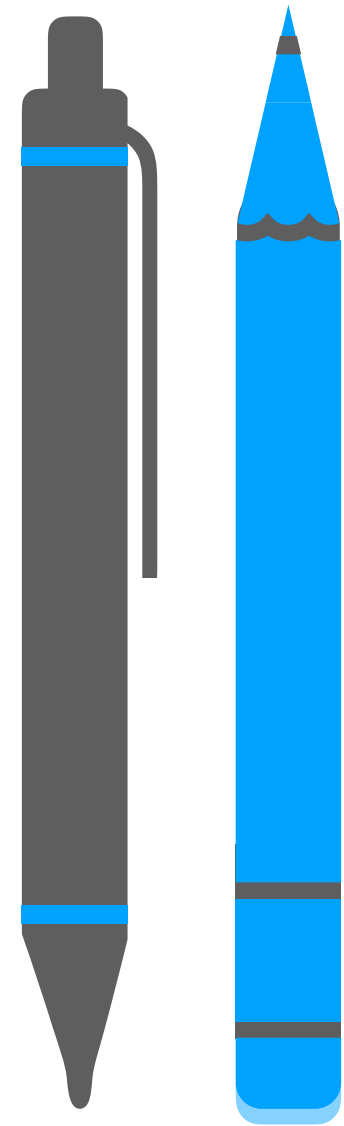
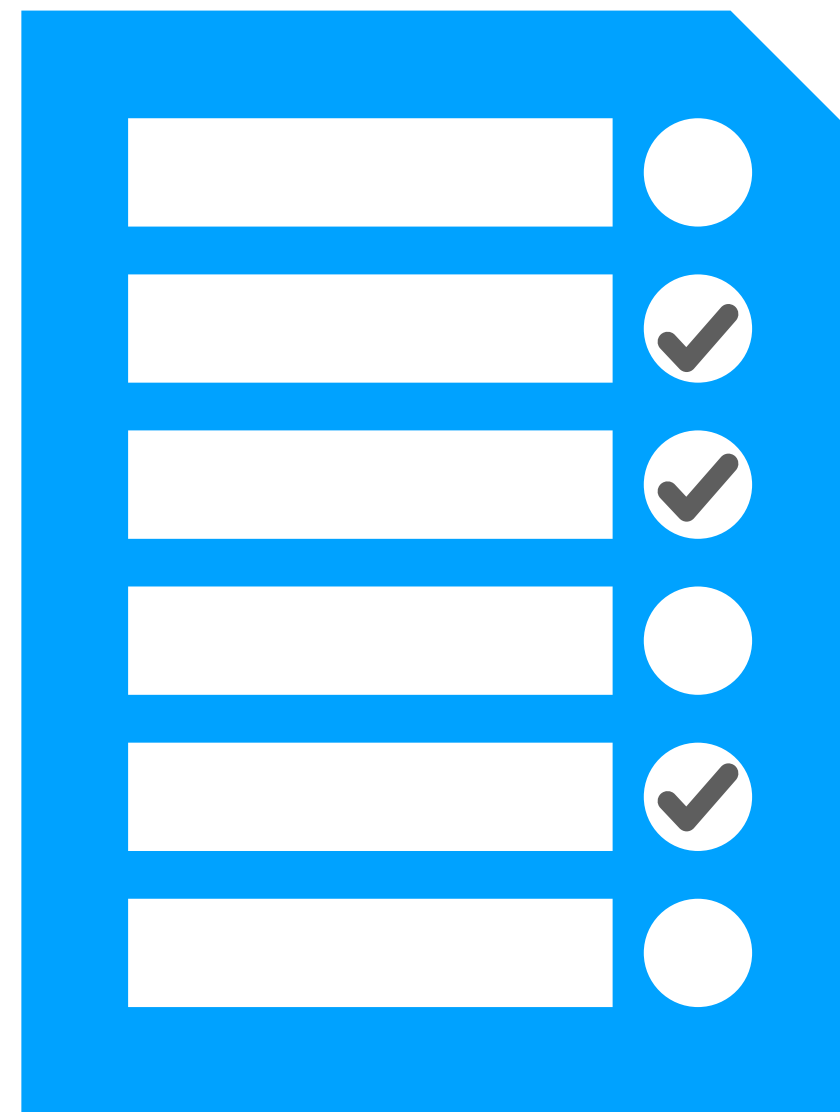
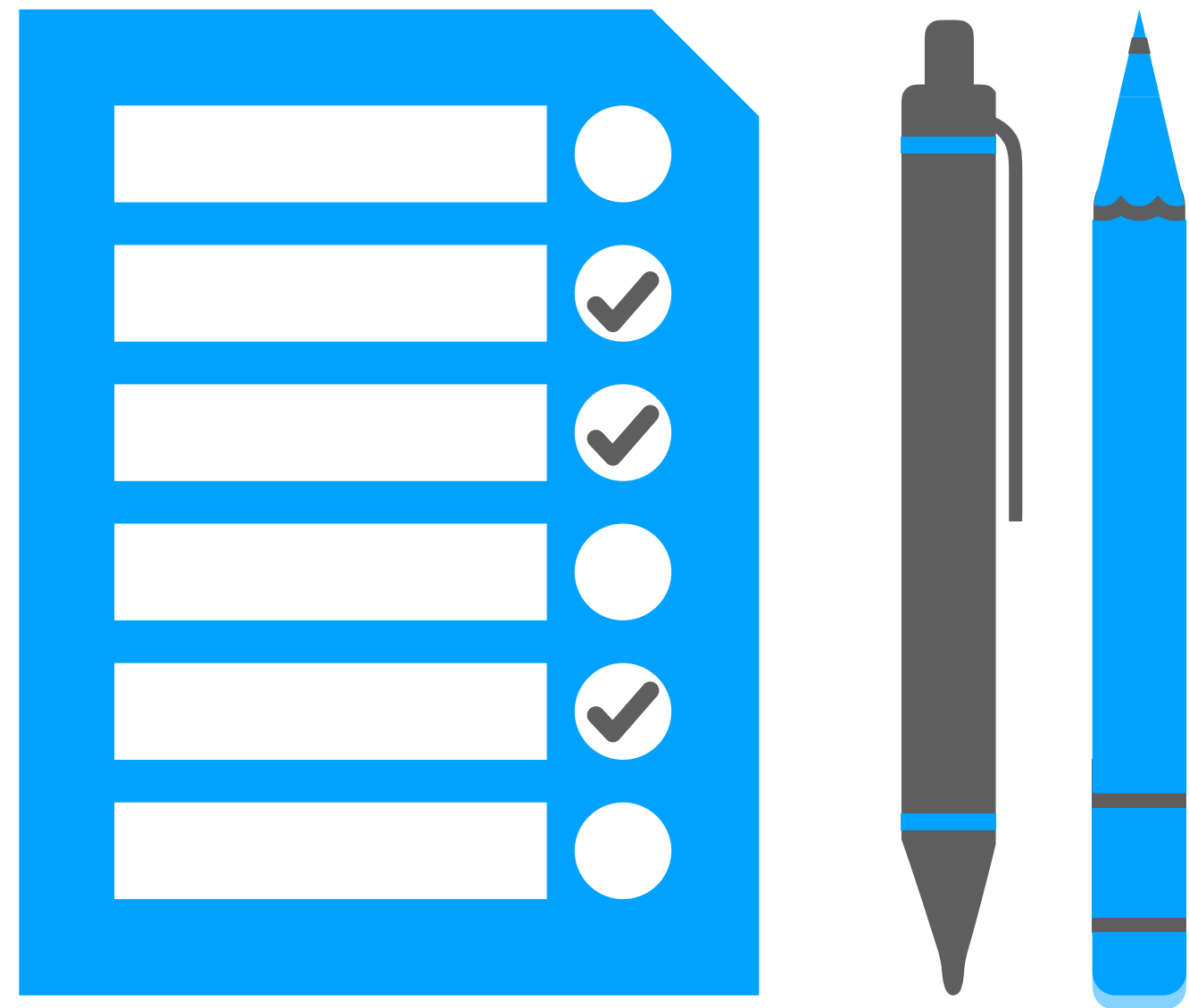


Exceptions in Java



- Errors vs Exceptions
- Understanding Exceptions
- Exception handling
- Exceptions hierarchy
- Checked and Unchecked Exceptions
- try, catch, finally blocks

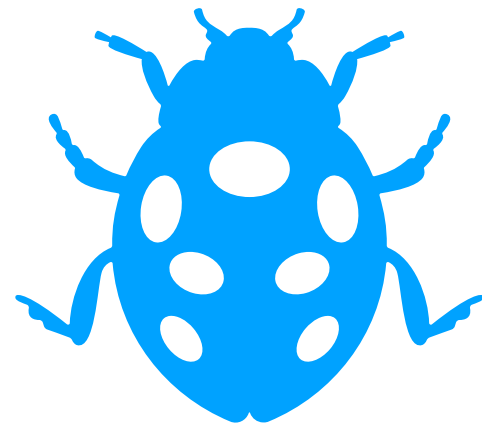
After today's session you should be able to:



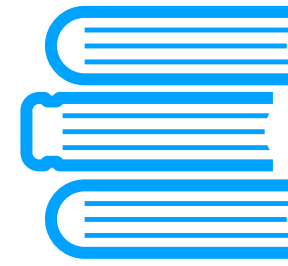
- Understand what are exceptions
- Apply Exception handling techniques
- Know the hierarchy of Exceptions

Things WILL Fail

Source of Errors



Bugs



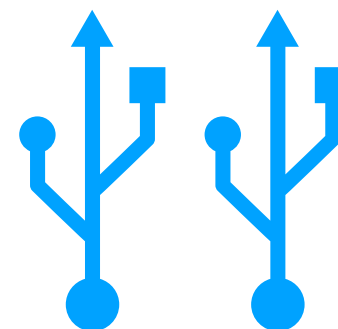
3rd part library



Wrong user input



3rd part library



Network issue

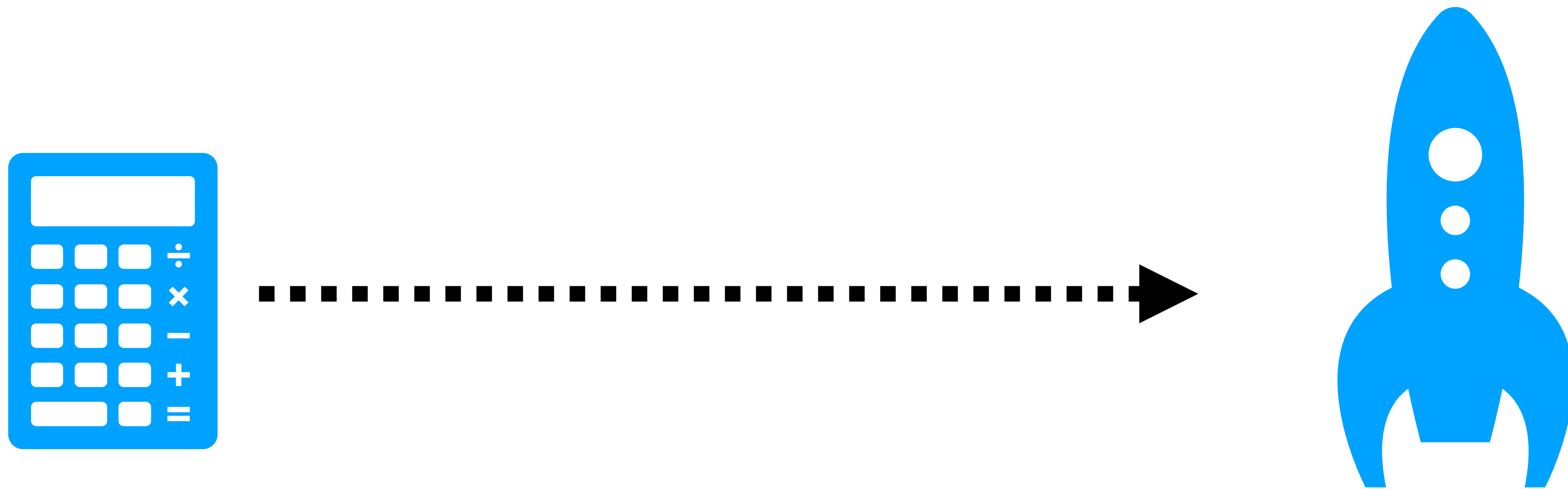


Hard drive failure

Exceptions are Object

Just like everything else in java

Exceptions are everywhere



Two categories of code



May Fail



Don't expect to fail

Two categories revisited



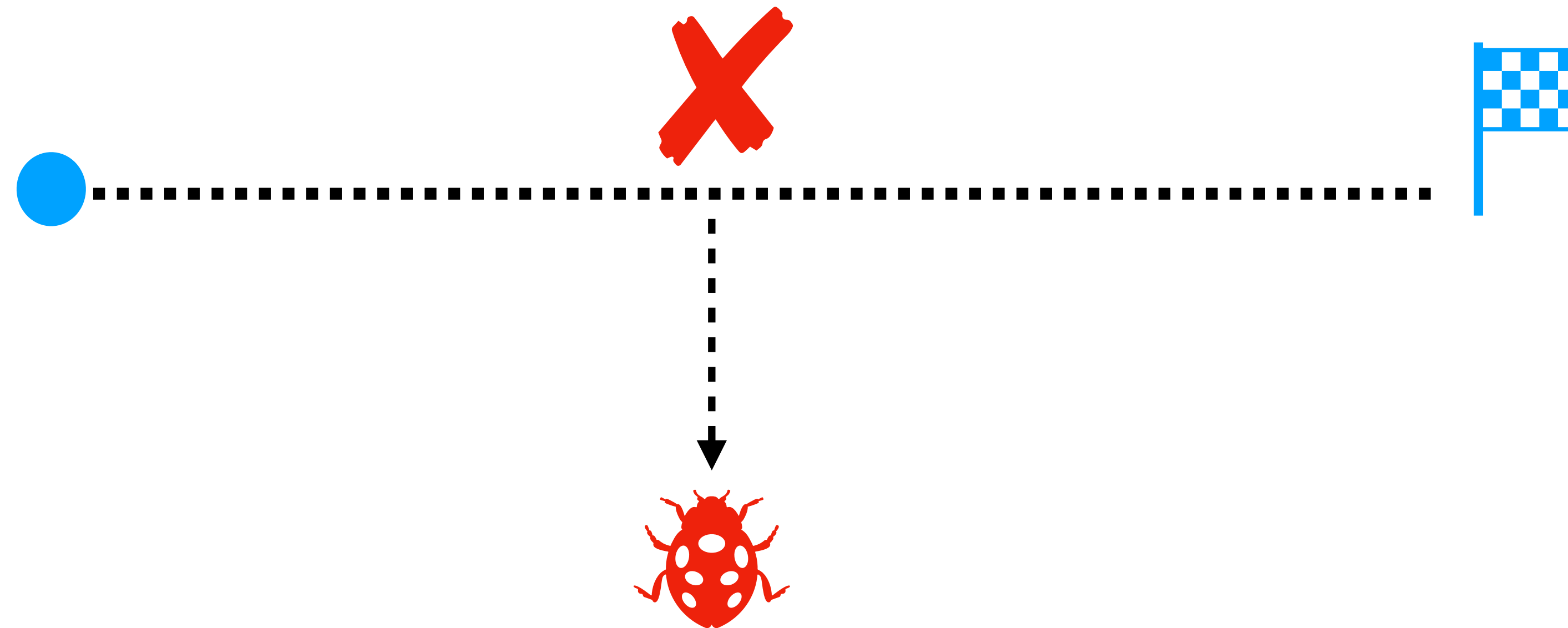
Expected



Don't expect to fail

Exception Defined

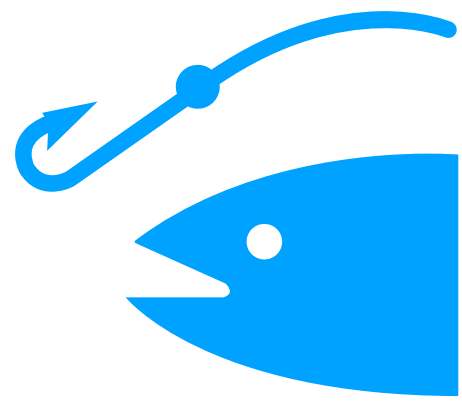
Non-typical , exceptional condition that signal a Piece of code could not execute normally



Exception Handling

Any type of action to process any kind of error

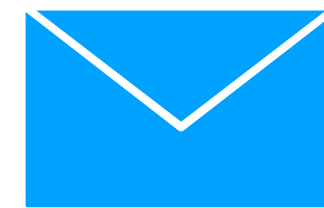
Exception Handling



Catch



Recover



Notify



Diagnose

try catch block

```
try {  
    // some code that might throw exception  
} catch (Exception e) {  
    // TODO: handle exception  
}
```

try catch finally block

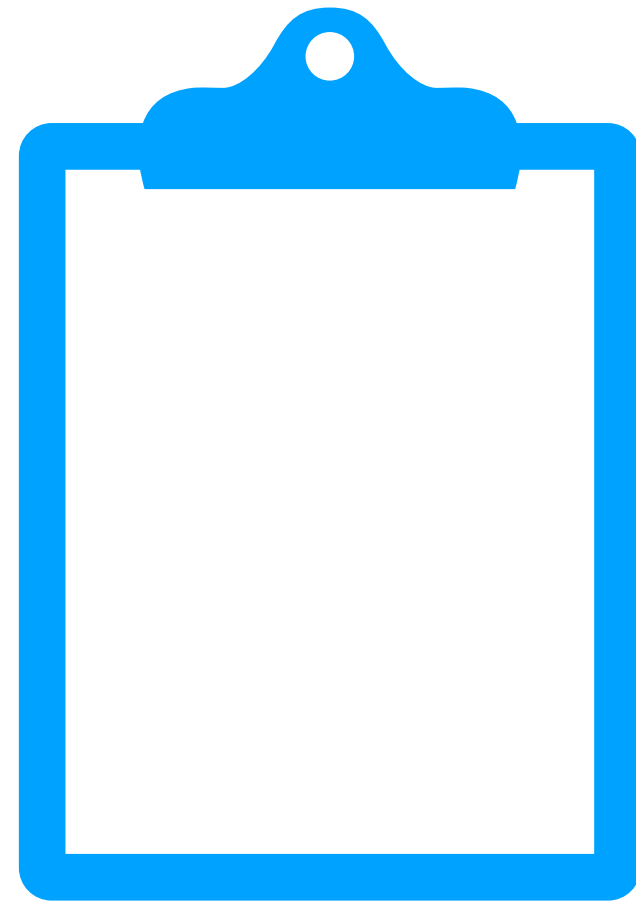
```
try {  
    // some code that might throw exception  
} catch (Exception e) {  
    // TODO: handle exception  
}finally {  
    // actions regardless of exception thrown or not  
}
```

Multi try catch block

```
try {  
    // some code that might throw exception  
} catch (ArithmeticException e) {  
    // TODO: handle exception  
} catch (NullPointerException e) {  
    // TODO: handle exception  
} catch (ArrayIndexOutOfBoundsException e){  
    // TODO: handle exception  
}
```

Categories of Exception

Must be handled Compile time



CHECKED EXCEPTION

Run time



UNCHECKED EXCEPTION

Most important 3 classes

Exception

RuntimeException

Error

Categories of Exception

Inheritance is used to categorize different type of Exceptions

Exception Hierarchy

