QUIZ

Complete the following class definition for a `Bank` class.

```
public class Bank {
  public static void main(String[] args) {
    // program tasks
  }
}
```

You got it!

An instance is declared in the `main()` function. Complete the method call.

```
public class Window {
  boolean isOpen;
  int height;
  int width;

  public Window(boolean open, int windowHeight, int windowWidth) {
    isOpen = open;
    height = windowHeight;
    width = windowWidth;
  }

  public static void main(String[] args) {

    Window bedroomWindow = new Window(true, 72, 34);

  }
}
```

You got it!

Instances of a Java class represent the real world with what two qualities?

- History and consequences.
- Behavior and history.
- State and history.
- State and behavior.

Correct! State is represented with instance fields and behavior is represented with methods.

Every Java program contains at least one class.

True.

👏 Correct! Java programs always require one class, and real-world programs can contain hundreds!

False.

Why will the following program produce an error?

```
public class Shelf {

  String material;

  public Shelf() {

  }

  public static void main(String[] args) {
    Shelf bureau = new Shelf("pine");
  }
}
```

No constructor method has been declared.

The instance field has an incorrect declaration.

`bureau` has the incorrect type.

The constructor does not have a parameter listed.

👏 Correct! We cannot invoke the constructor with a parameter unless it has been listed in the method.

The `main()` method is automatically run when the **.class** file is executed.

True.

👏 Correct! We never need to call `main()` ourselves.

False.

The `Bank` class has one instance field: `branchLocationCount`.

Complete the constructor method for this class.

```
public class Bank {
  int branchLocationCount;

  public Bank( int numLocations ) {
    branchLocationCount = numLocations;
  }
  public static void main(String[] args) {
    // program tasks
  }
}
```

You got it!

What is the data type of the variable `hedwig`?

```
public class Owl {
  String speak;
  boolean nocturnal;
  public Owl() {
    speak = "Hoot";
    nocturnal = true;
  }

  public static void main(String[] args) {
    Owl hedwig = new Owl();
  }
}
```

`speak`

`nocturnal`

`Owl`

Correct! The `hedwig` variable has a reference data type. When declaring a variable with a reference data type, the variable's type is the name of a class.

What is the signature of the following constructor?

```
public class Bug {
  String name;
  boolean ableToFly;
  int numberOfLegs;

  public Bug(String bugName, boolean canFly, int numLegs) {
    name = bugName;
    ableToFly = canFly;
    numberOfLegs = numLegs;
  }
  public static void main(String[] args) {
    Bug ladybug = new Bug("Lady Bug", true, 6);
  }
}
```

`Bug(double, String, boolean)`

`Bug(bugName String, canFly boolean, numLegs int)`

`Bug(name, ableToFly, numberOfLegs)`

`Bug(String bugName, boolean canFly, int numLegs)`

Correct! A signature consists of the constructor's name and then the data type and name of each of its parameters.

The following class definition requires a parameter to be passed in to the constructor in order to make an instance.

```
public class Dinosaur {
  boolean isExtinct;

  public Dinosaur(boolean extinct) {
    isExtinct = extinct;
  }

  public static void main(String[] args) {
    // program tasks
  }
}
```

False.

True.

Correct! To make an instance of `Dinosaur` we need to pass a `boolean` into the constructor invocation.