

# Tinker Academy

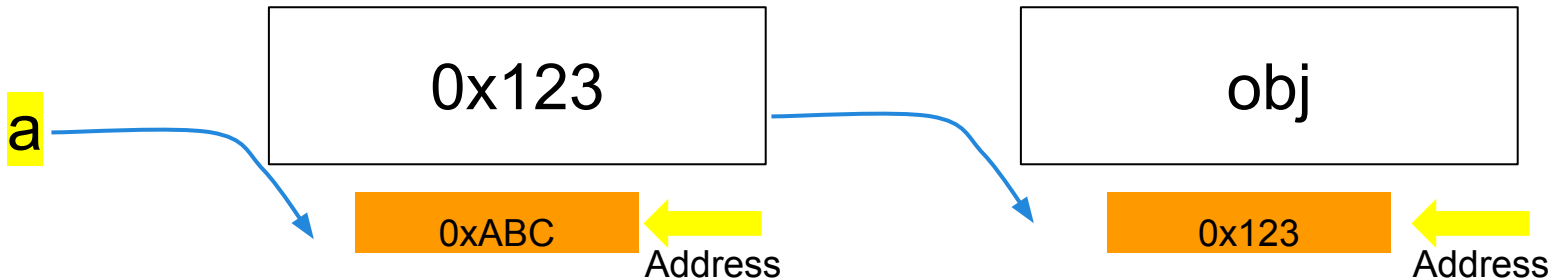
AP Computer Science Prep (Java Programming)  
Lecture 7 - Java Fundamentals 2  
(References)

# References

# Lecture 7 - Java Fundamentals 2

## Reference Variables

- value stored is the **location of an object**\*



\* or array

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## References

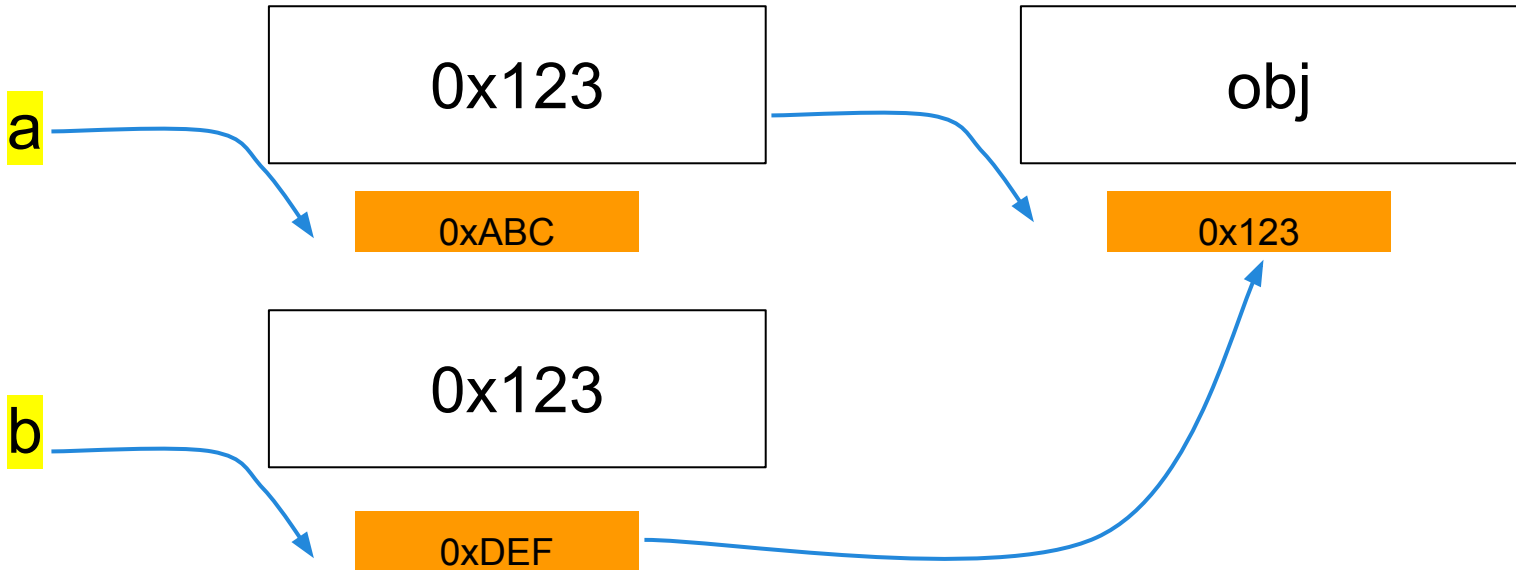
- are **variables** of reference datatype
- value is a reference to a valid object/array OR
- value is the special value null

\* to understand this you would need to understand class hierarchies and interfaces

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## Reference Variables

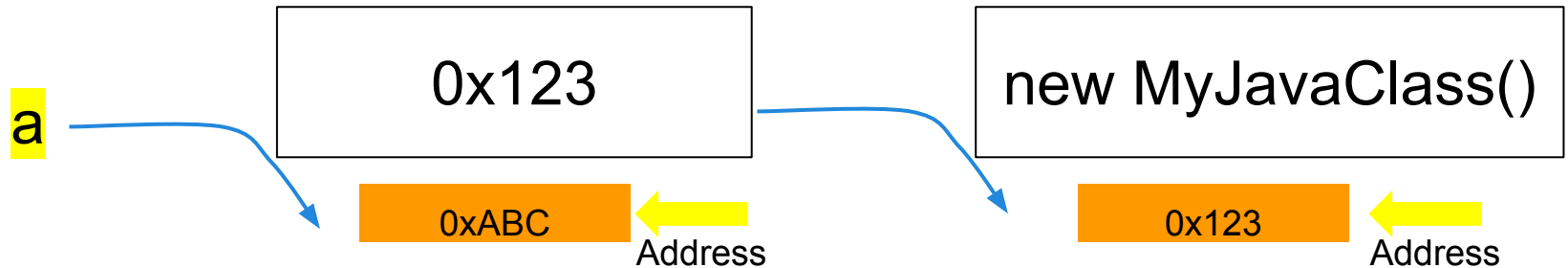
- an object can have multiple references to it



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## References

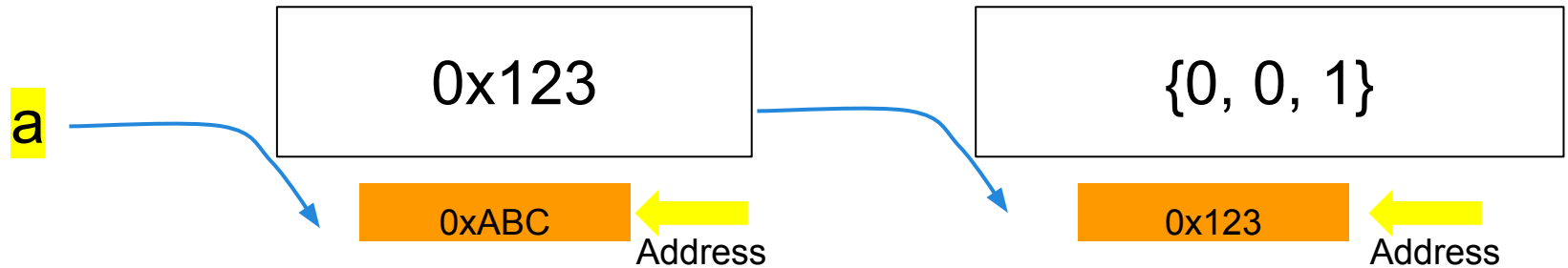
```
MyJavaClass a = new MyJavaClass();
```



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## References

```
int[] a = {0, 0, 1};
```



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## References

- references to objects are created using the **new** operator
- references to arrays are created using the array creation expression



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## References

Object a = new MyJavaClass();



\* a is a named location in memory  
value at location is the address of the object in memory

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## References

- value datatype pointed to is not be the same as the reference datatype\*

```
Object a = new MyJavaClass();
```



Datatype is the Object class



Datatype is the MyJavaClass class



This code is valid. Why?

\* to understand this you would need to understand class hierarchies and interfaces

# Class Activity