

Developing an Exception Handling Strategy



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Overview



Exception handling organization

What to do with exception information

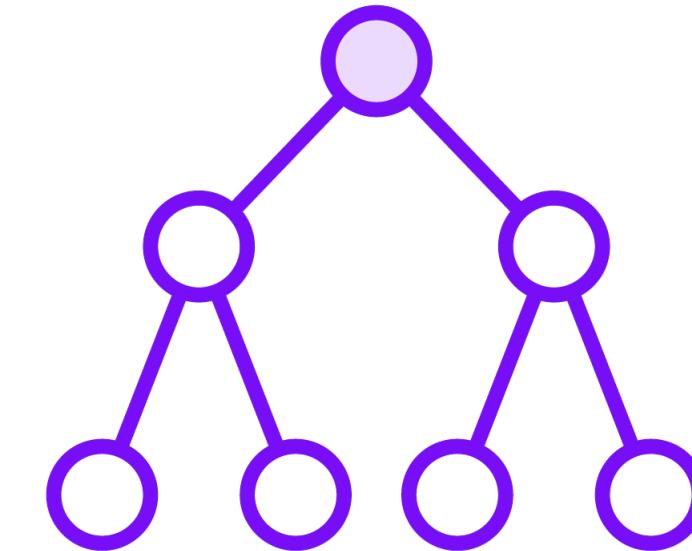
Do's and Don'ts of exceptions



Exception Handling Organization



Centralized Exception Handling

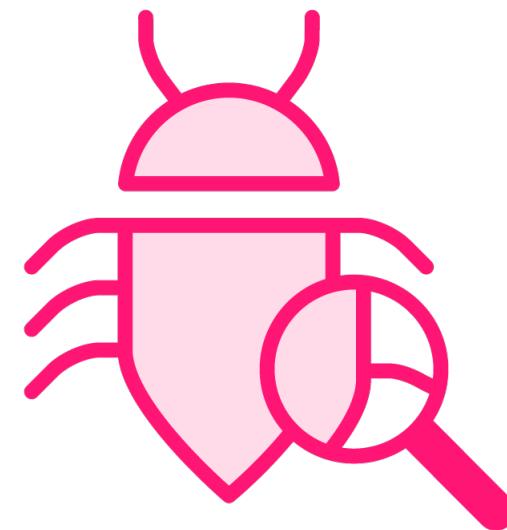


More Localized Exception Handling



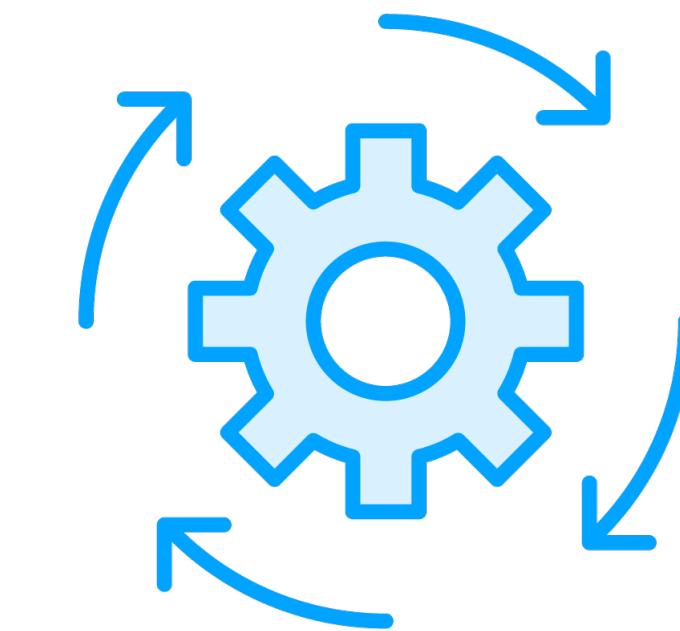
Centralized Exception Handling

Exception handling is grouped together



Tends to Simplify Exception Handling

Error handling is all in one place



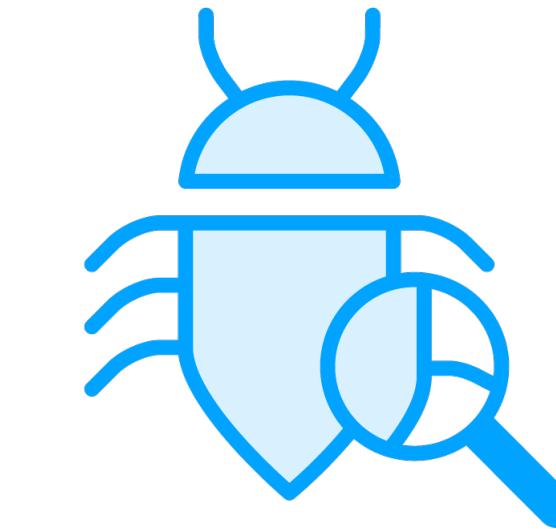
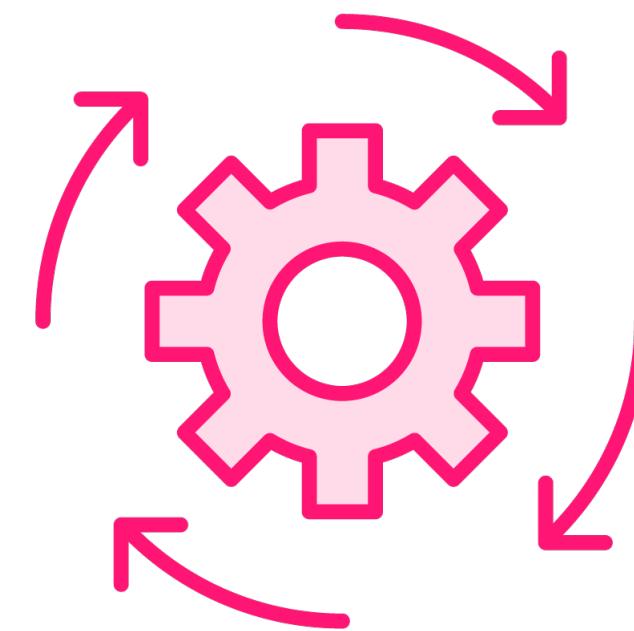
May Make Exception Recovery More Difficult

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

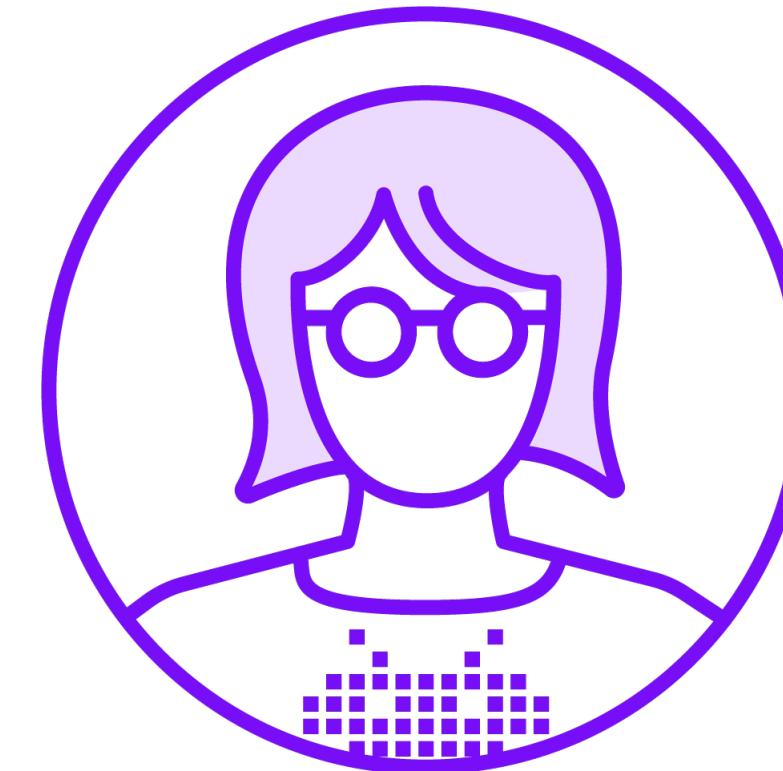


What to Do with Exception Information

Exception information has two audiences



End Users



Developers and Support Team



End Users

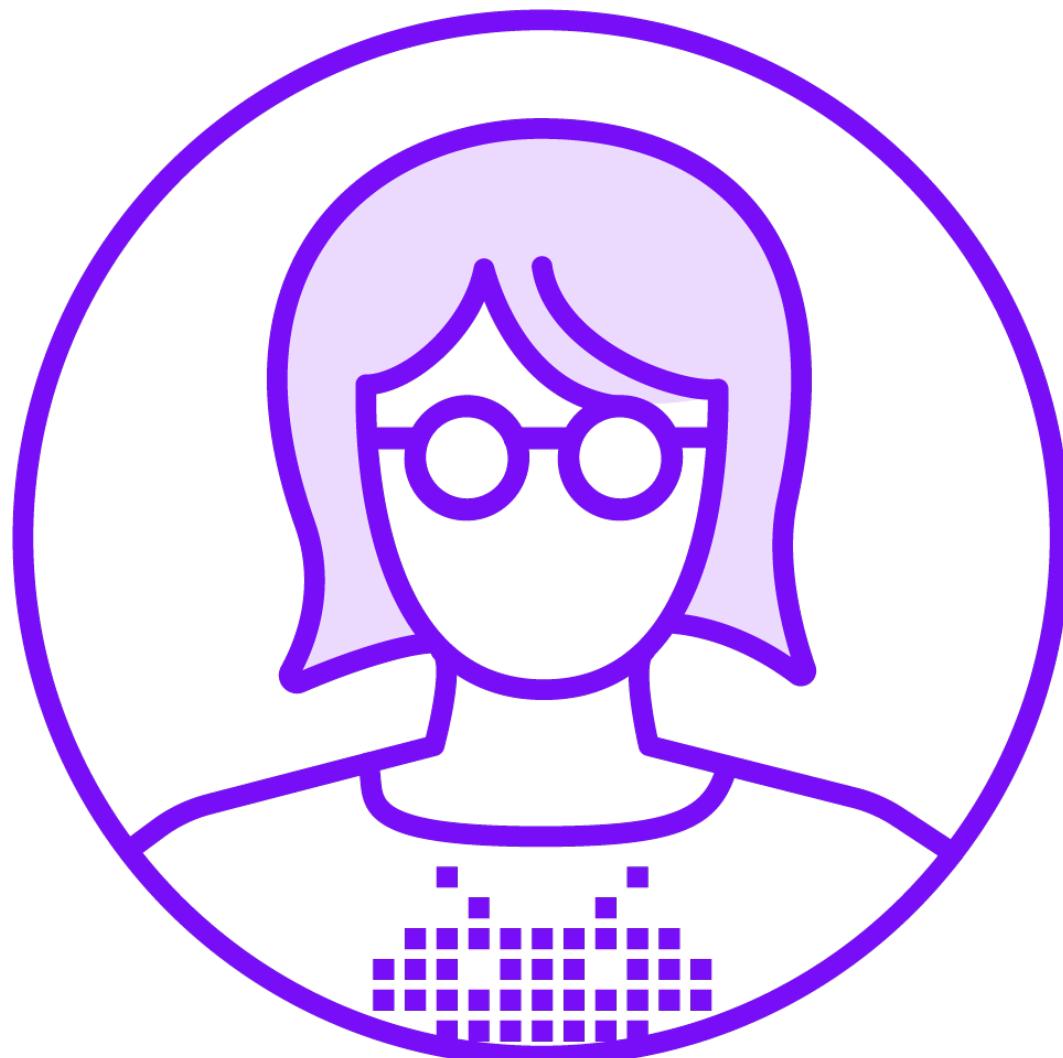


Let them know something has gone wrong

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



Developers and Support Team



Information must be detailed and complete

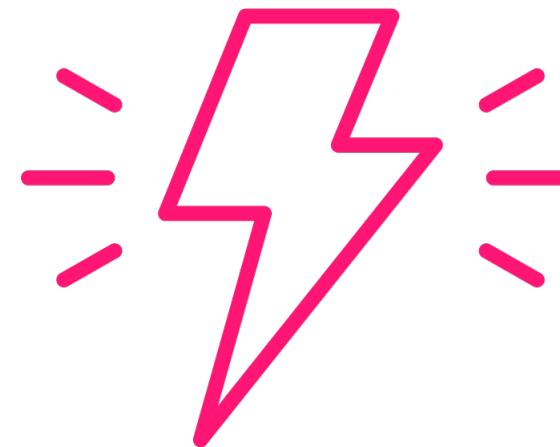
- Enable quick resolution if possible
- Provide all available information

Information should be persisted

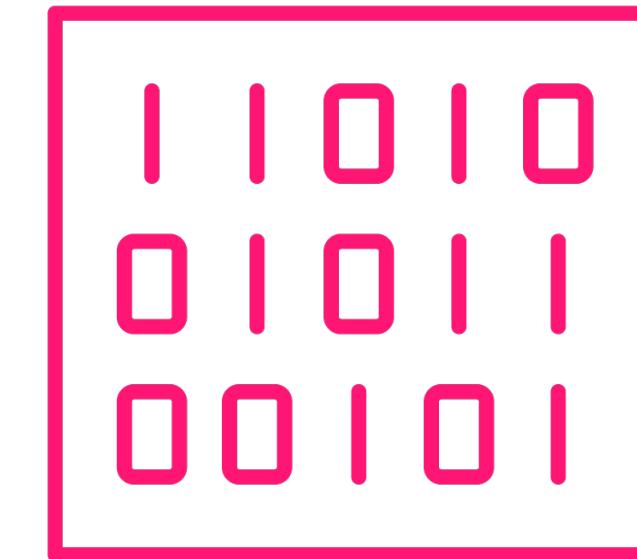
- Write information to the log system



Do's and Don'ts of Exceptions



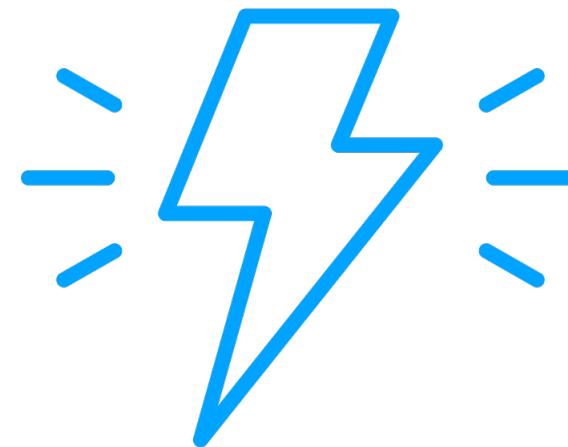
Do Use Exceptions ...
For indicating errors or other
exceptional circumstances



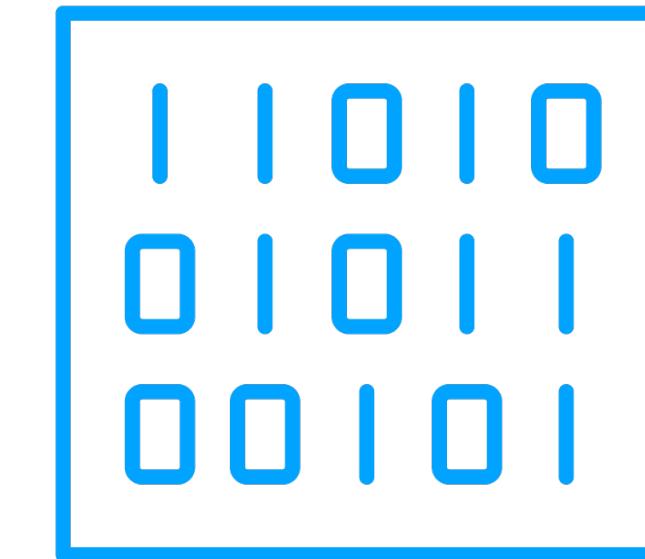
Do Include Data in Exceptions ...
For information specifically related to the
error or exceptional circumstance



Do's and Don'ts of Exceptions



Don't Use Exceptions ...
For standard app control flow
or conditional logic

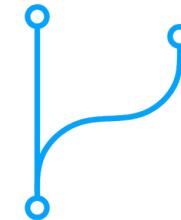


Don't Include Data in Exceptions ...
As a way of bypassing parameters
or method return values

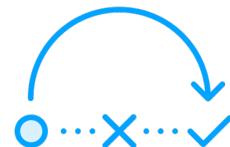


Improper Exception Use

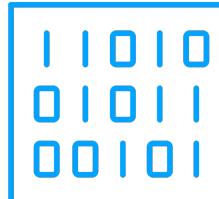
See the project `ImproperExceptionUse` in the `before` folder of this module's exercise files for an example of incorrect exception use



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

