bool ClickOnce = false;

int level; int base; bool CountUp = false;

private: Int32 Recursive(int n)

{

if (n == base)

{

txtLog->Text += "Base Case Reached! n = " + n.ToString();

return n;

}

else

{

if (CountUp == true)

{

txtLog->Text += "Recursive Call! n = " + n.ToString() + Environment::NewLine;

return Recursive(n + 1);

}

else

{

txtLog->Text += "Recursive Call! n = " + n.ToString() + Environment::NewLine;

return Recursive(n - 1);

}

}

}

private: System::Void btnCountUp\_Click(System::Object^ sender, System::EventArgs^ e) {

CountUp = true;

txtLog->Text = "";

rtbOutput->Text = "";

bool problem = false;

if(txtBase->Text != "" && txtBase->Text != " ")

{

base = Int32::Parse(txtBase->Text);

}

else

{

MessageBox::Show("Invalid base input! Please enter a whole number");

problem = true;

}

if(txtLevel->Text != "" && txtBase->Text != " ")

{

level = Int32::Parse(txtLevel->Text);

}

else

{

MessageBox::Show("Invalid level input! Please enter a whole number");

problem = true;

}

if (level <= base && !problem)

{

Recursive(level);

for (int i = level; i <= base; i++)

{

rtbOutput->Text += "Level: " + i.ToString() + Environment::NewLine;

}

}

else if (level == 0 && base == 0)

{

MessageBox::Show("You must enter a range!");

}

else

{

MessageBox::Show("You can't count up to " + base.ToString() + " from " + level.ToString() + "! You need to count down!");

}

}

private: System::Void btnClearAll\_Click(System::Object^ sender, System::EventArgs^ e) {

ClickOnce = false;

txtBase->Text = "";

txtLog->Text = "";

rtbOutput->Text = "";

txtLevel->Text = "";

}

private: System::Void btnCountDown\_Click(System::Object^ sender, System::EventArgs^ e) {

CountUp = false;

txtLog->Text = "";

rtbOutput->Text = "";

base = Int32::Parse(txtBase->Text);

level = Int32::Parse(txtLevel->Text);

if (level >= base)

{

Recursive(level);

for (int i = level; i >= base; i--)

{

rtbOutput->Text += "Level: " + i.ToString() + Environment::NewLine;

}

}

else

{

MessageBox::Show("You can't count down to " + base.ToString() + " from " + level.ToString() + "! You need to count up!");

}

}