**Online Lab 9**

**Object Oriented Programming**

**Learning Objectives**

The students will be able to

* **Exception handling in java**
* **Demonstration of various keywords related to exception handling**
* **Preconditions and post conditions using assertion**

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| **Home Task** |

11.16 (Catching Exceptions with Superclasses) Use inheritance to create an exception superclass  
(called ExceptionA) and exception subclasses ExceptionB and ExceptionC, where ExceptionB inherits from ExceptionA and ExceptionC inherits from ExceptionB. Write a program to demonstrate  
that the catch block for type ExceptionA catches exceptions of types ExceptionB and ExceptionC.

11.17 (Catching Exceptions Using Class Exception) Write a program that demonstrates how various exceptions are caught with catch (Exception exception) This time, define classes ExceptionA (which inherits from class Exception) and ExceptionB (which inherits from class ExceptionA). In your program, create try blocks that throw exceptions of types ExceptionA, ExceptionB, NullPointerException and IOException. All exceptions should be caught with catch blocks specifying type Exception.

11.18 (Order of catch Blocks) Write a program demonstrating that the order of catch blocks is  
important. If you try to catch a superclass exception type before a subclass type, the compiler should  
generate errors.

11.19 (Constructor Failure) Write a program that shows a constructor passing information about  
constructor failure to an exception handler. Define class SomeClass, which throws an Exception in  
the constructor. Your program should try to create an object of type SomeClass and catch the exception that’s thrown from the constructor.

11.20 (Rethrowing Exceptions) Write a program that illustrates rethrowing an exception. Define  
methods someMethod and someMethod2. Method someMethod2 should initially throw an exception.  
Method someMethod should call someMethod2, catch the exception and rethrow it. Call someMethod  
from method main, and catch the rethrown exception. Print the stack trace of this exception.