

## Call Stack Example

```
/**
 * A class used to illustrate how the call stack works.
 */
public class CallStackExample {

    public static void main(String[] args) {

        int x = 7, y = 8;
        String dairy = "milk", soda = "cola";

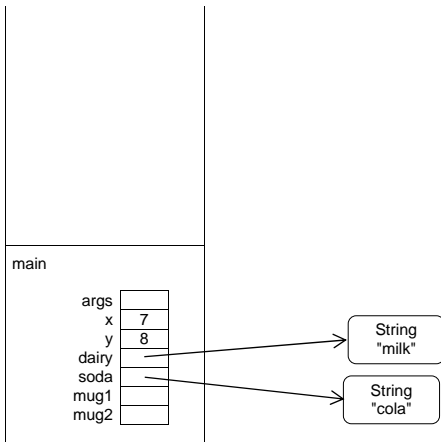
        SimpleMug mug1 = new SimpleMug(y, dairy); ←
        SimpleMug mug2 = new SimpleMug(x, soda);

        mug1.fill(x);
        y = mug2.getMaxCapacity();
    }
}
```

Memory right before call to SimpleMug constructor

Call Stack

Heap



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## Call Stack Example

```
/**
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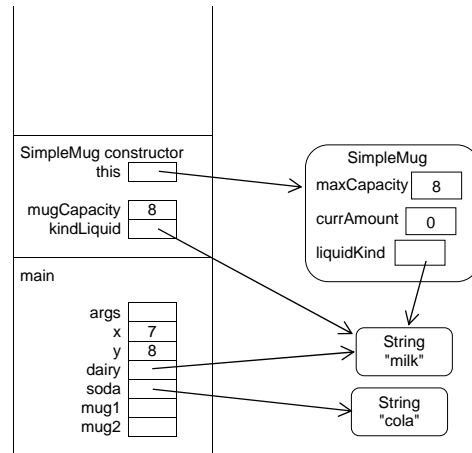
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Memory right before SimpleMug constructor returns to main

Call Stack

Heap



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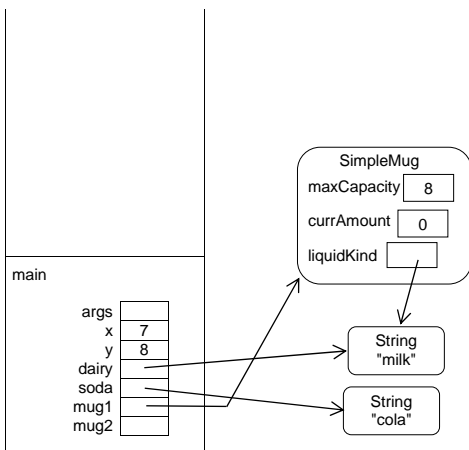
        SimpleMug mug1 = new SimpleMug(y, dairy);
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        mug1.fill(x);
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}
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Memory right before call to SimpleMug constructor

Call Stack

Heap



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## Call Stack Example

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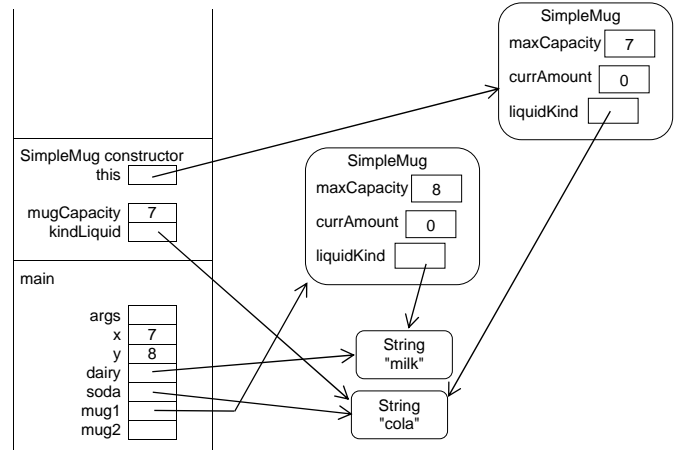
        SimpleMug mug1 = new SimpleMug(y, dairy);
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        mug1.fill(x);
        y = mug2.getMaxCapacity();
    }
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```

Memory right before SimpleMug constructor returns to main

Call Stack

Heap



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## Call Stack Example

```
/**
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public class CallStackExample {

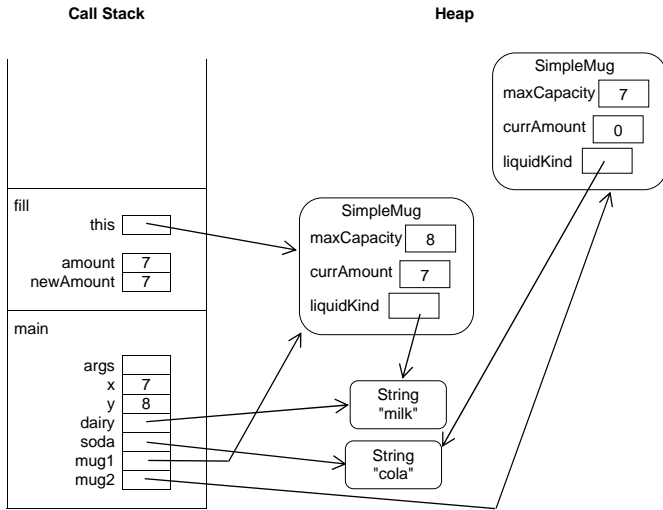
    public static void main(String[] args) {

        int x = 7, y = 8;
        String dairy = "milk", soda = "cola";

        SimpleMug mug1 = new SimpleMug(y, dairy);
        SimpleMug mug2 = new SimpleMug(x, soda);

        mug1.fill(x);
        y = mug2.getMaxCapacity();
    }
}
```

Memory right before fill returns to main



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```
/**
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public class CallStackExample {

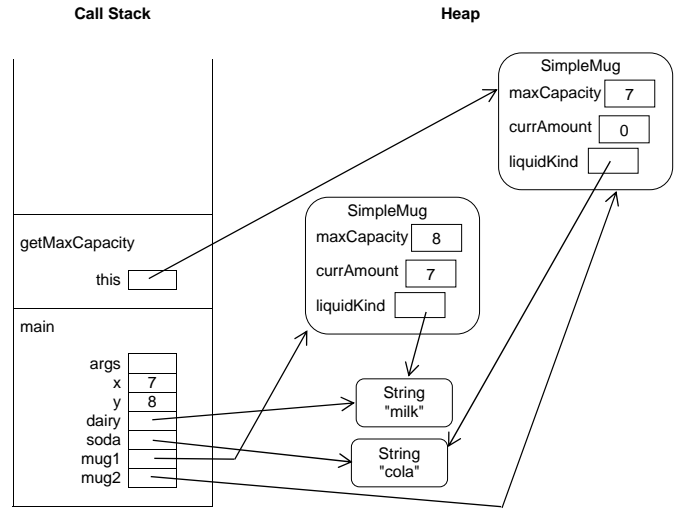
    public static void main(String[] args) {

        int x = 7, y = 8;
        String dairy = "milk", soda = "cola";

        SimpleMug mug1 = new SimpleMug(y, dairy);
        SimpleMug mug2 = new SimpleMug(x, soda);

        mug1.fill(x);
        y = mug2.getMaxCapacity();
    }
}
```

Memory right before getMaxCapacity returns to main



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```
/**
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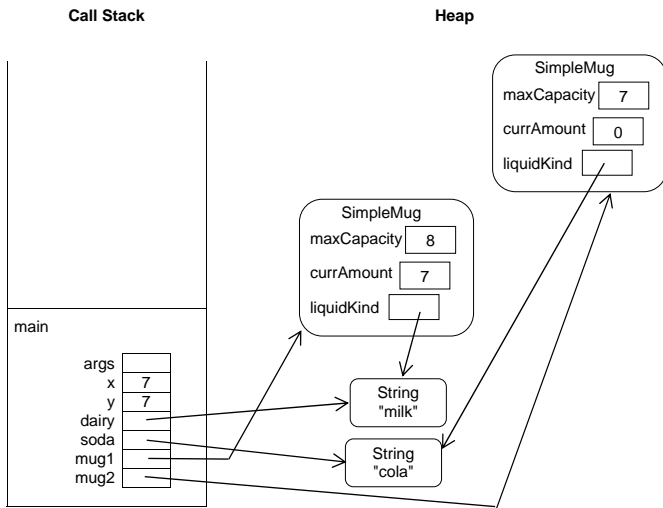
    public static void main(String[] args) {

        int x = 7, y = 8;
        String dairy = "milk", soda = "cola";

        SimpleMug mug1 = new SimpleMug(y, dairy);
        SimpleMug mug2 = new SimpleMug(x, soda);

        mug1.fill(x);
        y = mug2.getMaxCapacity();
    }
}
```

Memory right before main exits



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