

- **Prev Class**
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- Frames
- No Frames

- All Classes

- Summary:
- Nested |
- Field |
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- Method

- Detail:
- Field |
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- Method

cs131.pa2.Abstract

## Class Vehicle

- java.lang.Object
  - cs131.pa2.Abstract.Vehicle
- All Implemented Interfaces:
  - java.lang Runnable
- Direct Known Subclasses:
  - Ambulance, Car, Sled

# Assignment Project Exam Help

```
public abstract class Vehicle
extends java.lang.Object
implements java.lang Runnable
```

A Vehicle is a Runnable which enters tunnels. You must subclass Vehicle to customize its behavior (e.g., Car and Sled). When you start a thread which runs a Vehicle, the Vehicle will immediately begin trying to enter the tunnel or tunnels passed into its constructor by calling tryToEnter on each Tunnel instance. As long as tryToEnter returns false (indicating that the Vehicle did not enter that tunnel), the Vehicle will keep trying. This is called busy-waiting. In addition to recreating the constructors, the only method that you must override in Vehicle subclasses is getDefaultSpeed. This instance method is called from the private init method, and the integer that it returns is used as the speed for the vehicle.

### Author:

cs131a

- **Constructor Summary**

Constructors

### Constructor and Description

**Vehicle**(java.lang.String name, Direction direction)

Create a Vehicle with default priority that can cross one of a collection of tunnels and use the default log.

**Vehicle**(java.lang.String name, Direction direction, Log log)

Create a Vehicle with default priority that can cross one of a collection of tunnels.

- **Method Summary**

All Methods Instance Methods Concrete Methods

Modifier and  
Type

Method and Description

void **addTunnel**(java.util.Collection<Tunnel> newTunnels)  
Adds a new collection of tunnels to the current collection

void **addTunnel**(Tunnel newTunnel)

	Adds a new tunnel to the collection of tunnels for this vehicle
void	<b>doWhileInTunnel()</b> This is what your vehicle does while inside the tunnel to simulate taking time to "cross" the tunnel.
boolean	<b>equals()</b> (java.lang.Object obj)
Direction	<b>getDirection()</b> Returns the direction of this vehicle
java.lang.String	<b>getName()</b> Returns the name of this vehicle
int	<b>getPriority()</b> Returns the priority of this vehicle
int	<b>hashCode()</b>
void	<b>run()</b> Find and cross through one of the tunnels.
void	<b>setPriority</b> (int priority) Sets this vehicle's priority - used for priority scheduling
void	<b>setSpeed</b> (int speed) Sets this vehicle's speed - used for preemptive priority scheduler test
java.lang.String	<b>toString()</b> Returns a string representation of this vehicle

## Assignment Project Exam Help

- *Methods inherited from class java.lang.Object*  
getClass, notify, notifyAll, wait, wait, wait

- *Constructor Detail*  
• Vehicle

```
public Vehicle(java.lang.String name,
               Direction direction,
               Log log)
```

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Create a Vehicle with default priority that can cross one of a collection of tunnels.

### Parameters:

name - The name of this vehicle to be displayed in the output.  
direction - The side of the tunnel being entered.  
log - the log to be used for logging

- Vehicle

```
public Vehicle(java.lang.String name,
               Direction direction)
```

Create a Vehicle with default priority that can cross one of a collection of tunnels and use the default log.

### Parameters:

name - The name of this vehicle to be displayed in the output.  
direction - The side of the tunnel being entered.

- *Method Detail*

- setSpeed

```
public void setSpeed(int speed)
```

Sets this vehicle's speed - used for preemptive priority scheduler test

### Parameters:

speed - the new speed to be set (0 to 9)

- setPriority

```
public final void setPriority(int priority)
```

Sets this vehicle's priority - used for priority scheduling

**Parameters:**

priority - The new priority (between 0 and 4 inclusive)

- `getPriority`

```
public int getPriority()
```

Returns the priority of this vehicle

**Returns:**

This vehicle's priority.

- `getName`

```
public final java.lang.String getName()
```

Returns the name of this vehicle

**Returns:**

The name of this vehicle

- `toString`

```
public java.lang.String toString()
```

Returns a string representation of this vehicle

**Overrides:**

`toString` in class `java.lang.Object`

**Returns:**

the string representation of this vehicle

- `addTunnel`

```
public final void addTunnel(Tunnel newTunnel)
```

Adds a new tunnel to the collection of tunnels for this vehicle

**Parameters:**

newTunnel - the new tunnel to be added

`addTunnel`

```
public final void addTunnel(java.util.Collection<Tunnel> newTunnels)
```

Adds a new collection of tunnels to the current collection

**Parameters:**

newTunnels - the new collection of tunnels to be added

- `run`

```
public final void run()
```

Find and cross through one of the tunnels. When a thread is run, it keeps looping through its collection of available tunnels until it succeeds in entering one of them. Then, it will call `doWhileInTunnel` (to simulate doing some work inside the tunnel, i.e., that it takes time to cross the tunnel), then exit that tunnel.

**Specified by:**

run in interface `java.lang.Runnable`

- `getDirection`

```
public final Direction getDirection()
```

Returns the direction of this vehicle

**Returns:**

the direction of this vehicle

- `doWhileInTunnel`

```
public final void doWhileInTunnel()
```

This is what your vehicle does while inside the tunnel to simulate taking time to "cross" the tunnel. The faster your vehicle is, the less time this will take.

- `hashCode`

```
public int hashCode()
```

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**Overrides:**

hashCode in class java.lang.Object

- equals

public boolean equals(java.lang.Object obj)

**Overrides:**

equals in class java.lang.Object

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- Next Class

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- All Classes

- Summary:

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- Method

- Detail:

- Field |

- Constr |

- Method

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