**COMPUTER PROGRAMMING  
ASSIGNMENT #2**

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| **NAME :** | **M.WALEED AHMED** |
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| |  | | --- | |  |   **TASK:1**    INPUT  **string[] customerTypes = { "Walk-in", "Registered" };**  **double[] transactions = { 60000, 120000, 250000, 45000 }; // Example data**  **double[] discounts = new double[transactions.Length];**  **for (int i = 0; i < transactions.Length; i++)**  **{**  **Console.WriteLine($"Customer {i + 1}: Type {customerTypes[i % 2]}, Transaction Rs. {transactions[i]}");**  **if (i % 2 == 1) // Registered customer**  **{**  **if (transactions[i] > 200000)**  **discounts[i] = 5.5;**  **else if (transactions[i] > 100000)**  **discounts[i] = 5;**  **else**  **discounts[i] = 3.5;**  **}**  **else // Walk-in customer**  **{**  **if (transactions[i] > 50000)**  **discounts[i] = 2;**  **else**  **discounts[i] = 0;**  **}**  **Console.WriteLine($"Discount: {discounts[i]}%, Final Amount: Rs. {transactions[i] \* (1 - discounts[i] / 100)}\n");**  **}**  **}**  OUTPUT    **TASK:2**    INPUT  int[,] array1 = {  {3, 4, 5},  {6, 7, 9},  {5, 6, 8},  {6, 4, 4}  };  int[,] array2 = {  {6, 4, 2, 4},  {5, 2, 3, 7},  {7, 6, 4, 8}  };  int[,] array3 = new int[array1.GetLength(0), array2.GetLength(1)];  if (array1.GetLength(1) != array2.GetLength(0))  {  Console.WriteLine("Matrix multiplication is not possible.");  return;  }  for (int i = 0; i < array1.GetLength(0); i++)  {  for (int j = 0; j < array2.GetLength(1); j++)  {  array3[i, j] = 0;  for (int k = 0; k < array1.GetLength(1); k++)  {  array3[i, j] += array1[i, k] \* array2[k, j];  }  }  }  Console.WriteLine("Result Matrix (Array 3):");  for (int i = 0; i < array3.GetLength(0); i++)  {  for (int j = 0; j < array3.GetLength(1); j++)  {  Console.Write(array3[i, j] + "\t");  }  Console.WriteLine();  }  OUTPUT    **TASK:3**    INPUT  double[] loanAmounts = { 100000, 200000, 150000 }; // Example loan amounts  int[] years = { 3, 5, 2 }; // Loan durations  double markupRate = 18, insurance = 2, processingFee = 3;  for (int i = 0; i < loanAmounts.Length; i++)  {  double totalMarkup = loanAmounts[i] \* (markupRate / 100) \* years[i];  double insuranceAmount = loanAmounts[i] \* (insurance / 100);  double processingAmount = loanAmounts[i] \* (processingFee / 100);  double totalLoan = loanAmounts[i] + totalMarkup + insuranceAmount + processingAmount;  double monthlyInstallment = totalLoan / (years[i] \* 12);  Console.WriteLine($"Customer {i + 1}:");  Console.WriteLine($" Total Loan Amount: Rs. {totalLoan}");  Console.WriteLine($" Monthly Installment: Rs. {monthlyInstallment}\n");  }  OUTPUT    **TASK:4**       1. **Start** 2. **Input** mechanical charges, auto part charges, auto wash charges and other customer charges. 3. **Calculate the sum** ofmechanical charges and auto part charges is equal to sum 4. **Check condition** if sum > 10000 then auto car wash charges will be zero and print “it is complimentary” 5. **Calculate the total bill** mechanical charges+ auto part charges+ auto wash charges +other customer charges 6. **Output** Total bill of the customer 7. **End**   **TASK:5**    INPUT  string[] chapters = { "Chapter 1", "Chapter 2", "Chapter 3" };  int sectionsPerChapter = 5;  for (int i = 0; i < chapters.Length; i++)  {  Console.WriteLine(chapters[i]);  for (int j = 1; j <= sectionsPerChapter; j++)  {  Console.WriteLine($" Section {i + 1}.{j}");  }  }  OUTPUT |