Mining Truck State Diagram

Add the truck in waiting queue of a station which has the shortest wait time to unload.

Waiting in the queue

Start

Unloading time 5 mins

1hr <= loading time <= 5hrs

Travel to Unloading Station  
S

Travel time 30 mins

Travel time 30 mins

Unload Mine

Truck Empty

Arrived Unloading Station

Loading Mine

Arrived Mine Site

Travel to Mine

State Design Pattern has been used to design the mining truck state.

Class Diagram for Mining Truck State Design

StateExecutor

+Execute

State

+Handle

+DoTask

+GetNextState

State.Handle()

Loading Mine State

+DoTask

+GetNextState

Empty State

+GetNextState

1. State Executor holds a reference to a State object and delegates the work to it.
2. State Interface defines the common interfaces for all concrete state classes. Only two states have been used for diagram. Remaining classes should be included in the diagram.

Classs Diagram for Unloading and Blocking Queue relationship.

Unloading Station

+PushToQueue

+run

Blocking Queue

+push

+pop

+size