Yash Mahajan SE IT B 04

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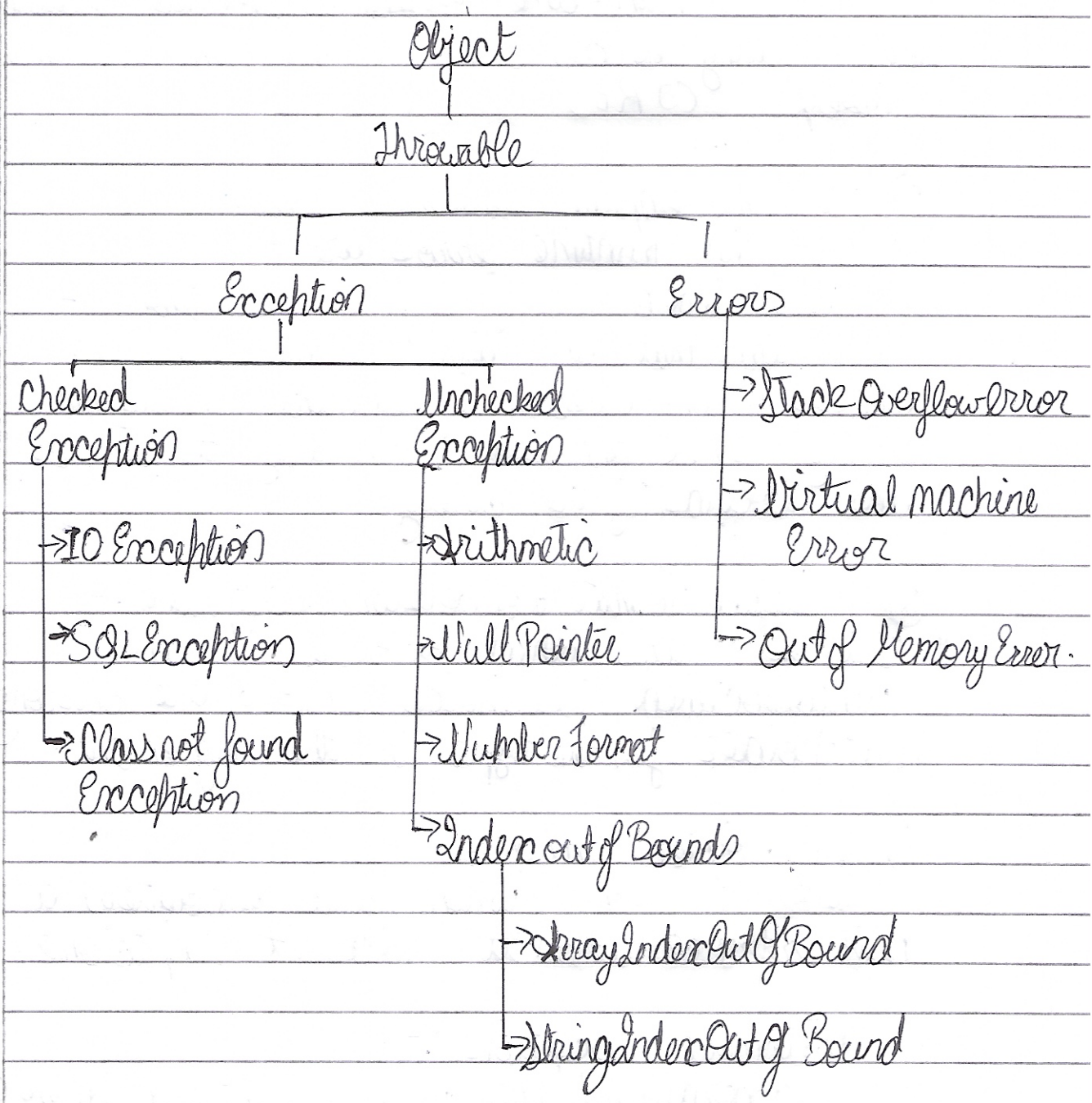
6. Post Experiment Exercise

A. Extended Theory:-

1) Explain the hierarchy of exception handling with the help of diagram



All exceptions and errors are sub classes of class Throwable, which is base class of hierarchy. One branch is headed by Exception. This class is used for exceptional conditions that user programs should catch, Null pointer is an example of such an exception. Another branch, Error are used by Java run-time system JVM to indicate errors having to do with the run-time environment itself (JRE)

2) List and explain runtime errors
The main runtime errors are :-
① Array index out of bounds Exception :-
This means that an attempt was made to access a non existential element. The element trying to be accessed is generally one outside the bounds of the array.

② Illegal Format Conversion Exception :-
This means that there is an unassociated placeholder or it's the wrong placeholder for the type in the argument.

4) Null Pointer Exception :-
This is thrown when Java encounters a null reference when it doesn't expectone.

5) Arithmetic Exception :-
This generallyhappens when you try to divide by 0.

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6) Class cast Exception :-
This happens when you try to wrongly cast an object to a particular class. This means that your object is not an instance or a subclass of this class.

7) Stack Overflow Exception :-
This happens when ~~you~~ Java runs out of it's available memory.

D] Conclusion :-

In this experiment we have studied the important concept of ~~ex~~ exception handling in Java. Exceptions are divided into two categories i.e. compiletime and runtime exception.

Exception handeling helps us maintain the desired output of the program even if unexpected events happen. If exceptions are handelled incorrectly the program may stop running.

Exception handling prevents a program from terminating ~~abnil~~ abruptly. It provides a proper method to handele all the compiletime and run time exceptions.