

Part

Class

Fields

currentMachine : Machine

currentXPosition : int

currentYPosition : int

id : int

prio : int

quality : double

state : int

staticId : int

workInstructions : List<WorkingStep>

Methods

deleteMachiningStep() : void

getNextMachiningMachineType() : string

getNextMachiningVolume() : double

getNumberOfOpenOperations() : int

getQuality() : double

Part(List<WorkingStep> workInstructions, int Prio)

setCurrentMachine(Machine M) : void

setPartFree() : void

setQuality(double newQuality) : void

setState(int newstate) : void

ToString() : string

ManagementClass

Class

Fields

allParts : List<Part>

brokenMachines : List<Machine>

finishedParts : List<Part>

machines : List<Machine>

openParts : List<Part>

qualityManagement : QualityManagementClass

workingMachines : List<Machine>

Methods

addMachine(Machine M) : void

getStates() : void

ManagementClass(QualityManagementClass QM)

produce(int currentTime) : void

readOrders() : void

sendToQualityCheck() : void

simulatePossibleError(int currentTime) : void

writeAllQualities() : void

Machine

Abstract Class

Fields

beginningTimeInUse : double

currentPart : Part

endingTimeInUse : double

errorProbability : int

inRepair : bool

inUse : bool

machineID : int

machineType : string

metalRemovalRate : double

wear : double

xCoordinate : int

yCoordinate : int

Methods

addToEndingTime(int endTime) : void

getCalcMachineTime() : double

getCurrentPart() : Part

getEndTime() : double

getInfluenceOnQuality() : double

getInRepair() : bool

getInUse() : bool

getMachineType() : string

Machine(int ID, int errorProbability, int xCoordinate, int yCoordinate)

possibleError() : bool

repair() : void

setCurrentPart(Part P) : void

setInRepair(bool b) : void

setInUse(bool B) : void

setMachinedVolume() : void

setTimesAndCalcWear(double currentTime, double endTime) : void

ToString() : string

TurningMachine

Class

Machine

Fields

cuttingDepth : double

cuttingSpeed : double

feed : double

turnedVolume : double

Methods

getCalcMachineTime() : double

getInfluenceOnQuality() : double

setMachinedVolume() : void

TurningMachine(int ID, int errorProbability, double cuttingSpeed, double cuttingDepth, double feed, int xCoordinate, int yCoordinate)

MillingMachine

Class

Machine

Fields

cuttingDepth : double

cuttingWidth : double

feedingSpeed : double

millingVolume : double

Methods

getCalcMachineTime() : double

getInfluenceOnQuality() : double

MillingMachine(int ID, int errorProbability, double cuttingDepth, double cuttingWidth, double feedingSpeed, int xCoordinate, int yCoordinate)

setMachinedVolume() : void

GrindingMachine

Class

Machine

Fields

cuttingSpeed : double

grindingVolume : double

grindingWidth : double

infeed : double

speedRelation : double

Methods

getCalcMachineTime() : double

GrindingMachine(int ID, int errorProbability, double infeed, double grindinWidth, double cuttingSpeed, double speedRelation, int xCoordinate, int yCoordinate)

setMachinedVolume() : void

QualityManagementClass

Class

Fields

allowedQuality : double

badParts : List<Part>

goodParts : List<Part>

xCoordinate : int

yCoordinate : int

Methods

checkQuality(Part P) : void

QualityManagementClass(double allowedQuality, int xCoordinate, int yCoordinate)

WorkingStep

Class

Fields

machineType : string

volume : double

Methods

getMachineType() : string

getVolume() : double

WorkingStep(string machinetype, double volume)

Program

Class

Methods

Main(string[] args) : void