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Working with Core Java

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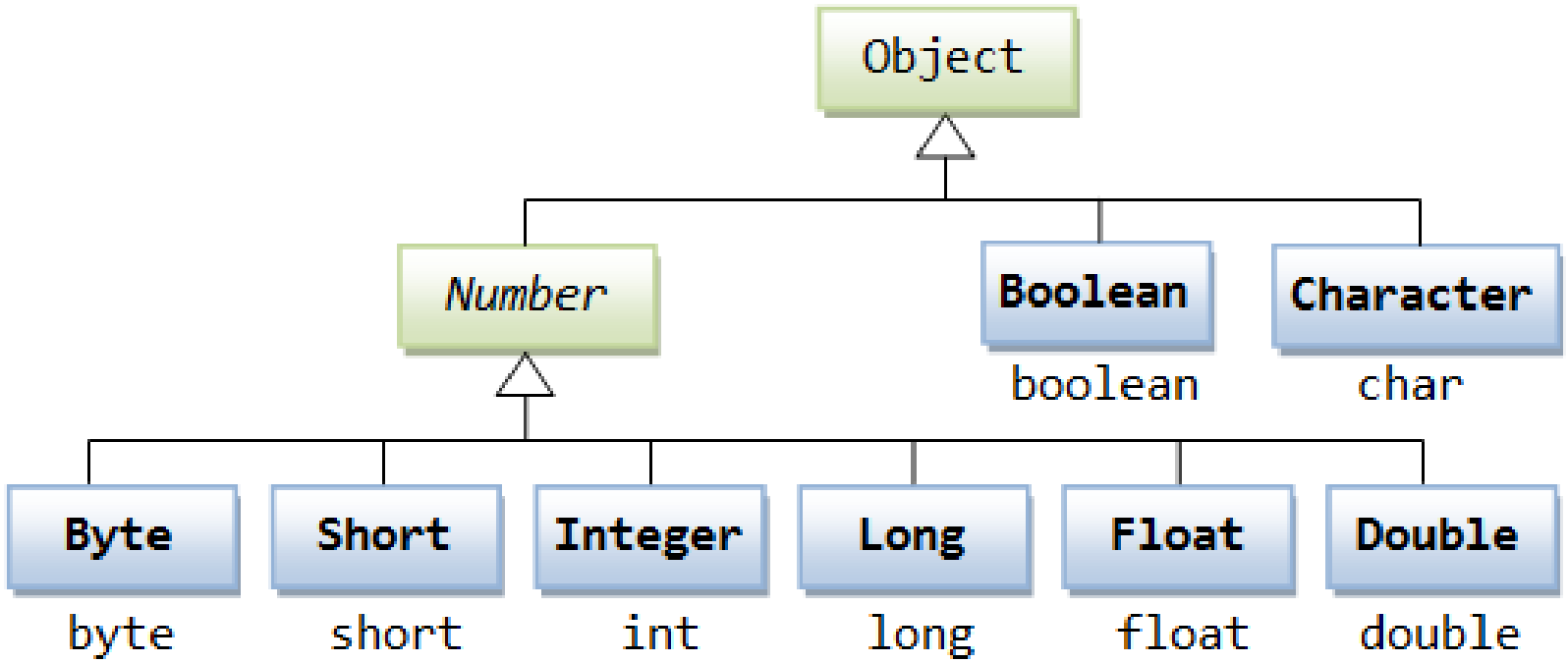
Getting Started with Java

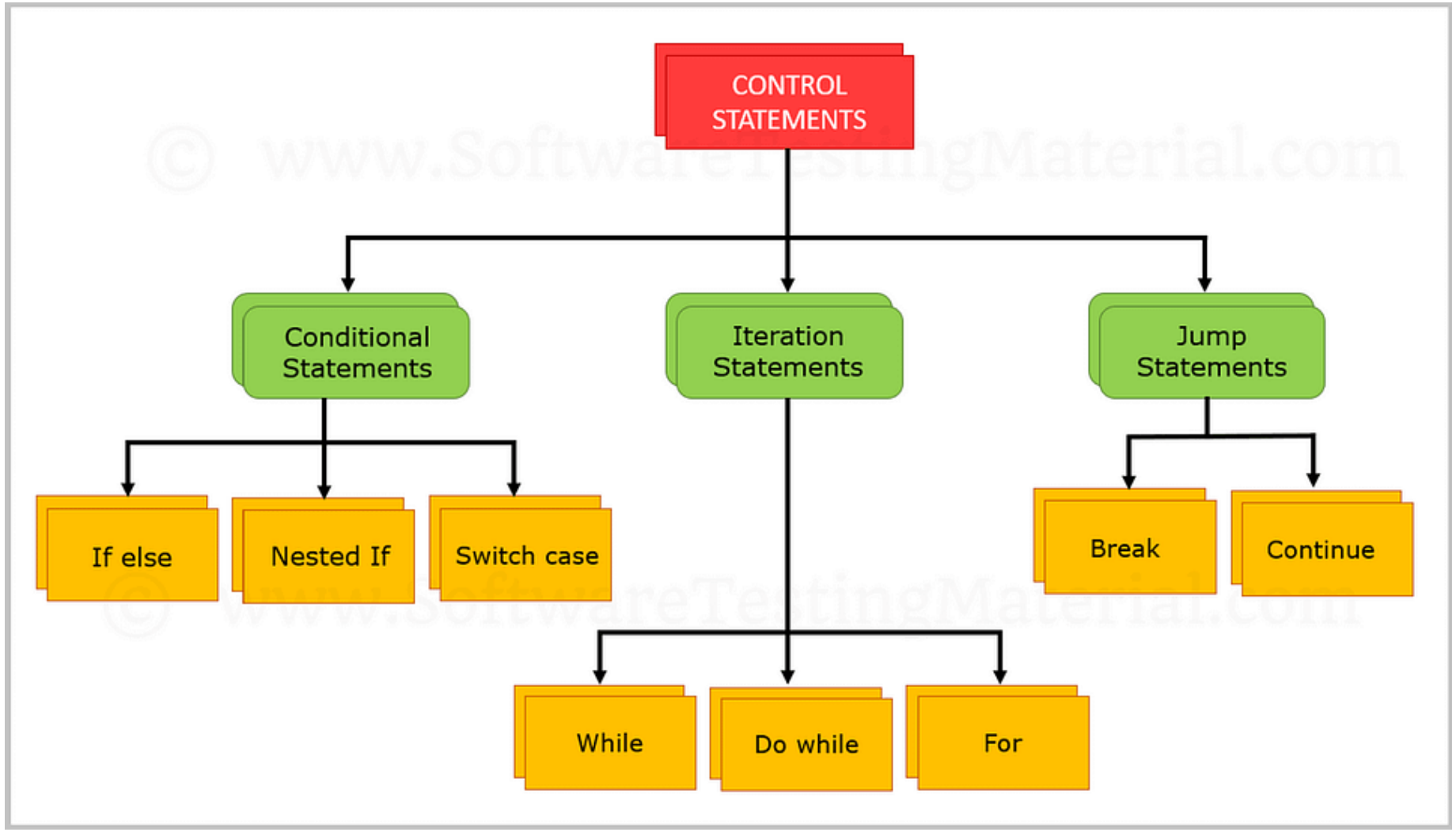
Wrapper Classes

Primitive type	Wrapper class	Constructor arguments
byte	Byte	byte or String
short	Short	short or String
int	Integer	int or String
long	Long	long or String
float	Float	float, double or String
double	Double	double or String
char	Character	char
boolean	Boolean	boolean or String

Wrapper Classes



Control Statements



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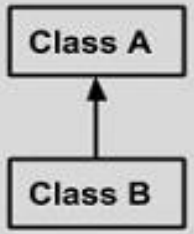
Object Oriented Programming

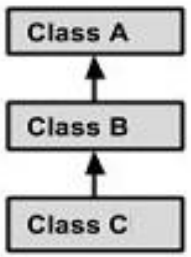
Inheritance

Single Inheritance



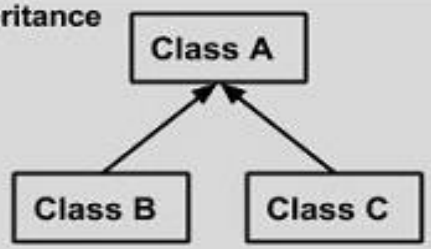

```
public class A {
   .....
}
public class B extends A {
   .....
}
```

Multi Level Inheritance



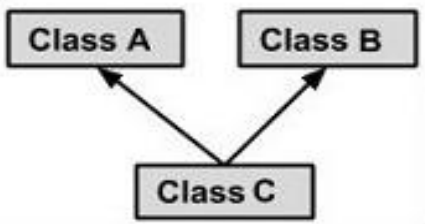

```
public class A { ..................}
public class B extends A {.....................}
public class C extends  B {..................... }
```

Hierarchical Inheritance




```
public class A { ..................}
public class B extends A {.....................}
public class C extends A {..................... }
```

Multiple Inheritance




```
public class A { ..................}
public class B {.....................}
public class C extends  A,B {
   .....................
} // Java does not support mutiple Inheritance
```

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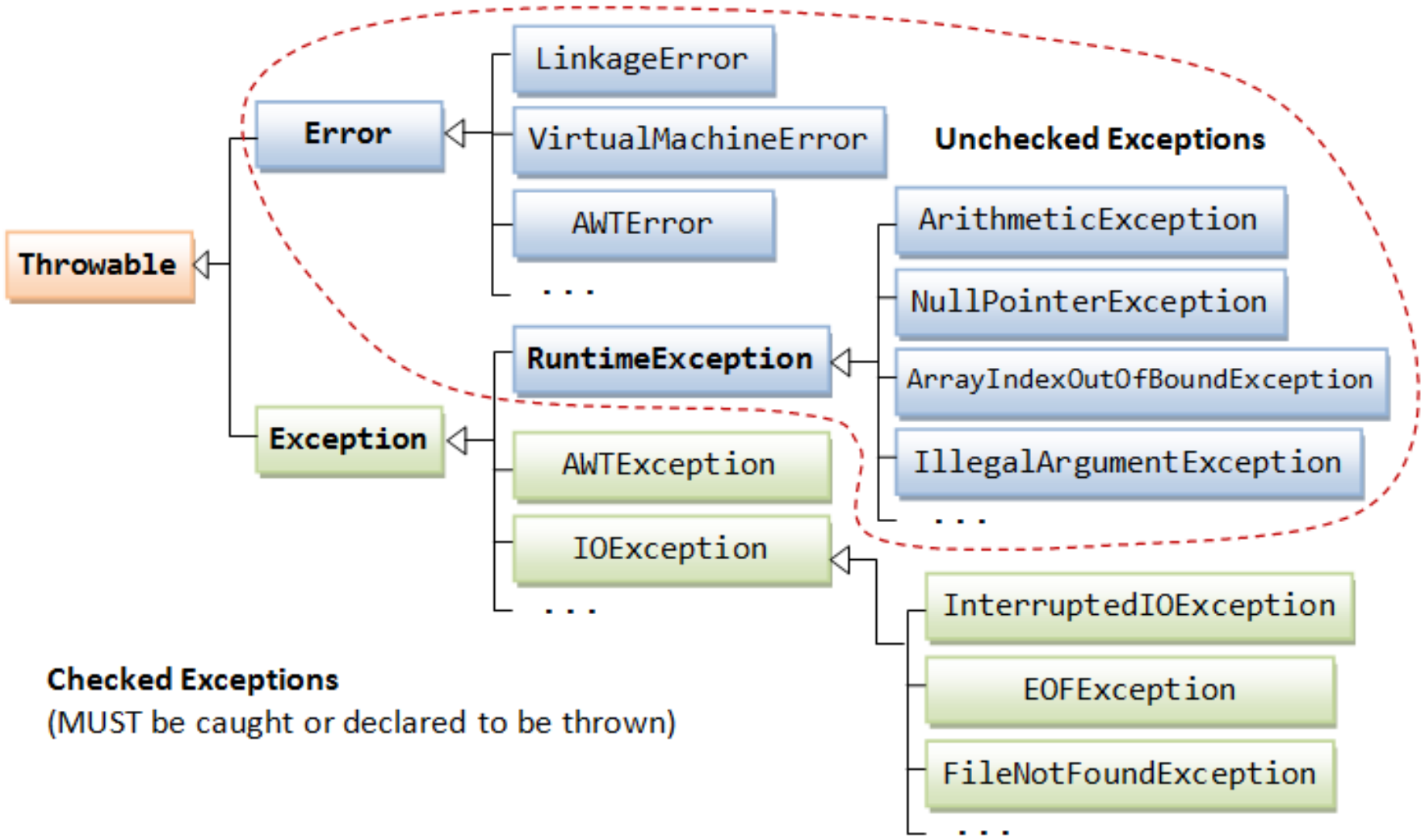
Exception Handling

Exception Handling



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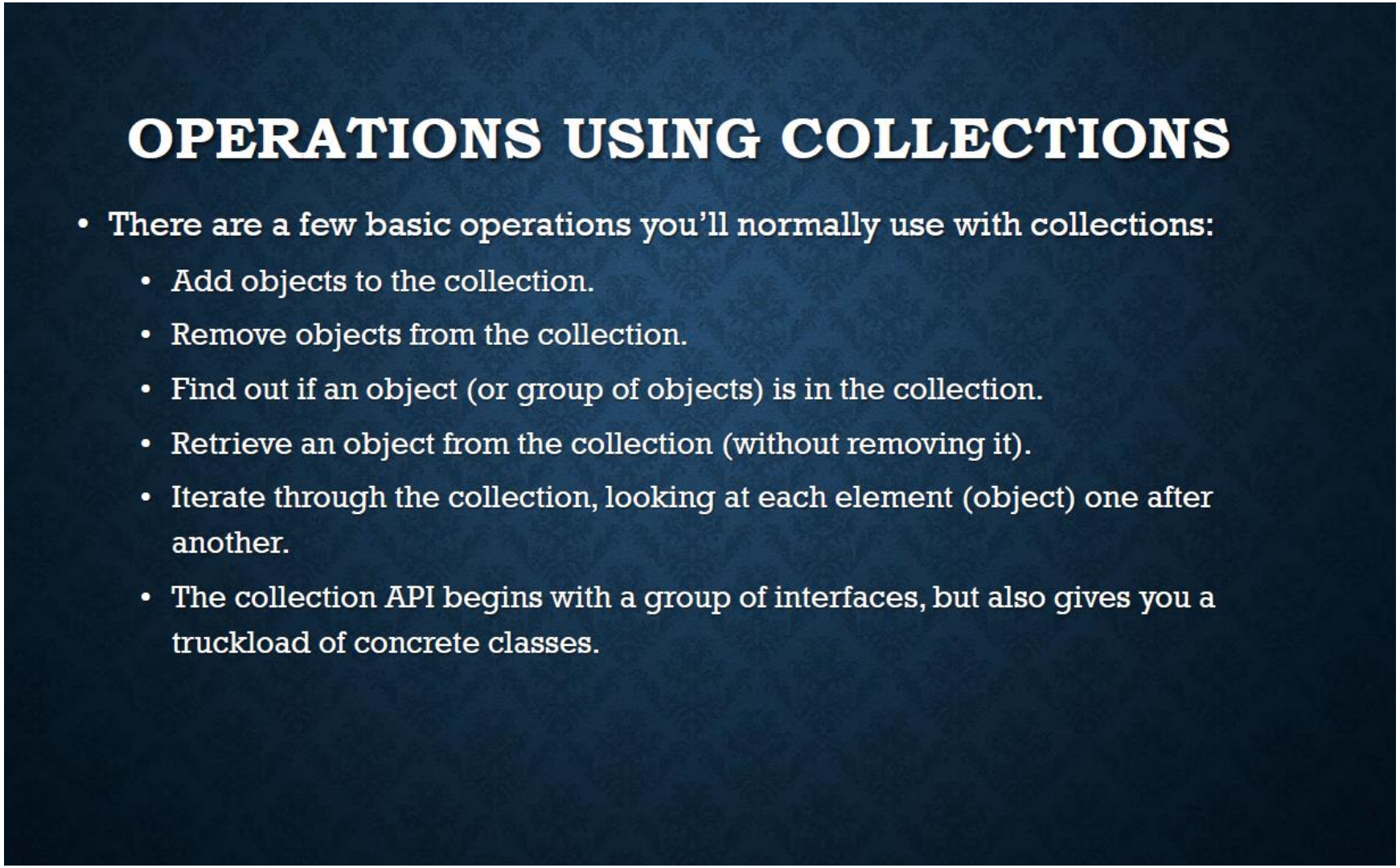
Java Collections

Java Collections

THE JAVA COLLECTION FRAMEWORK (JCF)

- A *collection* — sometimes called a container — is simply an object that groups multiple elements into a single unit.
- Collections are used to store, retrieve, manipulate, and communicate aggregate data.
- The collection framework gives you lists, sets, and maps to satisfy most of your coding needs.

Operations


OPERATIONS USING COLLECTIONS
There are a few basic operations you'll normally use with collections:
Add objects to the collection.
Remove objects from the collection.
Find out if an object (or group of objects) is in the collection.
Retrieve an object from the collection (without removing it).
Iterate through the collection, looking at each element (object) one after another.
The collection API begins with a group of interfaces, but also gives you a truckload of concrete classes.

Types of Collections

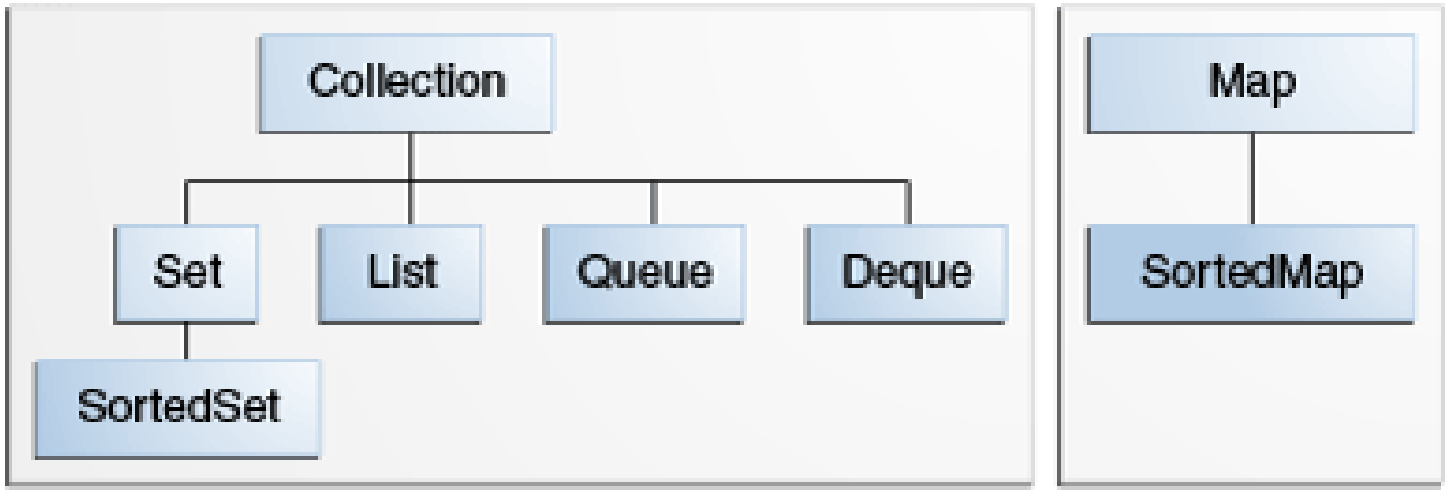
3 BASIC FLAVORS

- Lists: *Lists* of things (classes that implement List)
- Sets: *Unique* things (classes that implement Set)
- Maps: Things with a *unique ID* (classes that implement Map)

Collection API

- The core interfaces you need to know are the following six:
  - Collection
  - Set
  - SortedSet
  - List
  - Map
  - SortedMap
- Map implementation:
  - HashMap, Hashtable, TreeMap and LinkedHashMap.
- Set implementation:
  - HashSet, LinkedHashSet and TreeSet.
- List implementation:
  - ArrayList, Vector and LinkedList.

Collection API - Interfaces



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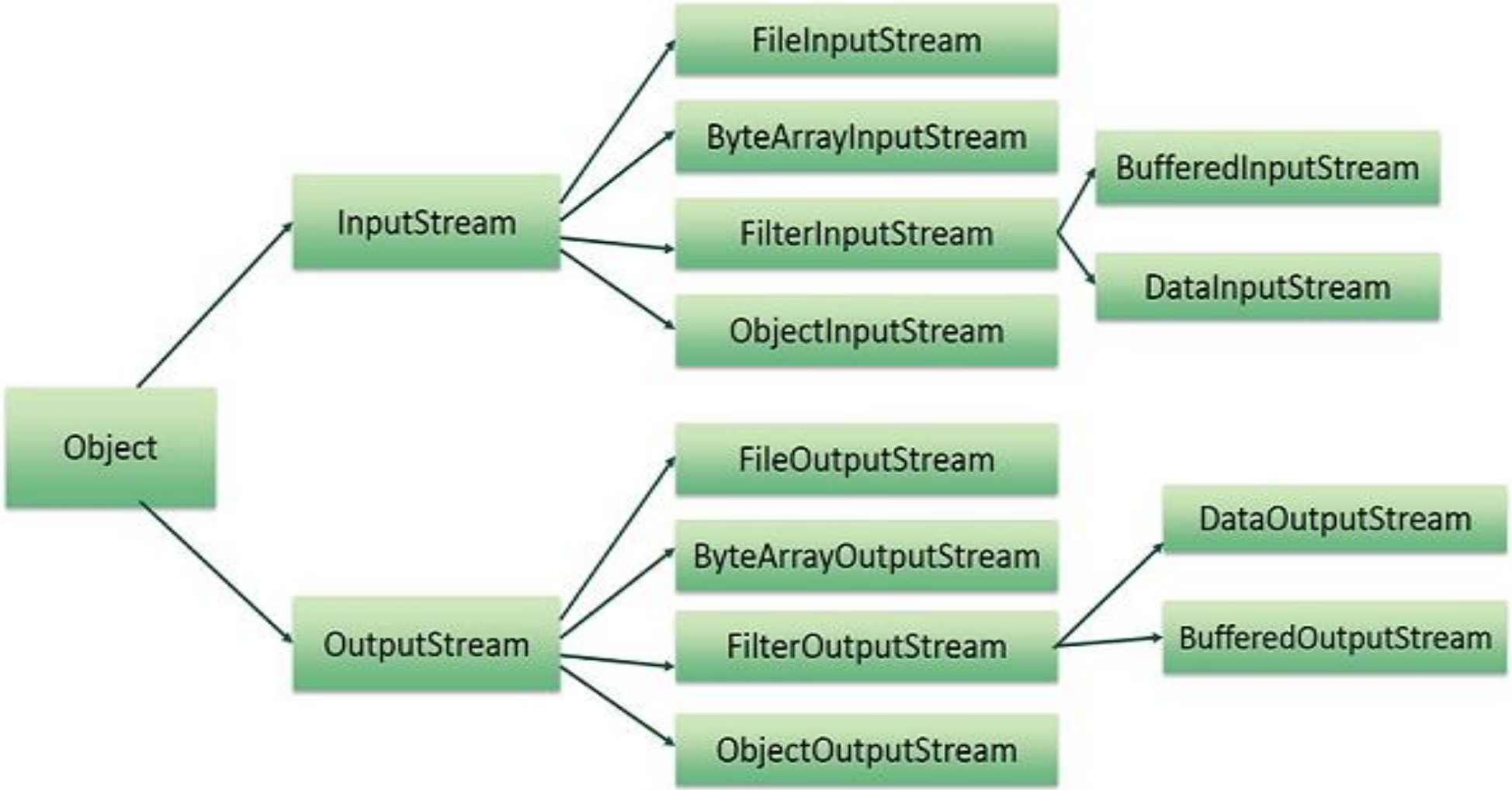
Handling Files in Java

File Handling



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