**BAHRIA UNIVERSITY (KARACHI CAMPUS**)

**Computer Programming (CSC - 113)**

**Assignment 01**

**Fall 2022**

**Class: BSE 1B Shift: Morning**

**Course Instructor: MUHAMMAD FAISAL Submission: 06 Oct 2022**

**Date: 24 Nov 2022 Marks: 05 Points**

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**[CLO-3]**

Question No 01: Write a C# program to find that a person is allowed to sit in BSE-1. He is allowed if he belongs to BUKC, and he is the student of First semester and he is a student of Software Engineering.

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

string department = "BSE";

string departmentIn;

string semester = "1st";

string semesterIn;

string campus = "BUKC";

string campusIn;

Console.WriteLine("\t-Student Data Check for Entry-");

Console.WriteLine("-Are you from Bahria University?");

Console.WriteLine("\tPress Y for Yes, N for No");

string opt = Console.ReadLine();

if (opt == "Y")

{

Console.WriteLine("-From which Campus?");

campusIn = Console.ReadLine();

Console.WriteLine("-What is Your Department?");

departmentIn = Console.ReadLine();

Console.WriteLine("-In which semester you are?");

semesterIn = Console.ReadLine();

if (campus == campusIn && department == departmentIn && semester == semesterIn)

{

Console.WriteLine("You are allow to Enter, have a Nice Day");

}

else

{

Console.WriteLine("Sorry you are not allow to Enter BUKC");

}

}

else

{

Console.WriteLine("Sorry You are not allow to enter Bahria University");

}

}

}

}

Output:

Text

Description automatically generated

Question No 02: Write a C# program to print number of days in given month using switch-case.

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

string monthName;

Console.WriteLine("Enter Month Name:");

monthName = Console.ReadLine();

switch (monthName)

{

case "Jan":

Console.WriteLine("{0} has 31 days", monthName);

break;

case "Feb":

Console.WriteLine("{0} has 28 (for leap year 29) days", monthName);

break;

case "Mar":

Console.WriteLine("{0} has 31 days", monthName);

break;

case "Apr":

Console.WriteLine("{0} has 30 days", monthName);

break;

case "May":

Console.WriteLine("{0} has 31 days", monthName);

break;

case "Jun":

Console.WriteLine("{0} has 30 days", monthName);

break;

case "Jul":

Console.WriteLine("{0} has 31 days", monthName);

break;

case "Aug":

Console.WriteLine("{0} has 31 days", monthName);

break;

case "Sep":

Console.WriteLine("{0} has 30 days", monthName);

break;

case "Oct":

Console.WriteLine("{0} has 31 days", monthName);

break;

case "Nov":

Console.WriteLine("{0} has 30 days", monthName);

break;

case "Dec":

Console.WriteLine("{0} has 31 days", monthName);

break;

}

}

}

}

Output:

Text

Description automatically generated

Question No 03: Write a C# program that takes integer between 1 and 12 from user and displays the name of the month using switch-case.

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

int num;

Console.WriteLine("Enter Month Number (Between 1-12):");

num =Convert.ToInt32(Console.ReadLine());

switch (num)

{

case 1:

Console.WriteLine("{0}st Month is January",num);

break;

case 2:

Console.WriteLine("{0}nd Month is February", num);

break;

case 3:

Console.WriteLine("{0}rd Month is March", num);

break;

case 4:

Console.WriteLine("{0}th Month is April", num);

break;

case 5:

Console.WriteLine("{0}th Month is May", num);

break;

case 6:

Console.WriteLine("{0}th Month is June", num);

break;

case 7:

Console.WriteLine("{0}th Month is July", num);

break;

case 8:

Console.WriteLine("{0}th Month is August", num);

break;

case 9:

Console.WriteLine("{0}th Month is September", num);

break;

case 10:

Console.WriteLine("{0}th Month is October", num);

break;

case 11:

Console.WriteLine("{0}th Month is November", num);

break;

case 12:

Console.WriteLine("{0}th Month is December", num);

break;

default:

Console.WriteLine("{0} is out of the Range!", num);

break;

}

}

}

}

Output:

Text

Description automatically generated

Question No 04: 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)).

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

int year;

Console.WriteLine("Enter The Year:");

year = Convert.ToInt32(Console.ReadLine());

if (year % 4 == 0 || year % 400 == 0)

{

Console.WriteLine("{0} is a Leap Year.", year);

}

else

{

Console.WriteLine("{0} is Not a Leap Year", year);

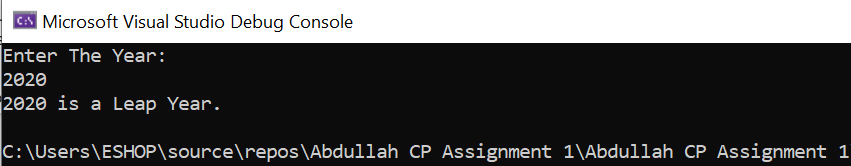
}

}

}

}

Output:



Question No 05: Write a C# program to check if given triangle is right angle triangle, acute angle triangle or obtuse angle triangle.

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

double angle;

Console.WriteLine("Enter the Greatest Angle of the Given Triangle:");

angle = Convert.ToDouble(Console.ReadLine());

if (angle == 90)

{

Console.WriteLine("It's a Right Angle Triangle");

}

else if (angle >= 90)

{

Console.WriteLine("It's an Abtuse Angle Triangle");

}

else if (angle == 60)

{

Console.WriteLine("It's an Equilateral Triangle");

}

else if (angle <= 60)

{

Console.WriteLine("Invalid Input! {0} is not the Greatest Angle of Triangle", angle);

}

else if (angle <= 90)

{

Console.WriteLine("It's an Acute Angle Triangle");

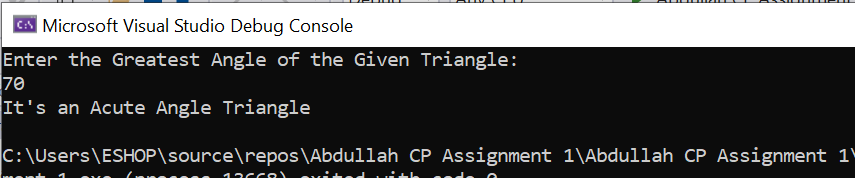
}

}

}

}

Output:



Question No 06: Write a C# program to print an appropriate message for Go, Stop and Wait on the bases of traffic lights by taking color of light as input.

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

string lightColor;

Console.WriteLine("What is the color of traffic signal?");

lightColor = Console.ReadLine();

switch (lightColor)

{

case "Red":

Console.WriteLine("Please Stop Your Vehicle!");

break;

case "Yellow":

Console.WriteLine("Please Wait until Signal turns Green.");

break;

case "Green":

Console.WriteLine("Signal is Open, you may go.");

break;

default:

Console.WriteLine("Invalid Color!");

break;

}

}

}

}

Output:

Text

Description automatically generated

Question No 07: Write a C# program to calculate discount for a departmental store. The departmental store has two types of customers: 1) Walk-in customers 2) Registered customers. For registered customers, they are offering 5% discount if their monthly transaction is more than Rs.100000 and 5.5% discount if their monthly transaction is more than Rs.200000, otherwise they will get a discount of 3.5%. For Walk-in customers a 2% discount is available if the transaction amount is more than 50,000.

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

double totalBill;

double monthlyTransaction;

double discount;

double finalBill;

string customerType;

Console.WriteLine("\t-Cashier Counter-");

Console.WriteLine("\nPlease Enter Your Total Bill (in Rs):");

totalBill = Convert.ToDouble(Console.ReadLine());

Console.WriteLine("Are You Registered Customer or Walk in Customer of our Store? (R for Registered / W for Walk in):");

customerType = Console.ReadLine();

if (customerType.Equals("R") || customerType.Equals("r"))

{

Console.WriteLine("Enter Your Monthly Transacted Amount in Our Store:");

monthlyTransaction = Convert.ToDouble(Console.ReadLine());

if (monthlyTransaction >= 200000)

{

discount = 0.055 \* totalBill;

finalBill = totalBill - discount;

Console.WriteLine("Your Final Bill is {0} Rs with Discount of {1} Rs (5.5%) as You Are Our Registered Customer and Have Monthly Transaction of {2} (More Then 200000 Rs)", finalBill, discount, monthlyTransaction);

}

else if (monthlyTransaction >= 100000)

{

discount = 0.05 \* totalBill;

finalBill = totalBill - discount;

Console.WriteLine("Your Final Bill is {0} Rs with Discount of {1} Rs (5%) as You Are Our Registered Customer and Have Monthly Transaction of {2} (More Then 100000 Rs)", finalBill, discount, monthlyTransaction);

}

else

{

discount = 0.033 \* totalBill;

finalBill = totalBill - discount;

Console.WriteLine("Your Final Bill is {0} Rs with Discount of {1} Rs (3.5%) as You Are Our Registered Customer", finalBill, discount);

}

}

else if (customerType.Equals("W") || customerType.Equals("w"))

{

Console.WriteLine("Enter Your Monthly Transacted Amount in Our Store:");

monthlyTransaction = Convert.ToDouble(Console.ReadLine());

if (monthlyTransaction >= 50000)

{

discount = 0.02 \* totalBill;

finalBill = totalBill - discount;

Console.WriteLine("Your Final Bill is {0} Rs with Discount of {1} Rs (2%) as You are Walk in Customer and Have Monthly Transaction of {2} (More Then 50000 Rs)", finalBill, discount, monthlyTransaction);

}

else

{

discount = 0 \* totalBill;

finalBill = totalBill - discount;

Console.WriteLine("Your Final Bill is {0} Rs with Discount of {1} Rs", finalBill, discount);

}

}

Console.WriteLine("\n-Have a Nice Day-");

}

}

}

Output:

Text

Description automatically generated with low confidence

Question No 08: Write a C# program to calculate the total fee of a student of Bahria University (@ Rs.5000 per credit hour). There is a 50% discount for students from a naval background, a 20% discount for students with a sibling already studying in Bahria University and a 30% discount for Bahria University permanent employees.

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

double creditHours, totalFee, discount, FinalFee;

int ratePerhour = 5000;

string studentBackground;

Console.WriteLine("\t-Student Semester Fee Calculator BUKC-");

Console.WriteLine("\nEnter Total Credit Hours of Your Program in this Semester:");

creditHours = Convert.ToDouble(Console.ReadLine());

Console.WriteLine("Enter your Background (Press 1 for 'Naval Background', 2 for 'Sibling Already Studying in Bahria', 3 for Bahria University Permanent Employees):");

studentBackground = Console.ReadLine();

totalFee = ratePerhour \* creditHours;

if (studentBackground.Equals ("1"))

{

discount = totalFee \* 0.5;

}

else if (studentBackground.Equals ("2"))

{

discount = totalFee \* 0.2;

}

else if (studentBackground.Equals ("3"))

{

discount = totalFee \* 0.3;

}

else

{

discount = totalFee \* 0;

}

FinalFee = totalFee - discount;

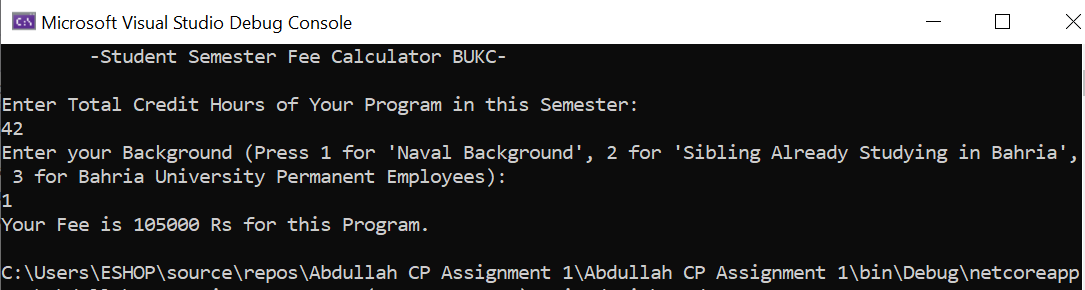
Console.WriteLine("Your Fee is {0} Rs for this Program.", FinalFee);

}

}

}

Output:



Question No 09: Write a C# program for user account login for userid = “admin” and password = “123456” (check userid and password).

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

string userid = "admin";

string useridin;

string password = "123456";

string passwordin;

Console.WriteLine("\t-Account Login-");

Console.WriteLine("Enter User ID:");

useridin = Console.ReadLine();

if (useridin == userid)

{

Console.WriteLine("Enter Password:");

passwordin = Console.ReadLine();

if (password == passwordin)

{

Console.WriteLine("-Login Completed-");

}

else

{

Console.WriteLine("Invalid Password!");

}

}

else

{

Console.WriteLine("Invalid User ID!");

}

}

}

}

Output:

Text

Description automatically generated

Question No 10: Write a C# program to check if given alphabet is a vowel or not.

Solution:

Input:

using System;

namespace Abdullah\_CP\_Assignment\_1

{

class Program

{

static void Main(string[] args)

{

string v;

Console.WriteLine("Enter an Alphabet:");

v = Console.ReadLine();

if (v == "a" || v == "e" || v == "i" || v == "o" || v == "u")

{

Console.WriteLine("{0} is a Vowel.", v);

}

else

{

Console.WriteLine("{0} is not a Vowel.", v);

}

}

}

}

Output:

Text

Description automatically generated