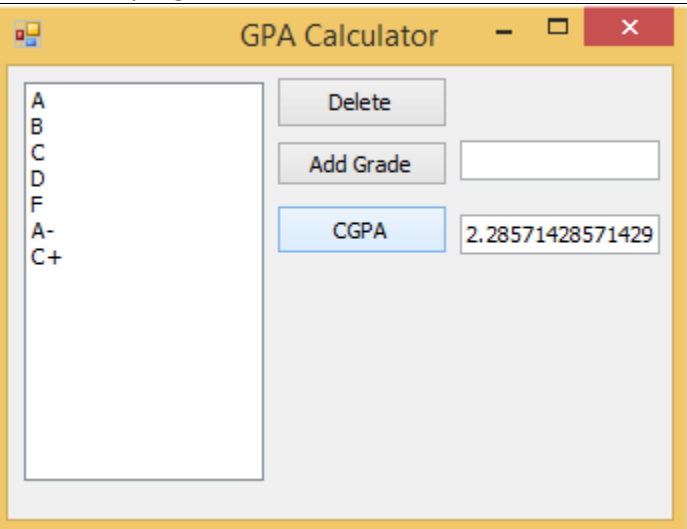


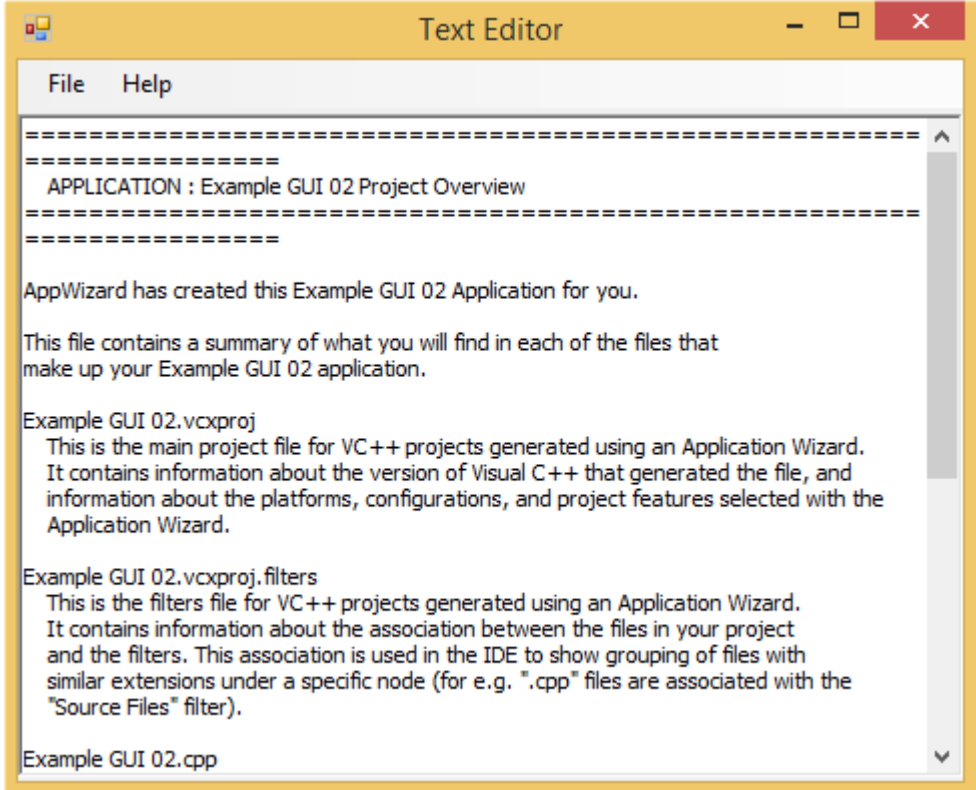
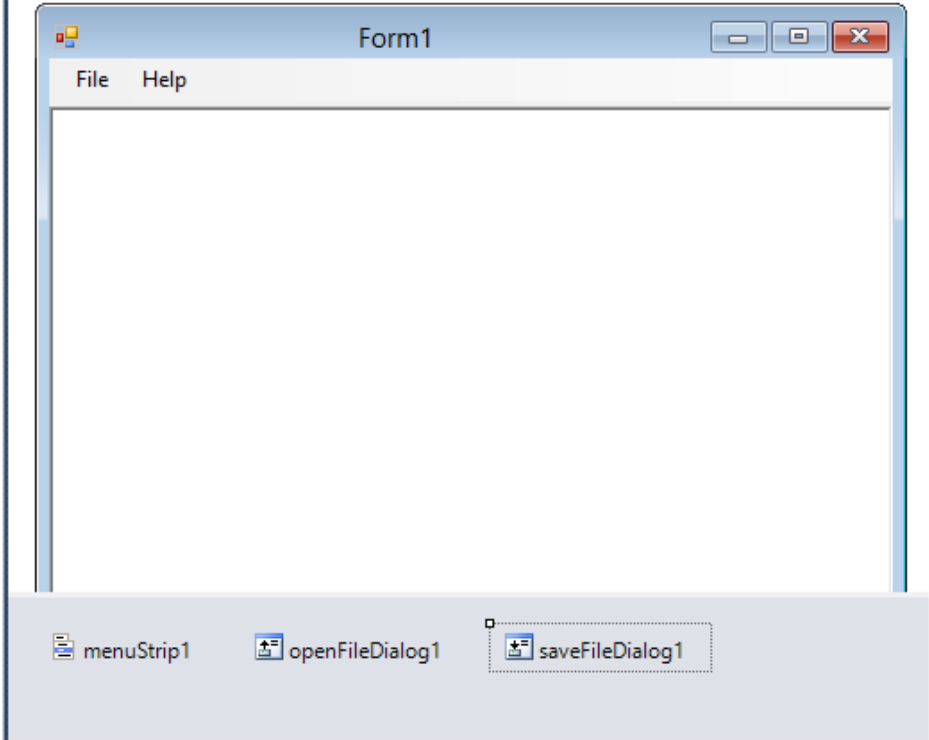
# Programming I – Tutorial 07

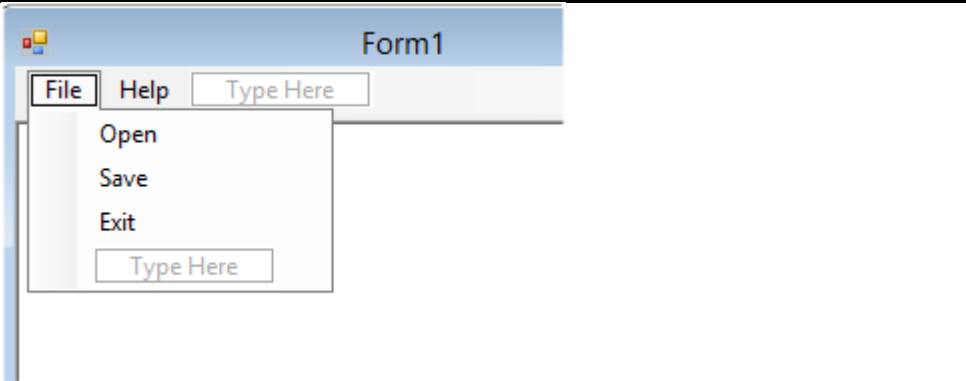
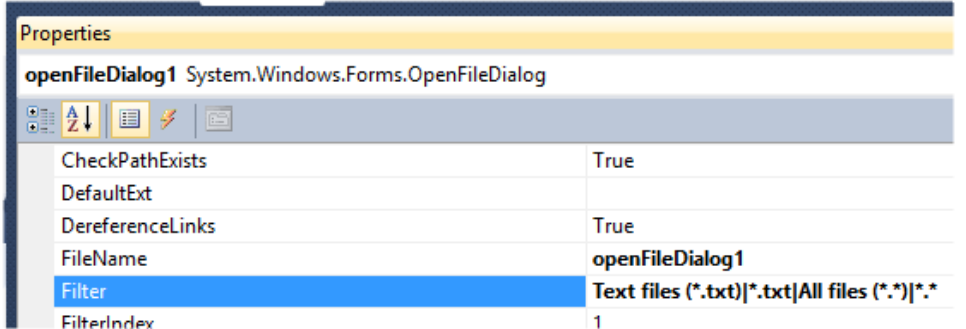
## Arrays

Q1	Build a GUI program that calculate CGPA of list of letter Grades	
GUI		
Code		<pre> double getGPA(String^ grade) {     double GPA;     if(grade=="A+")         GPA=4;     else if(grade=="A")         GPA=4;     else if(grade=="A-")         GPA=3.7;     else if(grade=="B+")         GPA=3.3;     else if(grade=="B")         GPA=3;     else if(grade=="B-")         GPA=2.7;     else if(grade=="C+")         GPA=2.3;     else if(grade=="C")         GPA=2;     else if(grade=="C-")         GPA=1.7;     else if(grade=="D+")         GPA=1.3;     else if(grade=="D")         GPA=1;     else if(grade=="F")         GPA=0;     else GPA=0;     return GPA; } </pre>
	add	<pre> private: System::Void button1_Click(System::Object^ sender, System::EventArgs^ e) {     listBox1-&gt;Items-&gt;Add(textBox1-&gt;Text);     textBox1-&gt;Text=""; } </pre>



calculate	<pre>private: System::Void button2_Click(System::Object^ sender, System::EventArgs^ e) {     double CGPA=0;     int courses=0;     int length=listBox1-&gt;Items-&gt;Count;     for(int n=0;n&lt;length;n++)     {         CGPA=CGPA+getGPA(listBox1-&gt;Items[n]- &gt;ToString());         courses++;     }     CGPA=CGPA/courses;     textBox2-&gt;Text=CGPA.ToString(); }</pre>
delete	<pre>private: System::Void button3_Click(System::Object^ sender, System::EventArgs^ e) {     int index=listBox1-&gt;SelectedIndex ;     listBox1-&gt;Items-&gt;RemoveAt( index ); }</pre>

Q2	Build a simple text editor that can open, edit, save files
GUI	 <p>The screenshot shows a window titled "Text Editor" with a menu bar containing "File" and "Help". The text area contains the following content:</p> <pre>===== APPLICATION : Example GUI 02 Project Overview =====  AppWizard has created this Example GUI 02 Application for you.  This file contains a summary of what you will find in each of the files that make up your Example GUI 02 application.  Example GUI 02.vcxproj This is the main project file for VC++ projects generated using an Application Wizard. It contains information about the version of Visual C++ that generated the file, and information about the platforms, configurations, and project features selected with the Application Wizard.  Example GUI 02.vcxproj.filters This is the filters file for VC++ projects generated using an Application Wizard. It contains information about the association between the files in your project and the filters. This association is used in the IDE to show grouping of files with similar extensions under a specific node (for e.g. ".cpp" files are associated with the "Source Files" filter).  Example GUI 02.cpp</pre>
Code	<p>components</p>  <p>The screenshot shows a component tray for a form named "Form1". It contains three components: "menuStrip1", "openFileDialog1", and "saveFileDialog1".</p>

Menu	
Open dialog filter	
Open	<pre>private: System::Void openToolStripMenuItem_Click(System::Object^ sender, System::EventArgs^ e) {     openFileDialog1-&gt;ShowDialog();     if(openFileDialog1-&gt;FileName!="")     {         richTextBox1-&gt;LoadFile(openFileDialog1- &gt;FileName,RichTextBoxStreamType::PlainText);     } }</pre>
Save	<pre>private: System::Void saveAsToolStripMenuItem_Click(System::Object^ sender, System::EventArgs^ e) {     saveFileDialog1-&gt;ShowDialog();     if(saveFileDialog1-&gt;FileName!="")     {         richTextBox1-&gt;SaveFile(saveFileDialog1- &gt;FileName,RichTextBoxStreamType::PlainText);     } }</pre>
Exit	<pre>private: System::Void exitToolStripMenuItem_Click(System::Object^ sender, system::EventArgs^ e) {     Application::Exit(); }</pre>
about	<pre>private: System::Void aboutToolStripMenuItem_Click(System::Object^ sender, System::EventArgs^ e) {     MessageBox::Show("my first text Editor, by : me."); }</pre>