Using Static Members

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Overview

- Static member overview
- Static fields
- Static methods
- Static import statement
- Static initialization blocks

Static Members

Static members are shared class-wide

- Not associated with individual instance

Declared using the static keyword

- Accessible using the class name

Static Members

Field

A value not associated with
a specific instance

All instances access the same value

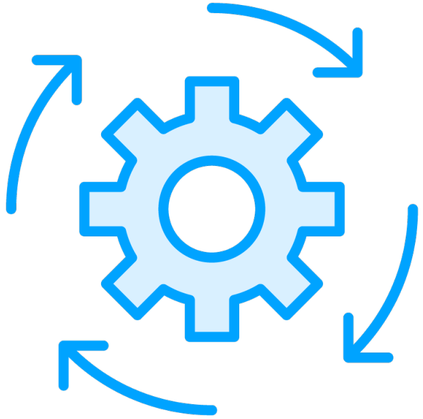
```
public class Flight {
  private int passengers, seats = 150;
  private static int allPassengers;
  public void add1Passenger() {
    if(passengers < seats) {
      passengers += 1;
      allPassengers += 1;
    }
  }
  // other members elided
}
```

Static Members

Field

A value not associated with a specific instance

All instances access the same value



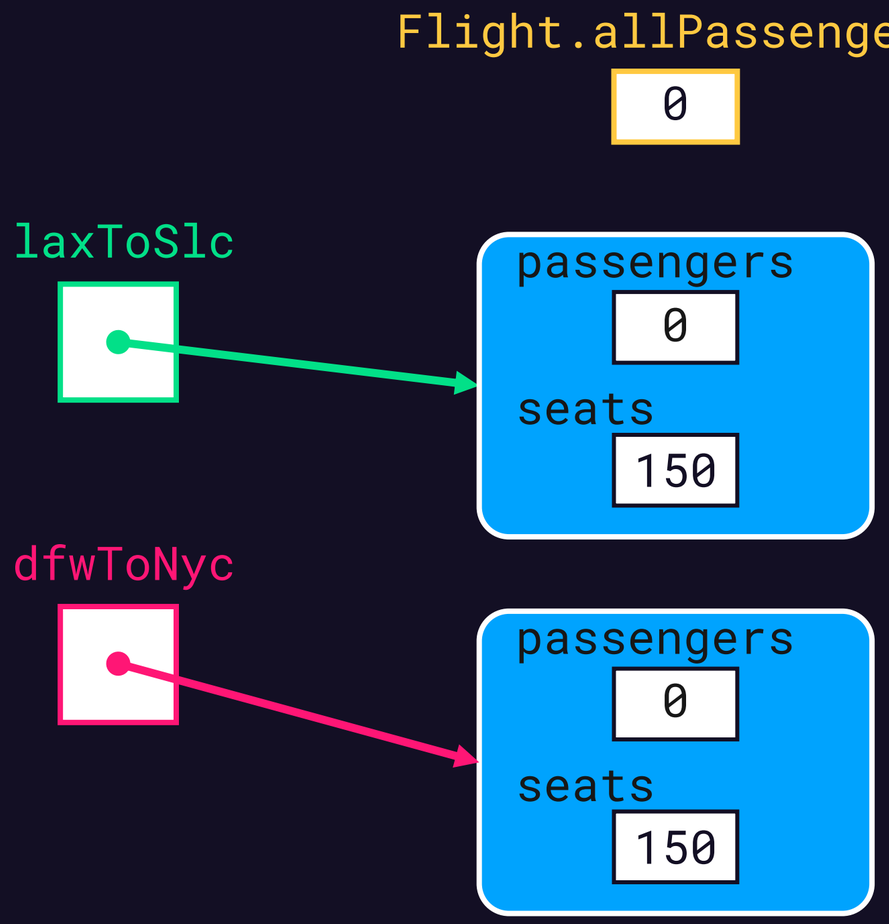
Method

Performs an action not tied to a specific instance

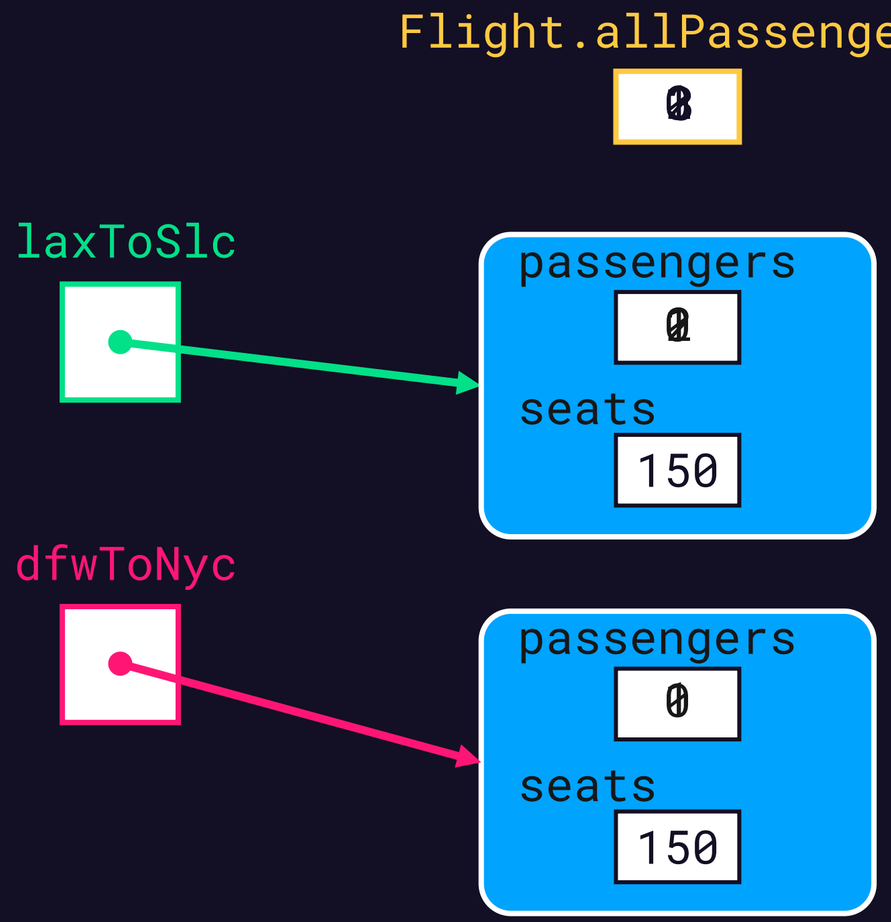
Has access to static members only

```
public class Flight {
  private int passengers, seats = 150;
  private static int allPassengers;
  public static int getAllPassengers() {
    return allPassengers;
  }
  public static void resetAllPassengers() {
    allPassengers = 0;
  }
  // other members elided
}
```

```
Flight laxToSlc = new Flight();

Flight dfwToNyc = new Flight();
```



```
Flight.resetAllPassengers();

Flight laxToSlc = new Flight();
laxToSlc.add1Passenger();
laxToSlc.add1Passenger();

Flight dfwToNyc = new Flight();
dfwToNyc.add1Passenger();

System.out.println(laxToSlc.getPassengers());
System.out.println(dfwToNyc.getPassengers());
System.out.println(Flight.getAllPassengers());
```



Static Import Statement

Import statement

- Allows a type name to be used without being package-qualified

Static import statement

- Used with static methods
- Allows method name to be used without being class-qualified

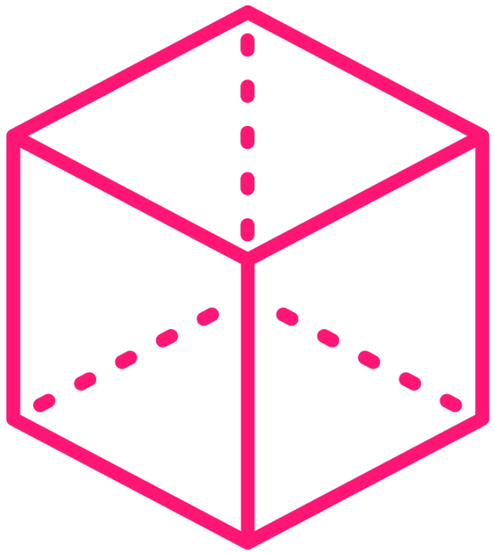
```
import        com.pluralsight.flightapp.Flight


Flight.resetAllPassengers();

Flight laxToSlc = new Flight();
laxToSlc.add1Passenger();
laxToSlc.add1Passenger();

Flight dfwToNyc = new Flight();
dfwToNyc.add1Passenger();

System.out.println(Flight.getAllPassengers());
```

```
import static com.pluralsight.flightapp.Flight.resetAllPassengers;
import static com.pluralsight.flightapp.Flight.getAllPassengers;

resetAllPassengers();

Flight laxToSlc = new Flight();
laxToSlc.add1Passenger();
laxToSlc.add1Passenger();

Flight dfwToNyc = new Flight();
dfwToNyc.add1Passenger();

System.out.println(Flight.getAllPassengers());
```

```
import static com.pluralsight.flightapp.Flight.resetAllPassengers;
import static com.pluralsight.flightapp.Flight.getAllPassengers;

resetAllPassengers();

Flight laxToSlc = new Flight();
laxToSlc.add1Passenger();
laxToSlc.add1Passenger();

Flight dfwToNyc = new Flight();
dfwToNyc.add1Passenger();

System.out.println(getAllPassengers());
```

```
import static com.pluralsight.flightapp.Flight.*;


resetAllPassengers();

Flight laxToSlc = new Flight();
laxToSlc.add1Passenger();
laxToSlc.add1Passenger();

Flight dfwToNyc = new Flight();
dfwToNyc.add1Passenger();

System.out.println(getAllPassengers());
```

Static Initialization Blocks



Perform one-time type initialization

- Execute before type's first use
- Has access to static members only

Statements enclosed in brackets

- Preceded by static keyword
- Outside of any method or constructor

```
public class Flight {

  private int passengers, seats = 150;
  private static int allPassengers

  static {
    AdminService admin = new AdminService();
    admin.connect();
    maxPassengersPerFlight = admin.isRestricted() ?
        admin.getMaxFlightPassengers() : Integer.MAX_VALUE;
    admin.close();
  }
```

```
  public void add1Passenger() {
     if(passengers < seats) {
       passengers += 1;
       allPassengers += 1;
     }
   }

   // other members elided

}
```

```
  public void add1Passenger() {
     if(passengers < seats && passengers < maxPassengersPerFlight) {
       passengers += 1;
       allPassengers += 1;
     }
   }

   // other members elided

}
```

Summary

Static members

- Shared class-wide
- Declared using the static keyword

Summary

Static fields

- Values not associated with an instance
- All instances access the same value

Static method

- Perform action not tied to an instance
- Can only access static members

Summary

Static import statement

- Allows static methods to be used without being class-qualified

Static initialization blocks

- Perform one-time type initialization
- Execute before type's first use