

Exception Handling

What is it?

- Exception = error
- Compile-time error
- Run-time error
- Exception handling = help you deal with error
- Uses the try, catch, and finally keyword

Overview

- Exceptions are types from **System.Exception**.
- Use a try block around the statements that might throw exceptions.
- **Catch keyword** is used to define an exception handler.
- If no exception handler for a given exception is present, the program stops executing with an error message.
- Do not catch an exception unless you can handle it

- If a **catch block** defines an exception variable, you can use it to obtain more information
- Exceptions can be explicitly generated by a program by using the **throw keyword**.
- Code in a finally block is executed even if an exception is thrown.

Divide by Zero

```
1  using System;
2
3  namespace test
4  {
5      class Program
6      {
7          static void Main(string[] args)
8          {
9              int j = 0;
10             int k = 100;
11             Console.WriteLine("j = {0}  k = {1}", j, k);
12             int x = k / j;
13             Console.WriteLine("x = {0}", x);
14         }
15     }
16 }
```

Exception handling

```
static void Main(string[] args)
{
    int j = 0;
    int k = 100;
    Console.WriteLine("j = {0}  k = {1}", j, k);
    int x = 0;

    try
    {
        x = k / j;
    }
    catch
    {
        Console.WriteLine("something wrong.");
        x = -1;
    }
    finally
    {
        Console.WriteLine("clean up here.");
    }
    Console.WriteLine("x = {0}", x);
}
```

Read user number data

```
class Program
{
    static void Main(string[] args)
    {
        decimal baht = 0;
        Console.Write("Enter value in Baht: ");
        baht = Convert.ToDecimal(Console.ReadLine());
        Console.WriteLine("USD = " + baht * 40);
    }
}
```

Try to input some number and letter

Exception handling

```
static void Main(string[] args)
{
    decimal baht = 0;
    Console.Write("Enter value in Baht: ");
    try
    {
        baht = Convert.ToDecimal(Console.ReadLine());
    }
    catch
    {
        baht = 0;
    }
    Console.WriteLine("USD = " + baht * 40);
}
```