raise():void EAST lower():void turnLeft(): SOUTH turnRight(): NORTH Position - x: int - y: int + getX():int + getY():int Flake Vehicle Diagram key - angle:int Untitled key item - dirs : Direction[] # position: Position + isWithinRange():boolean + direction: Direction Untitled key item + increaseAngle():void - nrDoors: int Untitled key item + decreaseAngle(): void + enginePower: int Untitled key item + currentSpeed: double Untitled key item - mode:Mode color: Color Untitled key item + modelName: String Untitled key item + upRamp:void + incrementSpeed(double amount):void → + downRamp:void + decrementSpeed(double amount):void # gas(double amount):void # brake(double amount):void CarRepairShop Scania CarTransport maxCapacity: int Saab95 Volvo240 vehicles: List<T> - flake: Flake - ramp: Ramp - turboOn: boolean rimFactor: double transport: Deque<Vehicle> + leaveCar(T v):void +getFlake():Flake + setTurboOn():void + repairedCar(T v):void + loadTruck(Vehicle car):void + setTurboOff():void + isCarRepaired(T v):void + unloadTruck(Vehicle car):void + isClose(Vehicle car):boolean JButton < JPanel BufferedImage Point «Interface» HasButtons gasButton:JButton ActionButtons brakeButton:JButton CarView turboOnButton:JButton gas(int amount):void liftBedButton:JButton -controlPanel:JPanel lowerBedButton:JButton saabTurboOn():void -gasPanel:JPanel startButton:JButton saabTurboOff():void -gasLabel:JLabel stopButton:JButton liftBedButton():void -gasSpinner:JSpinner lowerBedButton():void VehicleImage JFrame startAllCars():void stopAllCars():void +initComponents(int x, int y):void DrawPanel -image:BufferedImage reverseVehicle():void -vehicle:Vehicle notWithinBounds(Position p, Direction dir):void -vehicleImages:List<VehicleImages> -point:Point + moveVehicleImage(int x, int y):void + moveImage(int x, int y):void # paintComponent(Graphics g): void # drawImage(Graphics g):void ActionListener Timer Frame → -WIDTH:int TimeListener -HEIGHT:int CarController -view:CarView -frame:Frame -drawPanel:DrawPanel + actionPerformed(ActionEvent e):void -delay:int -timer:Timer +repaintFrame():void -vehicles:ArrayList<Vehicle> +moveFrame():void ArrayList

«interface»

Movable

MoveFlake

«enumeration»

Direction

«enumeration»

Mode

List

DOWN

Refaktoriseringsplan

able to repaint and move the frame.

- Create a new class VehicleImage that creates the vehicle images and controls their behaviour.
- The DrawPanel should have a list of the type VehicleImage as an instance variable, initializes the panel and repaint it.
- The Frame class should only handle the frame settings and layout. Should contain references to DrawPanel and CarView (instance variables). Have methods such as being
- The CarView class handles the UI elements such as the gaspanel, controlpanel among
- The CarController class should focus on the application logic (ie actions associated with the buttons, update the state of the model)
- The HasButtons interface includes all the JButton buttons, and CarController has to implement it. CarView implements this interface as well.
- The ActionButtons interface contains all the methods concerning with the JButton buttons and CarController needs to implement it as well.