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cs131.pa2.Abstract

Class Tunnel

- java.lang.Object
    - cs131.pa2.Abstract.Tunnel

- Direct Known Subclasses:
    BasicTunnel, PreemptivePriorityScheduler, PriorityScheduler

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```
public abstract class Tunnel
extends java.lang.Object
```

A Tunnel is an object which can be entered by vehicles. Vehicles themselves are responsible for indicating when they want to enter and when they are ready to leave. Tunnels are responsible for indicating if it is safe for a Vehicle to enter. When a Vehicle wants to enter a Tunnel, it calls tryToEnter on the Tunnel instance. If the Vehicle has entered the Tunnel successfully, tryToEnter returns true. Otherwise, tryToEnter returns false. The Vehicle simulates the time spent in the tunnel, and then must call exitTunnel on the same Tunnel instance it entered.

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- *Field Summary*

Fields

Modifier and Type	Field and Description
static Log	**DEFAULT_LOG** The default log

- *Constructor Summary*

Constructors

Constructor and Description
Tunnel(java.lang.String name) Constructs an instance of this class with the given name and the default log stored in this class
Tunnel(java.lang.String name, Log log) Constructs an instance of this class with the given name and log

- *Method Summary*

All Methods Instance Methods Abstract Methods Concrete Methods

Modifier and Type	Method and Description

boolean	**equals**(java.lang.Object obj)
void	**exitTunnel**(Vehicle vehicle) Vehicle exits this tunnel.
abstract void	**exitTunnelInner**(Vehicle vehicle) Vehicle exits the tunnel.
java.lang.String	**getName**() Returns the name of this tunnel
int	**hashCode**()
java.lang.String	**toString**()
boolean	**tryToEnter**(Vehicle vehicle) Checks whether the given vehicle should enter this tunnel, based on the vehicles currently in the tunnel.

- *Methods inherited from class java.lang.Object*

    getClass, notify, notifyAll, wait, wait, wait

- *Field Detail*

    - **DEFAULT_LOG**

    public static Log DEFAULT_LOG

    The default log

- *Constructor Detail*

    - **Tunnel**

    public Tunnel(java.lang.String name,
                  Log log)

    Constructs an instance of this class with the given name and log
    Parameters:
        name - the name of the tunnel to create
        log - the log to be used for logging

    - **Tunnel**

    public Tunnel(java.lang.String name)

    Constructs an instance of this class with the given name and the default log stored in this class
    Parameters:
        name - the name of the tunnel to create

- *Method Detail*

    - **tryToEnter**

    public final boolean tryToEnter(Vehicle vehicle)

    Checks whether the given vehicle should enter this tunnel, based on the vehicles currently in the tunnel. It calls the tryToEnterInner which is implemented by the subclass, and also adds entries for enter attempt and enter result in the log.
    Parameters:
        vehicle - the vehicle attempting to enter this tunnel
    Returns:
        true if the vehicle enters this tunnel successfully, false otherwise

    - **exitTunnel**

    public final void exitTunnel(Vehicle vehicle)

    Vehicle exits this tunnel. It calls exitTunnelInner and adds entries in the log.

Parameters:
vehicle - the vehicle exiting the tunnel

- **exitTunnelInner**

public abstractvoidexitTunnelInner(Vehiclevehicle)

Vehicle exits the tunnel.
Parameters:
vehicle - The vehicle that is exiting the tunnel

- **getName**

publicjava.lang.StringgetName()

Returns the name of this tunnel
Returns:
The name of this tunnel

- **toString**

publicjava.lang.StringtoString()

Overrides:
toString in class java.lang.Object

- **hashCode**

publicinthashCode()

Overrides:
hashCode in class java.lang.Object

- **equals**

publicbooleanequals(java.lang.Objectobj)

Overrides:
equals in class java.lang.Object