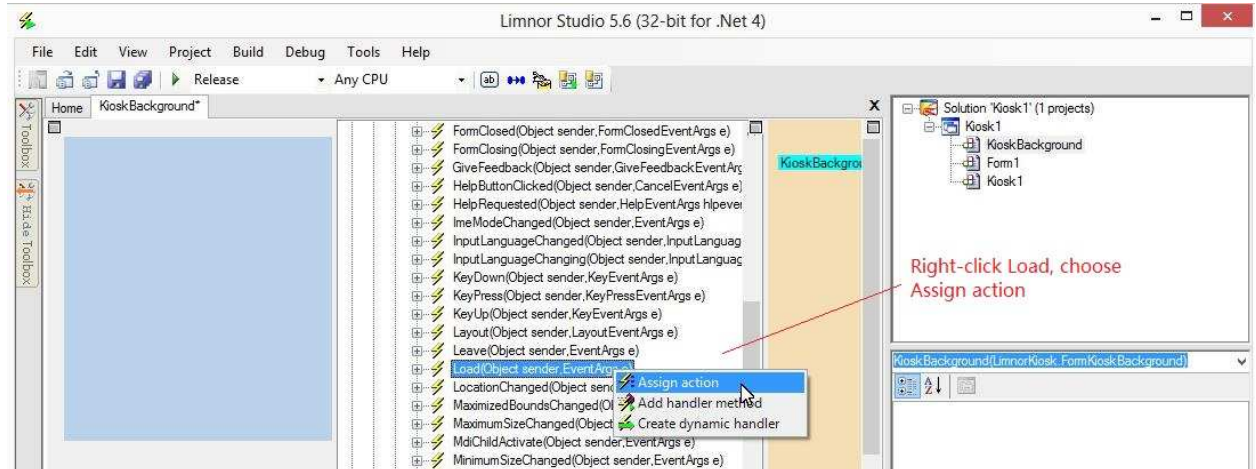
While you are testing your kiosk application, you may not want your desktop be covered. You may uncover the desktop by hiding the kiosk background form by doing following programming.

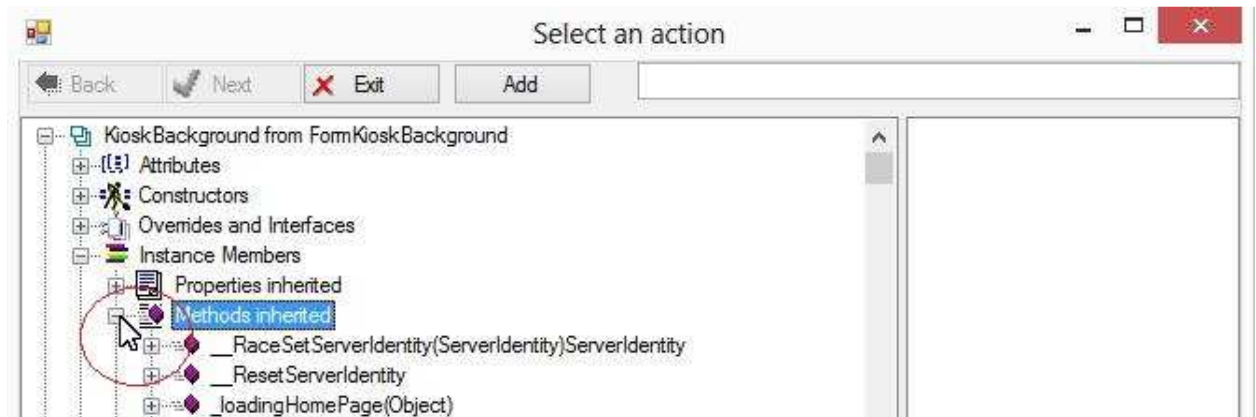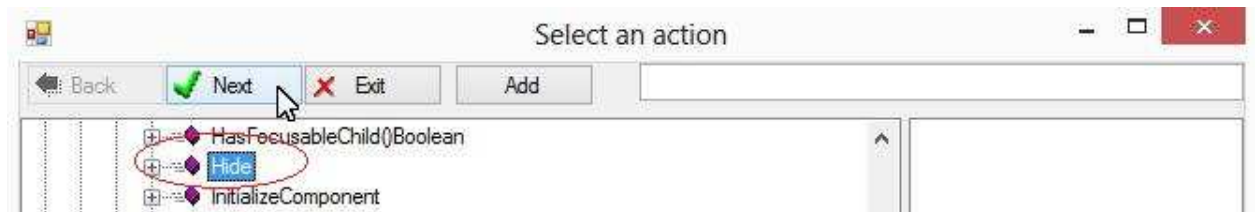1. Open the background form; expand "Events inherited" node:

2. Right-click "Load" event; choose "Assign action":



3. Expand "Methods inherited":



4. Select "Hide" method; click Next:



5. Click OK:
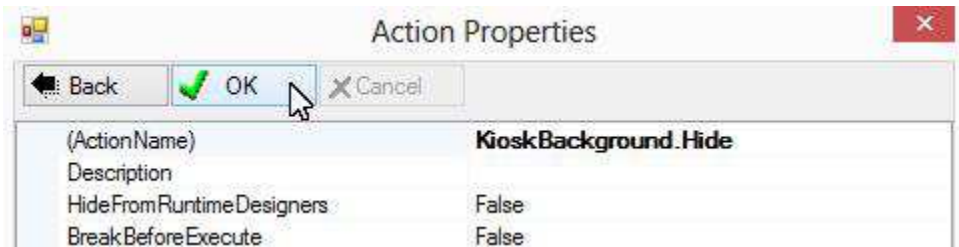
A new Hide action is created and assigned to the Load event of the background form:
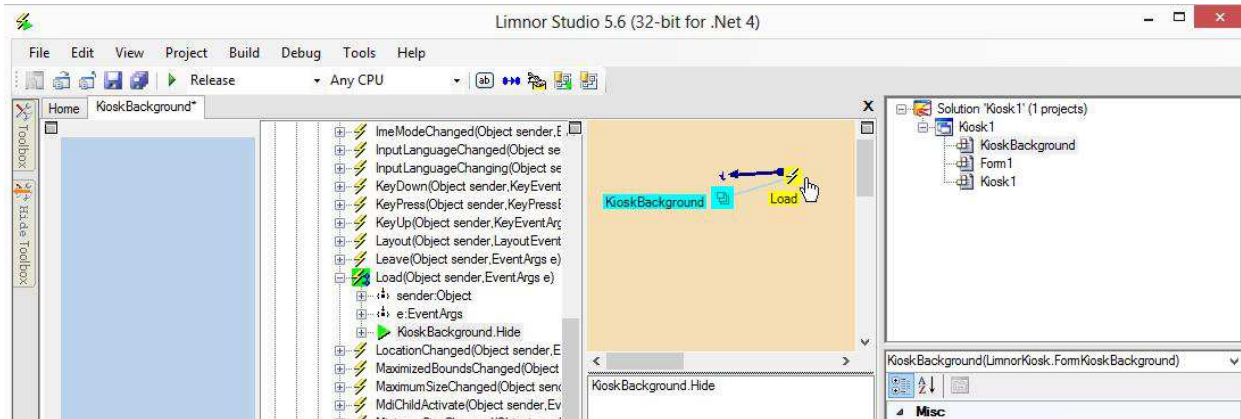


Now, run the kiosk project, the desktop will not be covered.

Once you finish testing and you are ready to release your kiosk application, you need to restore desktop cover. You may right-click the Load event and chose "Remove event handler":
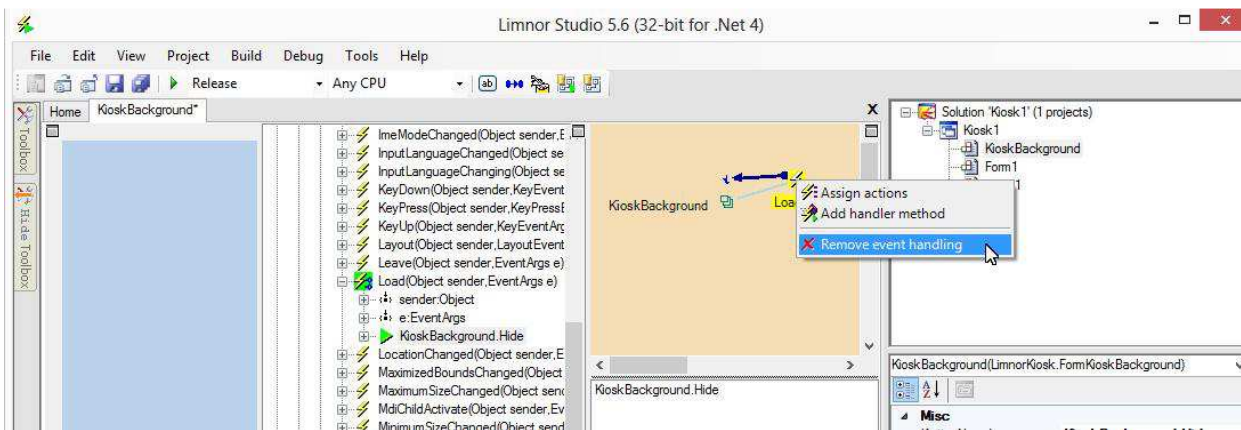


## Kiosk Computer Setup

A computer's registry needs to be adjusted for using it as a kiosk. A zip file containing registry samples can be downloaded from http://www.limnor.com/studio/kiosksetup.zip.

The sample registry contains following settings.

## Auto Logon

When a kiosk computer is turned on, usually we want it to automatically log on to a certain user. You can do it by setting registry:

```
[HKEY_LOCAL_MACHINE\Software\Microsoft\Windows NT\CurrentVersion\WinLogon]
"AutoAdminLogon" = 1
"DefaultUserName" = USERNAME
"DefaultPassword" = PASSWORD
"DefaultDomainName" = PCNAME
"IgnoreShiftOverride" = 1
"ForceAutoLogon" = 1
"DisableCAD" = 1
```

```
The above registry setting can be found at
http://www.limnor.com/studio/kiosksetup.zip
```

## Windows 7 – Disable Ctrl-Alt-Del

The desktop locking function included in the Limnor Studio Kiosk Applications cannot disable ctrl-alt-del. You may do it by setting registry and then reboot the computer:

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Keyboard Layout]
"Scancode Map"=hex:00,00,00,00,00,00,00,00,09,00,00,00,00,00,5b,e0,00,00,5c,e0,00,00,5d,e0,00,00,
44,00,00,00,1d,00,00,00,38,00,00,00,1d,e0,00,00,38,e0,00,00,00,00

For details, see http://www.northcode.com/blog.php/2007/07/25/Securing-Windows-For-Use-As-A-Kiosk

```
The above registry setting can be found at
http://www.limnor.com/studio/kiosksetup.zip
```

## KioskMode.exe

Limnor Studio provides a computer locking utility for your kiosk program: KioskMode.exe.
The syntax of this utility is as following.
To lock the computer:
KioskMode start
To unlock the computer:
KioskMode stop
To use the utility, **the logged on user must be an Administrator or run KioskMode.exe as Admin**.

## Configure the computer to steady state

Microsoft provides a way of locking computers. Microsoft provides documentations on how to set group policy for the computer to be in steady state.
See

http://www.microsoft.com/en-us/download/details.aspx?id=24373

## Automatic reboot

Suppose your kiosk program is running on a computer logged on by an Administrator, and maintenance personal needs to exit the kiosk program to do some work on the computer. You may not want the maintenance personal to assume the Administrator privileges as the kiosk program does. You want the maintenance personal to re-log on using correct credential.
You may set a particular registry value to instruct the kiosk program to reboot on exit. If the reboot instruction is set then at the time the kiosk program is shutting down the kiosk program will request a reboot but keep the computer locked. By the time the kiosk application shuts down the computer re-boots and forces the maintenance personal to do his/her log on.

If your kiosk program is compiled to target 32-bit Windows then the registry key is

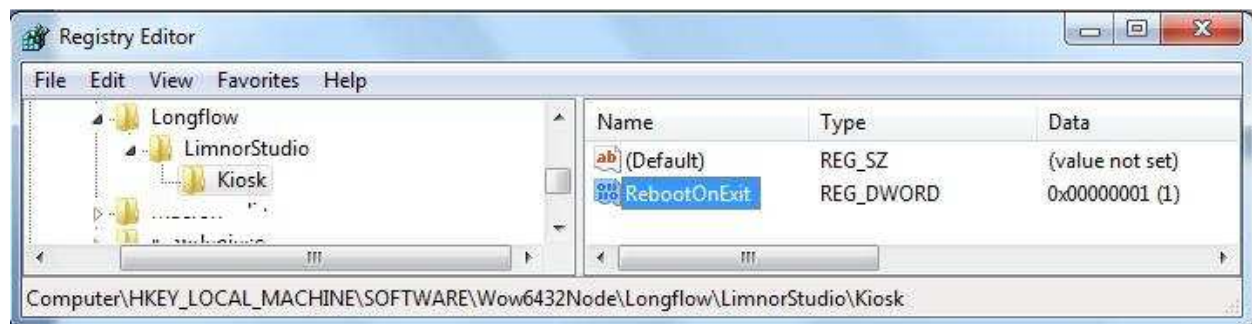HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Longflow\LimnorStudio\Kiosk

If you kiosk program is not targeting 32-bit Windows then the registry key is

HKEY_LOCAL_MACHINE\SOFTWARE\Longflow\LimnorStudio\Kiosk

The value name is RebootOnExit. The value type is DWORD.
To enable reboot, set the value to 1
To disable reboot, remove the value or set the value to 0



## Feedback

You may send your feedback to support@limnor.com.