**Plan for PA**

1. *Program Purpose*: Create a program that accepts a customer’s orders for hammocks. The customer gets a discount based on the order total (size). A sales receipt will be generated.

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| **Input** | **Processing** | **Output** |
| **hammock**  **quantity**  **color** | itemTotal =  quantity \*  price  subtotal += itemTotal  discount = subtotal \* .035  discount = subtotal \* .03  discount = subtotal \* .025  discount = subtotal \* .02  discSubtotal += subtotal – discount  tax = discSubtotal \* .0825  total = discSubtotal + tax | |  |  | | --- | --- | | **SALES RECEIPT**  **LAZY HAZY DAYS, INC.** |  | | **Huebner Oaks Mall** |  | | **San Antonio, TX** |  | |  |  | | **Date: 99/99/99**  **Time: 99:99:99 XX** |  | |  |  | | **Xxxxxxxxxxxxxxxxxxxx ZZZ,ZZ9** | **$ZZZ,ZZZ,ZZ9.99** | | **Xxxxxxxxxxxxxxxxxxxx ZZ,ZZ9** | **Z,ZZZ,ZZ9.99** | |  |  | | **SUBTOTAL:** | **$ZZZ,ZZZ,ZZ9.99** | | **DISCOUNT:** | **ZZZ,ZZ9.99** | | **TAX @ 8.250%:** | **ZZZ,ZZ9.99** | |  |  | | **TOTAL:** | **$ZZZ,ZZZ,ZZ9.99** | |

1. *Class Diagram:*

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| Class Name | OballeEscareno002PA1 |
| Class  Data Members | N/A |
| Method  Data Members | main()  hammock, quantity, color, iterations: int  cont: char  hammockDesc, colorSelected, salesReceipt: String  itemTotal, subtotal, discount, discSubtotal, tax, total, price: double  input: Scanner  dateTime: Calender |
| Methods | +main(String[] args): static void |

1. *Program Logic:*

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| **import Stmts: *import NameOfClass*** |
| import Scanner  import Calender |

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| **Class Header: *public class NameOfYourClass*** |
| Public class OballeEscareno002PA1 |

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| **Class Variables (Fields): *Refer to the Class Data Members section of the class diagram for a list of class-level variables or fields which should always be private (-).*** |
| **N/A** |

[**Method Logic table**](#Method_Table)

**🡻Recopy for each method in your program.**

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| **Method Purpose: Customers will be asked for a hammock choice based on small, medium, or large; the quantity or hammock size; and the color. An itemTotal is calculated for a selection, followed by a subtotal. Based on the subtotal a discount is derived, then the subtotal is re-calculated with the discount. The sales tax is based on the discounted subtotal. A total for the sale is finalized and the sales receipt is printed.** | | | |
| **Method Header** | Public static void main(String [] args) | | |
| **Method Variables** | int hammock, quantity, color, iterations = 1  double itemTotal, subtotal, discount, discSubtotal,  tax, total, price  Scanner input  Calendar dateTime  String hammockDesk, colorSelected  String salesReceipt =  “SALES RECEIPT”  “LAZY HAZY DAYS. INT.”  “Huebner Oaks Mall”  “San Antonio, TX”  “Date: “, dateTime  “Time: “, dateTime  Actual Java code:  System salesReceipt = String.format(“%n%nSALES RECEIPT”  + “%n%LAZY HAZY DAYS, INC.”  + “%nHuebner Oaks Mall”  + “%nSan Antonio, TX”  + “%n%nDate: %tD”  + “%nTime %tr%n”, dateTime, dateTime); | | |
| **CODE** | | | |
| **Prompts** | **Input Variables** | | **Input Prompt** |
| **1.** | hammock | “LAZY HAZY DAYS, INC,”  “Our beautiful cotton hammocks sport a traditional look and are very comfortable.”   |  |  |  | | --- | --- | --- | | “1. | Small-48in.x 11ft.-Good for 1 person | $100.00” | | “2. | Large-55in.x 13ft.-Good for 2 people | $140.00” | | “3. | Deluxe-60in. x 13ft.-Good for 2 or more people | $175.00” |   “Enter your choice: “ | |
| **2.** | quantity | | “Enter the quantity: “ |
| **3.** | color | | “1. Crimson Red”  “2. Emerald Green”  “3. Indigo Blue”  “4. Natural”  “5. Purple Haze”  “Enter your choice of colors: “ |
| **4** | cont | | “Do you want to add another hammock? Enter ‘Y’ or ‘N’: “; |
| **Calculations** | **Formulas** | | |
| **1** | itemTotal =  quantity \*  price | | |
| **2** | subtotal += itemTotal | | |
| **3** | discount = subtotal \* .035 | | |
| **4** | discount = subtotal \* .03 | | |
| **5** | discount = subtotal \* .025 | | |
| **6** | discount = subtotal \* .02 | | |
| **7** | discSubtotal += subtotal – discount | | |
| **8** | tax = discSubtotal \* .0825 | | |
| **9** | total = discSubtotal + tax | | |
| **Print** | **Output** | | |
| **2** | “Invalid hammock choice!” | | |
| **3** | “Invalid color choice!” | | |
| **Algorithms** | While cont = ‘y’    Prompt 1  if hammock = 1  hammockDesc = “small -48 in . x 11 ft.”  price = 100.00  else  if hammock = 2  hammockDesc = “Large – 55 in. x 13 ft.”  price = 140.00  else  if hammock = 3  hammockDesc = “Deluxe – 60 in. x 13 ft.”  price = 175.00  else  print 2  hammockDesc = “Invalid hammock”  price = 0.0  endIf  endIf  endIf  Prompt 2    Prompt 3        Calculation 1  Calculation 2  if subtotal >= 100000.00  Calculation 3  else  if subtotal >= 50000.00  Calculation 4  else  if subtotal >= 10000.00  Calculation 5  else  if subtotal >= 5000.00  Calculation 6  else  discount = 0.0  endIf  endIf  endIf  endIf    salesReciept +=  hammockDesc, “-“, colorSelected, quantity: “$”, itemTotal  or  hammockDesc,”-“,colorSelected, quantity itemTotal  Actual Java code:  salesReciept += stringf.format(“%n%-24s %c %-13s %5s %,7d %4s %s%,14.2f”, hammockDesc, ‘-‘, colorSelected, “ “,quantity, “ “, iterations > 1 ? “ “ : “$”, itemsTotal);  iterations = iterations + 1  Actual Java code:  iterations += 1;  prompt 4  endwhile  calculations 7, 8, 9  print 1  Actual Java code:  System.out.printf(“%s”  + “%n%n%52s %-6s $%, 14.2f”  + “%n%52s %-7s %,14.2f”  + “%n%52s %-7s %,14.2f”  + “%n%n%52s %-6s $%,14.2f”  salesReceipt, “SUBTOTAL:”, “ “.  subtotal, “DISCOUNT:”, “ “,  discount, “TAX @ 8.250%:”,  “ “, tax, “TOTAL:”, “ “, total);  Stop (end program) | | |
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