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# Exceptions

- Errors occur in software programs
  - Exceptions are nice way to deal with errors
    - An *exception* is an event that occurs during the execution of a program that disrupts the normal flow of instructions
  - Throwing an exception
    - Java method creates an exception object when an error occurs
  - Catch the exception
    - Exception handler handles the exception
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# Advantages

1. Separating Error Handling Code from "Regular" Code
  2. Propagating Errors Up the Call Stack
  3. Grouping Error Types and Error Differentiation
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# Advantage 1: Separating Error Handling Code from "Regular" Code

```
readFile {  
    open the file;  
    determine its size;  
    allocate that much memory;  
    read the file into memory;  
    close the file;  
}
```



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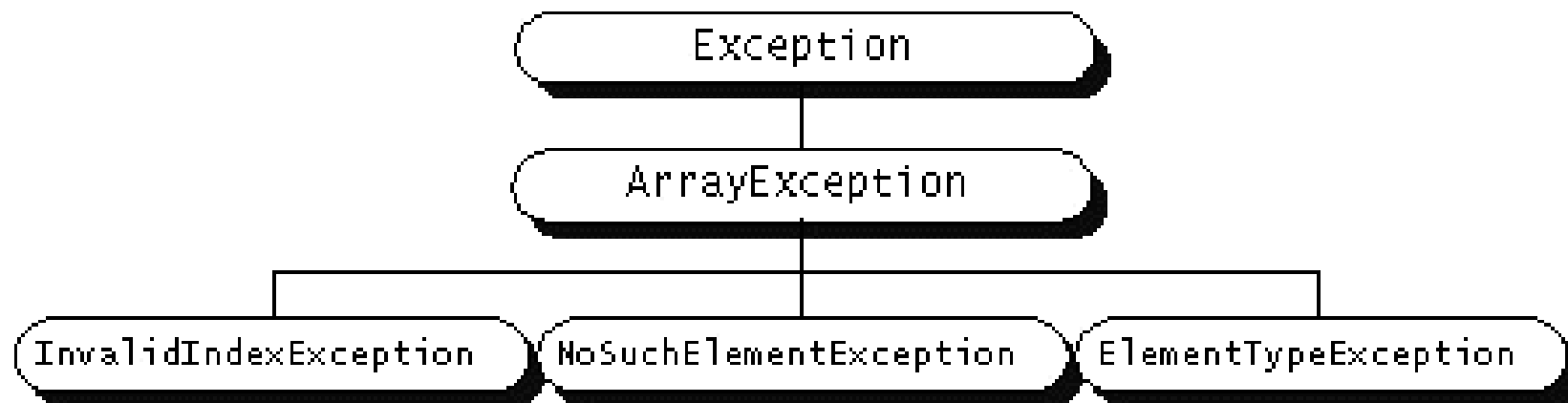
## Advantage 2: Propagating Errors Up the Call Stack

```
method1 {  
    call method2;  
}  
method2 {  
    call method3;  
}  
method3 {  
call readFile;  
}
```

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## Advantage 3: Grouping Error Types and Error Differentiation



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# For more information

- The Java Tutorial

- <http://java.sun.com/docs/books/tutorial/>

- Essential Java Classes

- Handling Errors Using Exceptions

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