\*\* Exercise: Implement a simple if statement

Step 3:

if (args.Length == 0)

{

WriteLine("There are no arguments.");

}

else

{

WriteLine("There is at least one argument.");

}

\*\* Exercise: Implement the new pattern matching feature of C# using the if statement

Step 1:

object o = "3";

int j = 4;

if(o is int i)

{

WriteLine($"{i} x {j} = {i \* j}");

}

else

{

WriteLine("o is not an int so it cannot multiply!");

}

\*\* Exercise: Implement a simple switch statement

Step 1:

A\_label:

var number = (new Random()).Next(1, 7);

WriteLine($"My random number is {number}");

switch (number)

{

case 1:

WriteLine("One");

break; // jumps to end of switch statement

case 2:

WriteLine("Two");

goto case 1;

case 3:

case 4:

WriteLine("Three or four");

goto case 1;

case 5:

// go to sleep for half a second

System.Threading.Thread.Sleep(500);

goto A\_label;

default:

WriteLine("Default");

break;

} // end of switch statement

\*\* Exercise: Implement pattern matching using a switch statement

Step 2:

string path = @"C:\Code\Chapter03";

Stream s = File.Open(Path.Combine(path, "file.txt"), FileMode.OpenOrCreate);

switch(s)

{

case FileStream writeableFile when s.CanWrite:

WriteLine("The stream is to a file that I can write to.");

break;

case FileStream readOnlyFile:

WriteLine("The stream is to a read-only file.");

break;

case MemoryStream ms:

WriteLine("The stream is to a memory address.");

break;

default: // always evaluated last despite its current position

WriteLine("The stream is some other type.");

break;

case null:

WriteLine("The stream is null.");

break;

}

\*\* Activity A-1

Step 1:

CheckObject(Console.BackgroundColor);

CheckObject(Console.WindowWidth);

CheckObject(null);

CheckObject(DateTime.Today);

Console.Read();

Step 2:

static void CheckObject(object value)

{

switch(value)

{

case ConsoleColor t:

Console.WriteLine($"Bacground Color: {t.ToString()}");

break;

case int w when w >=120:

Console.WriteLine($"Length (large): {w}");

break;

case int w:

Console.WriteLine($"Length (short): {w}");

break;

case DateTime d:

Console.WriteLine(d);

break;

case null:

Console.WriteLine("Null Value");

break;

default:

Console.WriteLine("Unknown value");

break;

}

}