**COMPUTER PROGRAMMING  
ASSIGNMENT #1**

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| 1. **Write a C# program to read temperature in centigrade and display a suitable message according to the temperature state below: a) Temp < 0 then Freezing weather**    1. **Temp 0-10 then Very Cold weather**    2. **Temp 10-20 then Cold weather**    3. **Temp 20-30 then Normal in Temp**    4. **Temp 30-40 then Its Hot**    5. **Temp >=40 then Its Very Hot**   **INPUT**  **double Temperature;**  **Console.WriteLine("Enter Temperature in centigrade : ");**  **Temperature = Convert.ToDouble(Console.ReadLine());**  **if (Temperature < 0)**  **{**  **Console.WriteLine("Its Freezing Weather!!!");**  **}**  **else if (Temperature >= 0 && Temperature <= 10)**  **{**  **Console.WriteLine("Its very Cold weather!!!");**  **}**  **else if (Temperature > 10 && Temperature <= 20)**  **{**  **Console.WriteLine("Its Cold weather!!!");**  **}**  **else if (Temperature > 20 && Temperature <= 30)**  **{**  **Console.WriteLine("Its Normal Temperature!!!");**  **}**  **else if (Temperature > 30 && Temperature <= 40)**  **{**  **Console.WriteLine("Its Hot weather!!!");**  **}**  **else if (Temperature > 40)**  **{**  **Console.WriteLine("Its Very Hot weather!!!");**  **}**  **OUTPUT**     1. **Write a c# program to check if the given year is a leap year or not (A year may be a leap year if it is evenly divisible by 4. Years that are divisible by 100 (century years such as 1900 or 2000) cannot be leap years unless they are also divisible by 400)).**   **INPUT**  **int year;**  **Console.WriteLine("Enter Year : ");**  **year = Convert.ToInt32(Console.ReadLine());**  **if (year % 4 == 0 && year % 100 != 0 || year % 400 == 0)**  **{**  **Console.WriteLine("This is leap year");**  **}**  **else**  **{**  **Console.WriteLine("This isn't a leap year");**  **}**  **OUTPUT**     1. **Write a C# program to check whether a triangle can be formed with the given values for the angles. [Hint: Sum of angle = 180]**   **INPUT**  **double angle1, angle2, angle3,sum\_of\_angles;**  **Console.Write("Enter first angle : ");**  **angle1=Convert.ToDouble(Console.ReadLine());**  **Console.Write("Enter second angle : ");**  **angle2 = Convert.ToDouble(Console.ReadLine());**  **Console.Write("Enter third angle : ");**  **angle3 = Convert.ToDouble(Console.ReadLine());**  **sum\_of\_angles= angle1 + angle2 + angle3;**  **if (sum\_of\_angles == 180)**  **{**  **Console.WriteLine("The triangle is can be formed by these angles!!");**  **}**  **else**  **{**  **Console.WriteLine("The triangle is can not be formed bt these angles!!");**  **}**  **OUTPUT**     1. **Write a C# program to check whether a character is an alphabet, digit or special character.**   **INPUT**  **char character;**  **Console.WriteLine("Enter your desired character : ");**  **character= Convert.ToChar(Console.ReadLine());**  **if (char.IsLetter(character))**  **{**  **Console.WriteLine("The character you have entered is an alphabet!!");**  **}**  **else if (Char.IsDigit(character))**  **{**  **Console.WriteLine("The character you have entered is digit!!");**  **}**  **else**  **{**  **Console.WriteLine("The character you have entered is special character!!");**  **}**  **OUTPUT**     1. **Write a c# program to check if given triangle is equilateral, isosceles or scalene.**   **INPUT**  **double s1, s2, s3;**  **Console.Write("Enter length of one side of triangle :");**  **s1 = Convert.ToDouble(Console.ReadLine());**  **Console.Write("Enter length of second side of triangle :");**  **s2 = Convert.ToDouble(Console.ReadLine());**  **Console.Write("Enter length of third side of triangle :");**  **s3 = Convert.ToDouble(Console.ReadLine());**  **if (s1 == s2 && s2 == s3)**  **{**  **Console.WriteLine("The given triangle is Equilateral!!");**  **}**  **else if (s1 == s2 || s2 == s3 || s1 == s3)**  **{**  **Console.WriteLine("The given triangle is Isosceles!!");**  **}**  **else**  **{**  **Console.WriteLine("The given triangle Scalene!!");**  **}**  **OUTPUT**     1. **Write a C# program for each condition given below: a) x > y > z**    1. **x and y are both less than 0**    2. **neither x nor y is less than 0**    3. **x is equal to y but not equal to z.**   **INPUT**  **double x, y, z;**  **Console.WriteLine("Enter value of x:");**  **x = Convert.ToDouble(Console.ReadLine());**  **Console.WriteLine("Enter value of y:");**  **y = Convert.ToDouble(Console.ReadLine());**  **Console.WriteLine("Enter value of z:");**  **z = Convert.ToDouble(Console.ReadLine());**  **Console.WriteLine("============================================================================");**  **Console.WriteLine("1. x > y > z \n2. x and y are both less than 0 \n3. neither x nor y is less than 0 \n4. x is equal to y but not equal to z. ");**  **Console.WriteLine("============================================================================");**  **Console.WriteLine("Enter the number of the condition to check whether it is true or false:");**  **char input = Convert.ToChar(Console.ReadLine());**  **Console.WriteLine("============================================================================");**  **switch (input)**  **{**  **case '1':**  **{**  **if ((x > y && x > z) && (y > z))**  **{**  **Console.WriteLine("Condition is True");**  **}**  **else**  **{**  **Console.WriteLine("Condition is False");**  **}**  **break;**  **}**  **case '2':**  **{**  **if (x < 0 && y < 0)**  **{**  **Console.WriteLine("Condition is True");**  **}**  **else**  **{**  **Console.WriteLine("Condition is False");**  **}**  **break;**  **}**  **case '3':**  **{**  **if (x > 0 && y > 0)**  **{**  **Console.WriteLine("Condition is True");**  **}**  **else**  **{**  **Console.WriteLine("Condition is False");**  **}**  **break;**  **}**  **case '4':**  **{**  **if (x == y && x != z)**  **{**  **Console.WriteLine("Condition is True");**  **}**  **else**  **{**  **Console.WriteLine("Condition is False");**  **}**  **break;**  **}**  **default:**  **Console.WriteLine("Invalid input! Please enter a valid condition number.");**  **break;**  **}**  **Console.WriteLine("============================================================================");**  **OUTPUT**     1. **National Defense Finance Corporation, Pakistan has started saving schemes where they are offering two options, one with 5 years fixed deposit where the interest rate is 10%. In second option, client will get monthly interest amount with 8.5% per year. By using switch statement, write a program that will calculate the total amount after 5 years for option one and monthly amount in option 2 for the provided user input amount.**   **INPUT**  **int o;**  **Console.WriteLine("Select an option:");**  **Console.WriteLine("(1)\t5 years fixed deposit where interest rate is 10%.\n(2)\tmonthly interest amount with 8.5% per year. ");**  **Console.WriteLine("Enter the number of option to calculate total amount:");**  **o=Convert.ToInt32(Console.ReadLine());**  **switch (o)**  **{**  **case 1:**  **{**  **double amount, tamnt;**  **Console.Write("Enter the total amount:");**  **amount = Convert.ToDouble(Console.ReadLine());**  **tamnt = (amount \* 0.1\*5 )+ amount;**  **Console.WriteLine("The total amount after five years will be :" + tamnt);**  **break;**  **}**  **case 2:**  **{**  **double amount, yinterest,mamount;**  **Console.Write("Enter the total amount:");**  **amount = Convert.ToDouble(Console.ReadLine());**  **yinterest = 0.085 \* amount;**  **mamount= yinterest / 12;**  **Console.WriteLine("The monthly amount will be "+mamount);**  **break;**  **}**  **default:**  **Console.WriteLine("Enter a valid input (It must be 1 or 2)");**  **break;**  **}**  **OUTPUT**     1. **Write a c# program for user account login for userid = “admin” and password = “123456” (check userid and password).**   **INPUT**  **string userid = "admin";**  **string password ="123456";**  **string id, pass;**  **Console.WriteLine("Enter your Id : ");**  **id= Console.ReadLine();**  **Console.WriteLine("Enter your Password : ");**  **pass = Console.ReadLine();**  **if(id==userid && pass==password)**  **{**  **Console.WriteLine("Login successfully!!");**  **}**  **else**  **{**  **Console.WriteLine("Invalid Id or Password!!");**  **}**  **OUTPUT**     1. **By using switch statement, write a c# program to calculate the total hospital bill for tests performed. When a discount of 50% is offered for community members, 30% for the needy and 20% for employees of the hospital.**   **INPUT**  **Console.WriteLine("Are you community member or needy or employee of hospital?");**  **Console.WriteLine("Press C for community member, N for needy and E for employee!");**  **char type\_of\_person = Convert.ToChar(Console.ReadLine());**  **double amt,applied\_disc;**  **switch (type\_of\_person)**  **{**  **case 'C':**  **Console.WriteLine("Enter your amount : ");**  **amt = Convert.ToDouble(Console.ReadLine());**  **applied\_disc = amt \* 0.5;**  **amt = amt - applied\_disc;**  **Console.WriteLine("Your bill after discount is : {0}", amt);**  **break;**  **case 'N':**  **Console.WriteLine("Enter your amount : ");**  **amt = Convert.ToDouble(Console.ReadLine());**  **applied\_disc = amt \* 0.3;**  **amt = amt - applied\_disc;**  **Console.WriteLine("Your bill after discount is : {0}", amt);**  **break;**    **case 'E':**  **Console.WriteLine("Enter your amount : ");**  **amt = Convert.ToDouble(Console.ReadLine());**  **applied\_disc = amt \* 0.2;**  **amt = amt - applied\_disc;**  **Console.WriteLine("Your bill after discount is : {0}", amt);**  **break;**  **default:**  **Console.WriteLine("You are not eligible for any discount plz pay the full bill ");**  **break;**  **}**  **OUTPUT**     1. **Suppose gpa is a variable containing the grade point average of a student. Suppose the goal of a program is to let a student know if he/she made the Dean's list (the gpa must be 3.5 or above). Write an if... else... statement that prints out the appropriate message (either "Congratulations—you made the Dean's List" or "Sorry you didn't make the Dean's List")..**   **INPUT**  **Console.WriteLine("Enter the students GPA: ");**  **double GPA=Convert.ToDouble(Console.ReadLine());**  **if (GPA < 0 || GPA>4)**  **{**  **Console.WriteLine("Enter a valid GPA");**  **}**  **else**  **{**  **if (GPA >= 3.5)**  **{**  **Console.WriteLine("Congratulations—you made the Dean's List");**  **}**  **else**  **{**  **Console.WriteLine("Sorry you didn't make the Dean's List");**  **}**  **}**  **OUTPUT** |