**UML Diagram SP2023\_SP23Product\_OLI**

SP2023\_SP23Product\_OLI

-productUnits: int[]

-transactionCount: int

+ SP2023\_SP23Product\_OLI()  
+ SP2023\_SP23Product\_OLI(int[])  
+calculatePrice(float[]):float[]  
+calculateSubtotal(float[]):float  
+calculateTax(float[]):double  
+calculateTotal(float[]):double  
+printReceipt(float[]):void  
+writeDayFile():void  
+writeMonthFile():void  
+writeYearFile():void  
+printReport(float[]):void

**Pseudo-Code for SP2023\_ SP23Product \_OLI**

class SP2023\_SP23Product\_OLI

productUnits: int[]

constructor SP2023\_SP23Product\_OLI()

productUnits = new int[9]

constructor SP2023\_SP23Product\_OLI(productUnits: int[])

this.productUnits = productUnits

function calculatePrice(prices: float[]) -> float[]

totalPrices = new float[9]

for i = 0 to 8

totalPrices[i] = productUnits[i] \* prices[i]

return totalPrices

function calculateSubtotal(prices: float[]) -> float

subtotal = 0

pricess = calculatePrice(prices)

for price in pricess

subtotal += price

return subtotal

function calculateTax(prices: float[]) -> double

taxRate = 0.0825

subtotal = calculateSubtotal(prices)

return subtotal \* taxRate

function calculateTotal(prices: float[]) -> double

subtotal = calculateSubtotal(prices)

tax = calculateTax(prices)

return subtotal + tax

function printReceipt(productPrice: float[])

// Print receipt details, including product names, unit prices, units, money, subtotal, tax, and total

function writeDayFile()

// Create and update the daily sales file with transaction ID and product units

function writeMonthFile()

// Create and update the monthly sales file with the day and product units

function writeYearFile()

// Create and update the yearly sales file with the month and product units

function printReport(productPrice: float[])

// Print report details, including product names, unit prices, units, money, subtotal, tax, and total

**Pseudo-Code for SP2023\_Sale\_SP23Product\_Application\_OLI**

function main()

productUnits = [0, 0, 0, 0, 0, 0, 0, 0, 0]

while true

ShowMenu()

read option from user input

switch option

case 1:

ShowSaleProduct(productUnits)

create sp2023\_SP23Product\_OLI object with productUnits

sp2023\_SP23Product\_OLI.printReceipt(productPrice)

sp2023\_SP23Product\_OLI.writeDayFile()

break

case 2:

PrintDayReport()

break

case 3:

PrintMonthReport()

break

case 4:

PrintYearReport()

break

case 5:

exit the program

**OUTPUT FOR PROJECT 7**

**Table

Description automatically generated**

**Table

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