

# Application Modeling & Design Course

## Lab 4

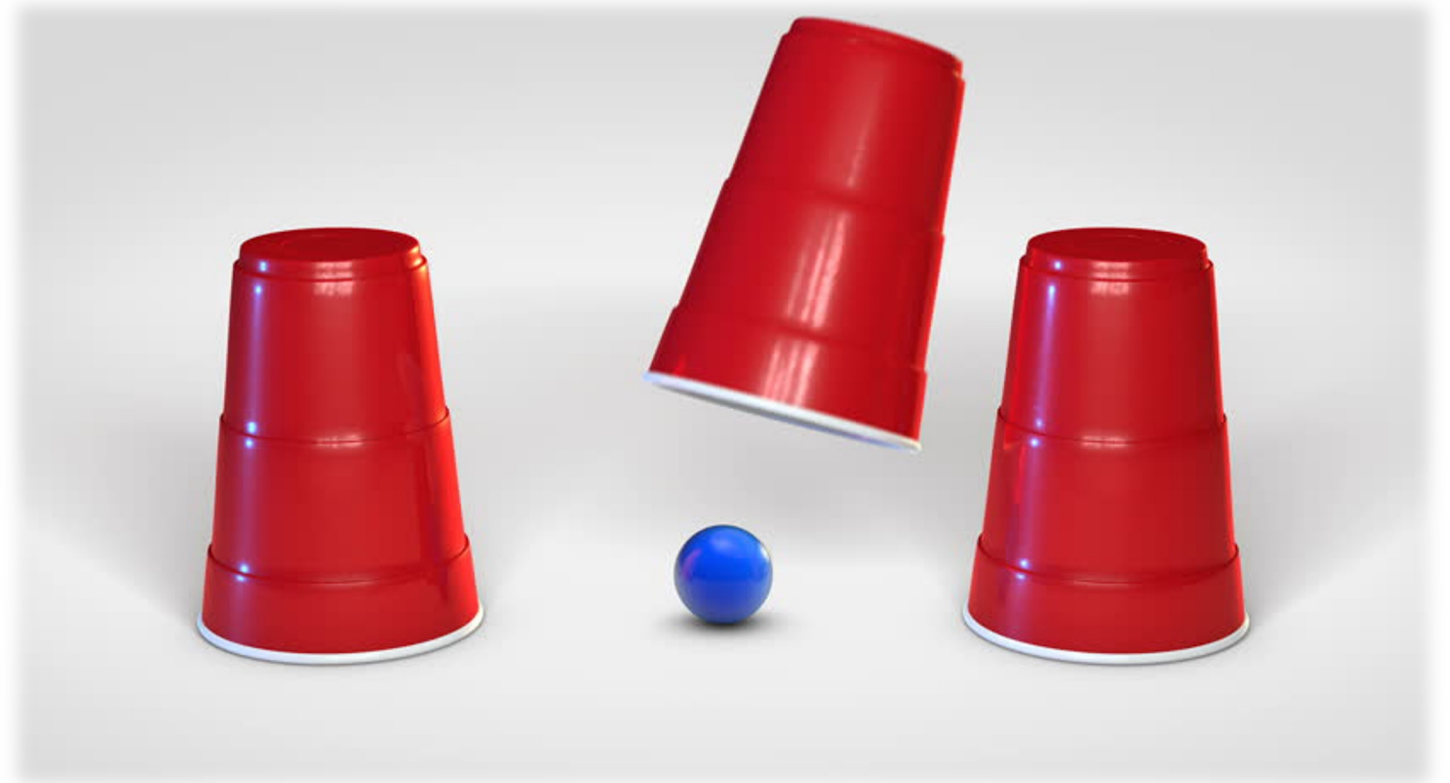
Fall 2022

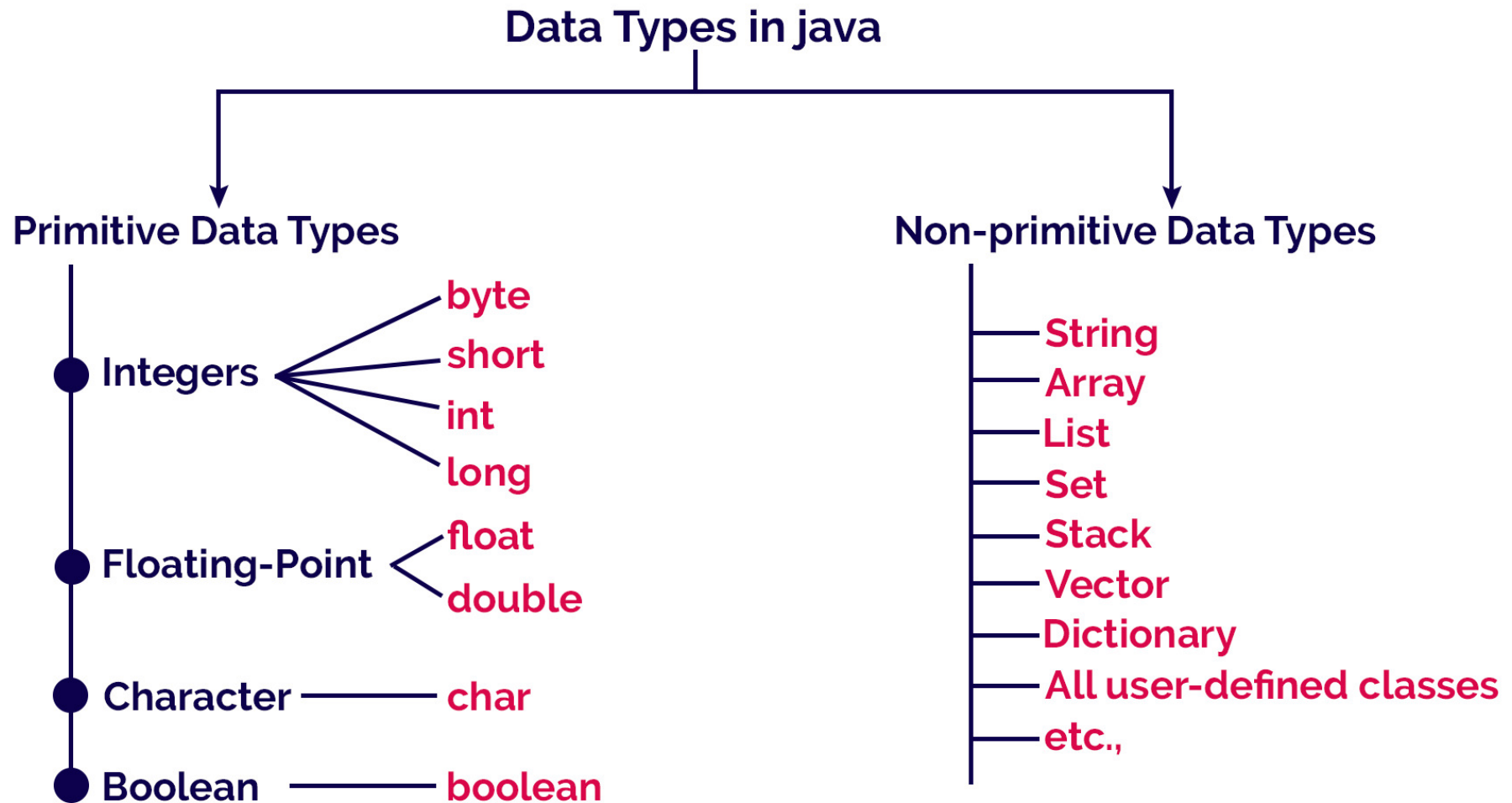


# Topics

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- Primitive Type vs Reference Types
- Using a Debugger
- Using ArrayLists





<https://docs.oracle.com/javase/tutorial/java/nutsandbolts/datatypes.html>

## Primitive Vs Non-primitive Data Types

Primitive Data Type	Non-primitive Data Type
These are built-in data types	These are created by the users
Does not support additional methods	Support additional methods
Always has a value	It can be null
Starts with lower-case letter	Starts with upper-case letter
Size depends on the data type	Same size for all

# What is a Debugger

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**DON'T NEED DEBUGGER**



**IF YOU DON'T WRITE BUGS**

[makeameme.org](http://makeameme.org)



# Collection - ArrayList

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## ArrayList - Insertion

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```
// Create an arraylist
ArrayList arraylist = new ArrayList();

// Adding elements
arraylist.add("Rose");
arraylist.add("Lilly");
arraylist.add("Jasmine");
arraylist.add("Rose");

//removes element at index 2
arraylist.remove(2);
```



Any questions?

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