Contents

Exceptions

Solutions for those exercises.[1]

Questions

1. In computing, what is an exception?

    ☐ A compilation error.
    ☐ When a program user requires a special accommodation.
    ☐ When a behaviour not supposed to happen occurs during execution.
    ☐ A keyword.

2. When a program meets an unexpected behaviour, we say that it…

    ☐ … *raises* an exception.
    ☐ … *throws* an exception.
    ☐ All of the above.

3. An exception can occur when…

    ☐ … a user enters for example the `string` "Test" when asked for a numerical value.
    ☐ … a division by 0 occurs.
    ☐ … the program tries to access an array outside of its index range.
    ☐ All of the above.

4. A `try`-`catch` block…

    ☐ … executes all the code inside its `try` block, then all its code inside its `catch` block.
    ☐ … executes all the code inside its `try` block, then all its code inside its `catch` block if an exception was raised at any point.
    ☐ … executes only if an exception was raised in the program before.
    ☐ … executes the code inside its `try` block, and switches to its `catch` block if an exception was thrown.

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[1] https:/princomp.github.io/solutions/misc/exceptions

☐ … executes its **catch** block first, and then its **try** block if an exception was raised.

5. A **try-catch-finally** block…

☐ … can have multiple **catch** block.
☐ … can omit the **finally** block.
☐ … can omit the **catch** block.
☐ All of the above.

Warm-up Exercise

1. Consider the following code:

```csharp
using System;

class Program
{
    static void Main()
    {
        try
        {
            Console.WriteLine("Enter a number");
            int uInput =
              ↪  int.Parse(Console.ReadLine());
            int[] t = { 10 };
            int div = 0 / (uInput -1);
            int tAcces = t[uInput];
        }
        catch (IndexOutOfRangeException)
        {
  ↪  Console.WriteLine("IndexOutOfRangeException");
        }
        catch (DivideByZeroException)
        {
  ↪  Console.WriteLine("DivideByZeroException");
        }
        catch (FormatException)
        {
            Console.WriteLine("FormatException");
        }
        catch (ArgumentNullException)
        {
  ↪  Console.WriteLine("ArgumentNullException");
```

```
            }
        }
}
```

(Download this code)[2]

- Determine which input would the user needs to enter to get "IndexOutOfRangeException", "DivideByZeroException", "FormatException" and "ArgumentNullException" displayed.
- Is there something the user could enter that would *not* raise any exception?

[2]https:/princomp.github.io/code/projects/TriggeringExceptions.zip