TRACEABILITY REPORT

Vending Machine

Group 1
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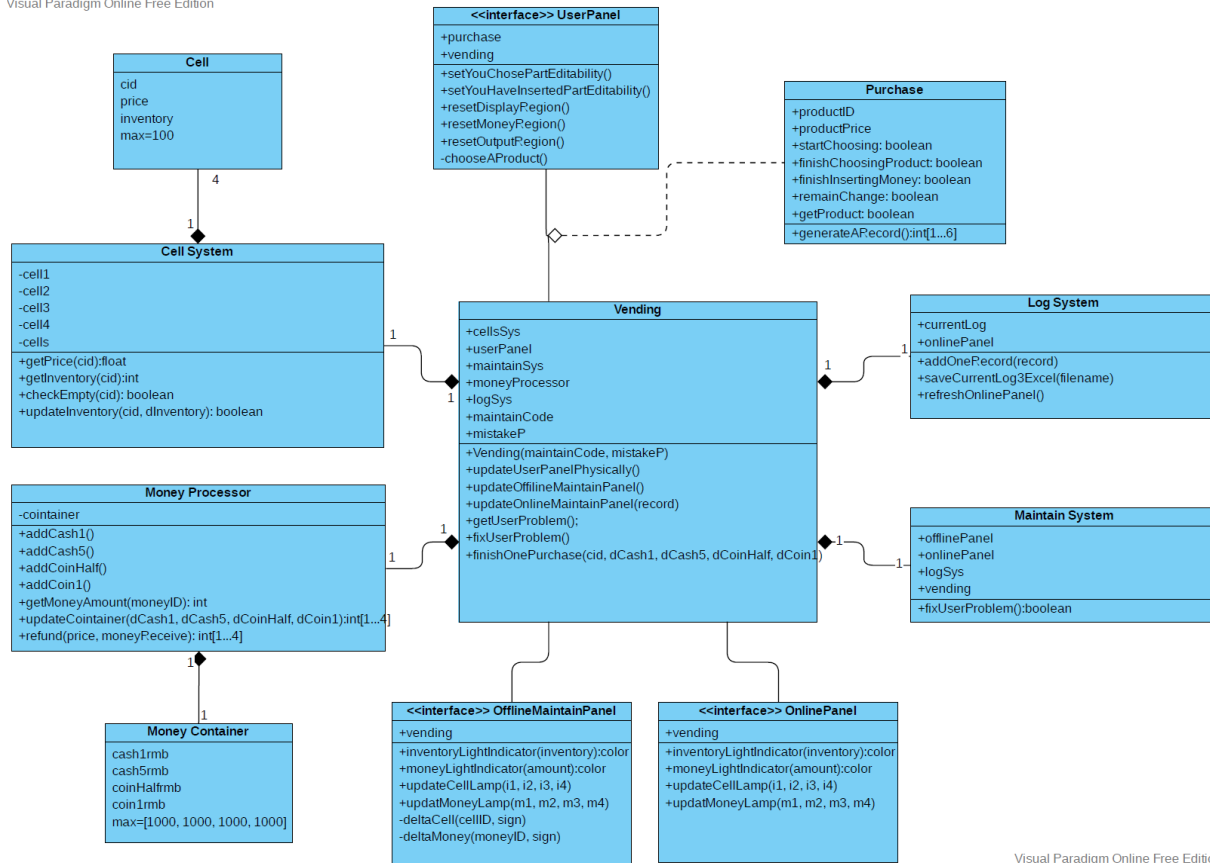
Table of Contents

System Architecture

The system architecture is shown below:

Cell
cid
price
inventory
max=100

<<interface>> UserPanel
+purchase
+vending
+setYouChosePartEditability()
+setYouHaveInsertedPartEditability()
+resetDisplayRegion()
+resetMoneyRegion()
+resetOutputRegion()
-chooseAProduct()

Purchase
+productID
+productPrice
+startChoosing: boolean
+finishChoosingProduct: boolean
+finishInsertingMoney: boolean
+remainChange: boolean
+getProduct: boolean
+generateARecord():int[1...6]

Cell System
-cell1
-cell2
-cell3
-cell4
-cell5
+getPrice(cid):float
+getInventory(cid):int
+checkEmpty(cid): boolean
+updateInventory(cid, dInventory): boolean

Vending
+cellsSys
+userPanel
+maintainSys
+moneyProcessor
+logSys
+maintainCode
+mistakeP
+Vending(maintainCode, mistakeP)
+updateUserPanelPhysically()
+updateOfflineMaintainPanel()
+updateOnlineMaintainPanel(record)
+getUserProblem();
+fixUserProblem()
+finishOnePurchase(cid, dCash1, dCash5, dCoinHalf, dCoin1)

Log System
+currentLog
+onlinePanel
+addOneRecord(record)
+saveCurrentLog3Excel(filename)
+refreshOnlinePanel()

Money Processor
-cointainer
+addCash1()
+addCash5()
+addCoinHalf()
+addCoin1()
+getMoneyAmount(moneyID): int
+updateCointainer(dCash1, dCash5, dCoinHalf, dCoin1):int[1...4]
+refund(price, moneyReceive): int[1...4]

Maintain System
+offlinePanel
+onlinePanel
+logSys
+vending
+fixUserProblem():boolean

Money Container
cash1rmb
cash5rmb
coinHalfrmb
coin1rmb
max=[1000, 1000, 1000, 1000]

<<interface>> OfflineMaintainPanel
+vending
+inventoryLightIndicator(inventory):color
+moneyLightIndicator(amount):color
+updateCellLamp(i1, i2, i3, i4)
+updatMoneyLamp(m1, m2, m3, m4)
-deltaCell(cellID, sign)
-deltaMoney(moneyID, sign)

<<interface>> OnlinePanel
+vending
+inventoryLightIndicator(inventory):color
+moneyLightIndicator(amount):color
+updateCellLamp(i1, i2, i3, i4)
+updatMoneyLamp(m1, m2, m3, m4)

Software Traceability

	Is implemented by	Is validated by
R1.1.1	S1.1.1	T1.6.3, T3.1.1
R1.1.2	S1.1.1, S4.1.2, S4.1.3	T1.2.2, T1.9.1, T2.1.1, T3.1.1
R1.1.3	S1.1.1	T1.2.1, T2.1.1, T3.1.1
R1.2.1	S1.2.1	T3.2.1
R1.2.2	S1.2.1	T2.1.1, T3.2.2, T3.2.3
R1.2.3	S1.2.1	T2.1.1, T3.2.2, T3.2.3
R1.3.1	S1.3.1, S1.3.2	T1.1.1, T2.1.1, T3.3.1
R1.3.2	S1.3.1, S1.3.2	T1.1.1, T2.1.1, T3.3.1
R1.4.1	S1.3.1, S1.3.2, S1.4.1, S2.1.1	T1.9.4, T2.1.1, T3.4.1
R2.1	S2.1.1, S4.1	T1.9.4, T1.9.5, T2.1.1
R2.2	S2.2, S4.1	T1.1.2-T1.1.7, T1.7.6, T2.1.1
R2.3	S2.3, S4.1	T1.2.1-T1.2.4,T1.7.5, T2.1.1
R2.4.1	S3.2, S3.3, S4.1	T1.3.2
R3.1	S4.2	T2.1.1