

# Developing an Exception Handling Strategy

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# Overview



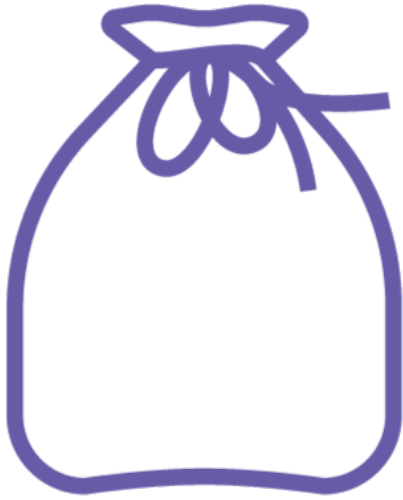
**Exception handling organization**

**What to do with exception information**

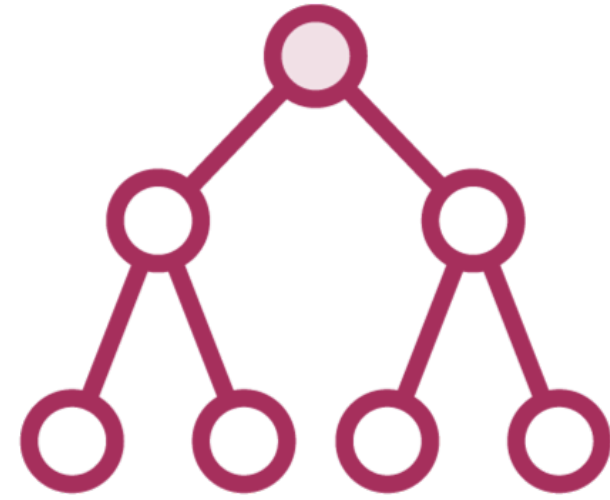
**Do's and Don'ts of exceptions**



# Exception Handling Organization



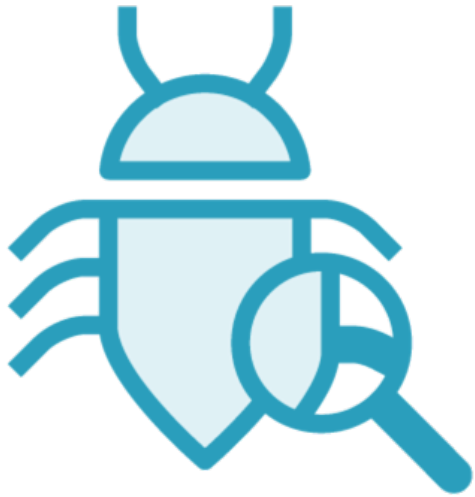
Centralized exception handling



More localized exception handling

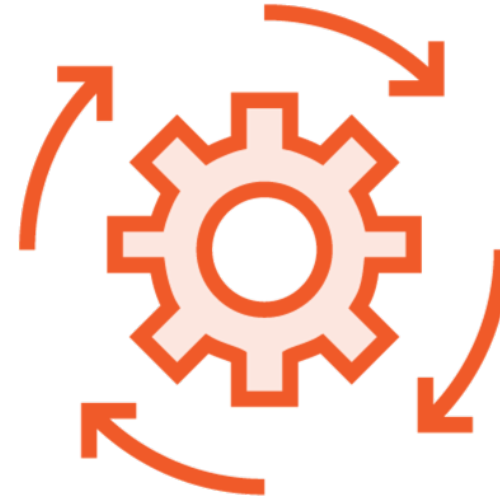
# Centralized Exception Handling

**Exception handling is grouped together**



**Tends to simplify exception handling**

Error handling is all in one place

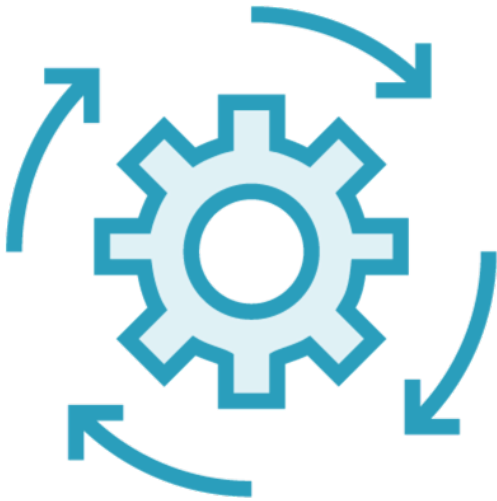


**May make exception recovery more difficult**

May exit processing logic prematurely

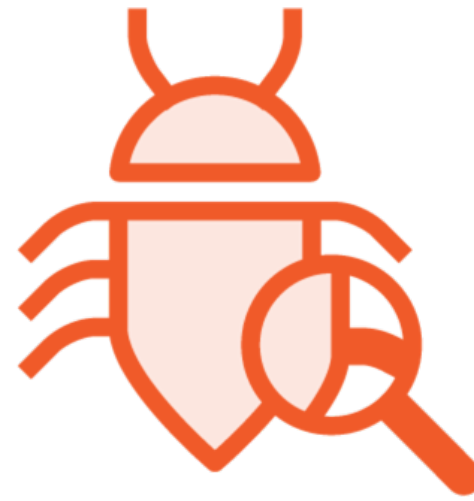
# More Localized Exception Handling

Exception handling is closer to the point where the issue occurs



**Better enables exception recovery**

Error handling happens within processing logic



**May make exception handling cumbersome**

Error handling is spread throughout code

# What to Do with Exception Information

**Exception information has two audiences**



End users



Developers and support team

# End Users



**Let them know something has gone wrong**

- Information should be clear and simple
- Identify where the problem occurred



# Developers and Support Team



## **Information must detailed and complete**

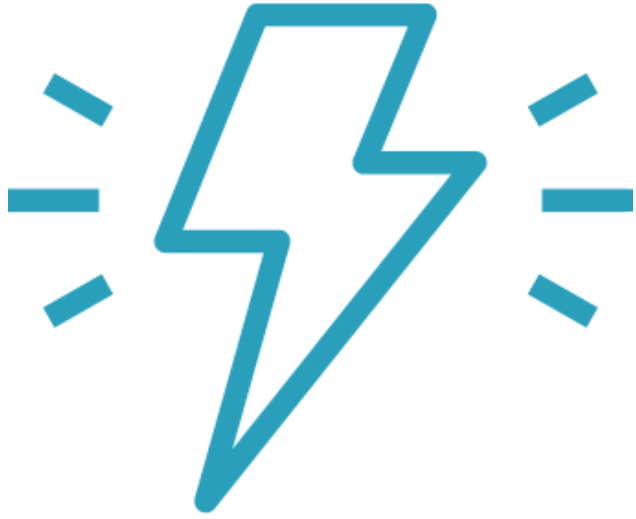
- Enable quick resolution if possible
- Provide all available information

## **Information should be persisted**

- Write information to the log system

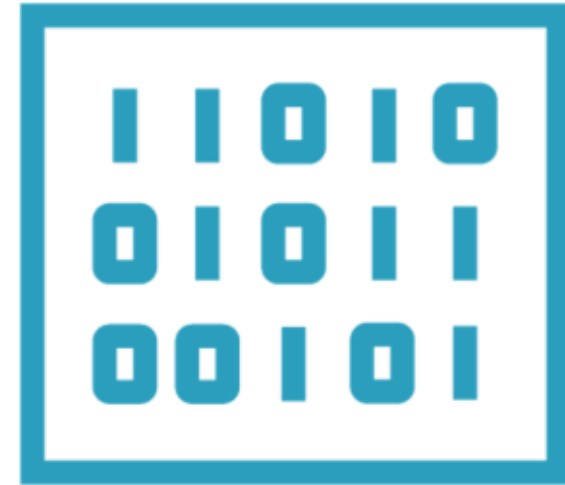


# Do's and Don'ts of Exceptions



**Do use exceptions ...**

For indicating errors or other exceptional circumstances



**Do include data in exceptions ...**

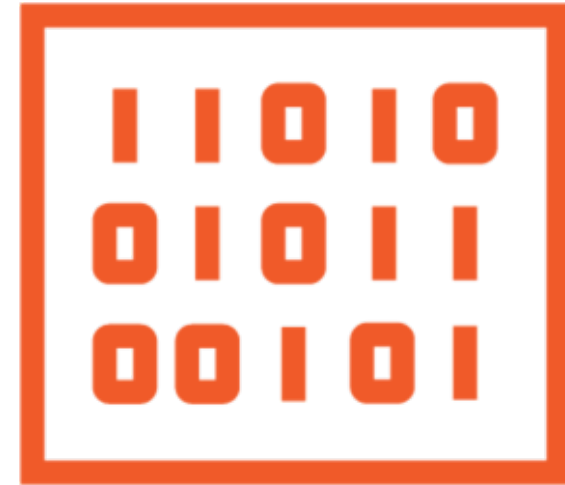
For information specifically related to the error or exceptional circumstance

# Do's and Don'ts of Exceptions



## Don't use exceptions...

For standard app control flow or conditional logic



## Don't include data in exceptions ...

As a way of bypassing parameters or method return values

# Improper Exception Use

See the project `ImproperExceptionUse` in the `before` folder of this module's exercise files for an example of incorrect exception use



Uses exceptions for standard logic control flow



Uses exceptions to exit back multiple methods in call stack



Uses exceptions to pass data values not related to an error



# Summary



## Exception handling organization

- Balance the tradeoffs

## Centralized handling

- Tends to simplify handling
- May make recovering difficult

## Localized handling

- Tends to simplify recovering
- May make handling cumbersome



# Summary



## Exception information has two audiences

- Target each appropriately

### End user

- Information should be clear and simple
- Identify where the problem occurred

### Developers and support team

- Information should be detailed
- Write to log system

# Summary



## Using exceptions appropriately

- Errors and exceptional circumstances
- Only include data related directly to the error or exceptional circumstance

