**To find the area of a room.**

using System;

namespace Class\_Examples

{

class Program

{

static void Main(string[] args)

{

int li, lf, bf, bi, ai, af;

li = 6;

lf = 15;

bf = 16;

bi = 8;

af = bf \* lf;

ai = li \* bi;

if (ai >= 12)

{

int r, i;

r = ai / 12;

af = af + r;

i = ai % 12;

ai = i;

}

Console.WriteLine("The Area is {0} ft and {1} inches", af, ai);

}

}

}

**To calculate the amount of interest**

using System;

namespace Class\_Examples

{

class Program

{

static void Main(string[] args)

{

double r, i;

int p, t;

Console.WriteLine("Enter your amount: ");

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

Console.WriteLine("Enter the time period in years: ");

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

r = 16.5;

i = p \* t \* r / 100;

Console.WriteLine("Your interest amount is: {0}", i);

}

}

}

**Even Odd:**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter a number");

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

string result = (num % 2 == 0) ? "Even" : "Odd";

Console.WriteLine(result);

}

}

}

**To Convert Kelvin into Fahrenheit**

using System;

namespace Class\_Examples

{

class Program

{

static void Main(string[] args)

{

double k, f, c;

Console.WriteLine("Enter the temperature in Kelvin(K): ");

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

c = k - 273;

f = c \* 9 / 5 + 32;

Console.WriteLine("The Temperature in Farenheit is {0}.", f);

}

}

}

S=vit vf=vi +a t s=vit+0.5a\*t\*t 2as=vf vf – vi vi

**First Equation of Motion**

using System;

namespace Class\_Examples

{

class Program

{

static void Main(string[] args)

{

double s, vi, t;

Console.WriteLine("Enter the initial Velocity: ");

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

Console.WriteLine("Enter the time (In Seconds): ");

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

s = vi \* t;

Console.WriteLine("The Distance is {0}", s);

}

}

}

**Second Equation of Motion**

using System;

namespace Class\_Examples

{

class Program

{

static void Main(string[] args)

{

double vf,a, vi, t;

Console.WriteLine("Enter the initial Velocity: ");

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

Console.WriteLine("Enter the time (In Seconds): ");

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

Console.WriteLine("Enter the acceleration: ");

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

vf = vi+a\* t;

Console.WriteLine("The Final Velocity is {0}", vf);

}

}

}

**Third Equation of Motion**

using System;

namespace Class\_Examples

{

class Program

{

static void Main(string[] args)

{

double s,vf,a, vi, t;

Console.WriteLine("Enter the initial Velocity: ");

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

Console.WriteLine("Enter the time (In Seconds): ");

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

Console.WriteLine("Enter the acceleration: ");

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

Console.WriteLine("Enter the Final Velocity: ");

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

s = vi\*t + 0.5\*a\* t\*t;

Console.WriteLine("The Distance is {0}", s);

}

}

}

**Finding out Hypotenuse or Perpendicular or Base, based on the input user gives**

using System;

namespace prac

{

class Program

{

static void Main(string[] args)

{

double p, b, h;

char op;

Console.WriteLine("Enter the corresponding letter of side you want to find.\n1) Hypotenuse 'h'\n2)Base 'b'\n3)Perpendicular 'p'");

op = Convert.ToChar(Console.ReadLine());

if(op.Equals('h'))

{

Console.WriteLine("Enter the perpendicular: ");

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

Console.WriteLine("Enter the base: ");

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

h = Math.Sqrt(p \* p + b \* b);

Console.WriteLine("The Hypotenuse is {0:0.00}", h);

}

else if (op.Equals('b'))

{

Console.WriteLine("Enter the hypotenuse: ");

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

Console.WriteLine("Enter the perpendicular: ");

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

b = Math.Sqrt(h\*h-p \* p );

Console.WriteLine("The base is {0:0.00}", b);

}

else if (op.Equals('p'))

{

Console.WriteLine("Enter the hypotenuse: ");

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

Console.WriteLine("Enter the base: ");

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

p = Math.Sqrt(h \* h - b\*b);

Console.WriteLine("The perpendicular is {0:0.00}", p);

}

else { Console.WriteLine("Unidentified answer"); }

}

}

}

**Identifying the Hypotenuse based on the given input of all 3 sides**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

int s1, s2, s3;

Console.WriteLine("Enter Side 1:");

s1 = Convert.ToInt32(Console.ReadLine());

Console.WriteLine("Enter Side 2:");

s2 = Convert.ToInt32(Console.ReadLine());

Console.WriteLine("Enter Side 3:");

s3 = Convert.ToInt32(Console.ReadLine());

if (s1 > s2 || s1 > s3)

{

Console.WriteLine("Side 1 is Hypotenuse");

}

else if (s2 > s1 || s2 > s3)

{

Console.WriteLine("Side 2 is Hypotenuse");

}

else

{

Console.WriteLine("Side 3 is Hypotenuse");

}

}

}

}

}

**Calculation an year’s expenditure using the FOR,DO WHILE, WHILE**

**FOR**

using System;

namespace prac

{

class Program

{

static void Main(string[] args)

{

int exp, tot\_exp, mon;

tot\_exp = 0;

for(mon=0;mon<12;mon++)

{

Console.WriteLine("Enter the month's expenditure");

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

tot\_exp += exp;

}

Console.WriteLine("The Total Expenditure is {0:C}", tot\_exp);

}

}

}

**WHILE**

namespace calculator

{

class Program

{

static void Main(string[] args)

{

int exp, totExp, mon;

totExp = 0;

mon = 0;

while(mon<12)

{

Console.WriteLine("Enter a month's expenditure: ");

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

totExp += exp;

mon++;

}

Console.WriteLine("Total Expenditure is {0:C}", totExp);

}

}

}

**DO WHILE**

namespace calculator

{

class Program

{

static void Main(string[] args)

{

int exp, totExp, mon;

totExp = 0;

mon = 0;

do

{

Console.WriteLine("Enter a month's expenditure: ");

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

totExp += exp;

mon++;

} while (mon < 12);

Console.WriteLine("Total Expenditure is {0:C}", totExp);

}

}

}

**Bahria Grading System:**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

double math, phy, chem, eng, urdu,total,percent;

string grade="F";

Console.WriteLine("Enter Maths Mark");

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

Console.WriteLine("Enter Physics Mark");

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

Console.WriteLine("Enter Chemistry Mark");

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

Console.WriteLine("Enter English Mark");

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

Console.WriteLine("Enter Urdu Mark");

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

total = math + eng + urdu + phy + chem;

percent = total / 500 \* 100;

if (percent >= 85)

{

grade = "A";

}

else if (percent >= 80)

{

grade = "A-";

}

else if (percent >= 75)

{

grade = "B+";

}

else if (percent >= 71)

{

grade = "B";

}

else if (percent >= 68)

{

grade = "B-";

}

else if (percent >= 64)

{

grade = "C+";

}

else if (percent >= 60)

{

grade = "C";

}

else if (percent >= 57)

{

grade = "C-";

}

else if (percent >= 53)

{

grade = "D+";

}

else if (percent >= 50)

{

grade = "D";

}

Console.WriteLine("Total Marks: {0}\nPercentage: {1}\nGrade: {2}",total,percent,grade);

}

}

}

**Checking UserID and Password using Conditional Statements**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

string id = "abdur", pw = "123", uid, upw;

Console.WriteLine("Enter your ID");

uid = Console.ReadLine();

Console.WriteLine("Enter your Password");

upw = Console.ReadLine();

if (uid == id && upw == pw)

{

Console.WriteLine("Welcome to our website!");

}

else

{

Console.WriteLine("You have entered incorrect ID or Password");

}

}

}

}

**Program to check valid voter:**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter you nationality: (P for Pak, I for India, T for Turkish");

string n = Console.ReadLine();

if (n == "p" || n == "P")

{

Console.WriteLine("Are you 18+? Reply with y or n");

string rep = Console.ReadLine();

if (rep == "y" || rep == "Y")

{

Console.WriteLine("Do you have a valid NIC? Reply with y or n");

string nic = Console.ReadLine();

if (nic == "y" || nic == "Y")

{

Console.WriteLine("You are eligible to vote!");

}

else

{

Console.WriteLine("Sorry you dont have a valid NIC");

}

}

else

{

Console.WriteLine("Sorry, you are not 18+");

}

}

else

{

Console.WriteLine("Sorry your nationality doesn't match the criteria for voting");

}

}

}

}

**Calculating Subject’s Total Marks and Grade**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter your quiz marks");

double qz = double.Parse(Console.ReadLine());

if (qz >= 0 && qz <= 10)

{

Console.WriteLine("Enter your total assignment marks");

double ass = double.Parse(Console.ReadLine());

if (ass >= 0 && ass <= 20)

{

Console.WriteLine("Enter your Mid's marks");

double mid = double.Parse(Console.ReadLine());

if (mid >= 0 && mid <= 20)

{

Console.WriteLine("Enter your Final's marks");

double final = double.Parse(Console.ReadLine());

if (final >= 0 && final <= 50)

{

string grade = "F";

double total = qz + ass + mid + final;

if (total >= 85)

{

grade = "A";

}

else if (total >= 80)

{

grade = "A-";

}

else if (total >= 75)

{

grade = "B+";

}

else if (total >= 71)

{

grade = "B";

}

else if (total >= 68)

{

grade = "B-";

}

else if (total >= 64)

{

grade = "C+";

}

else if (total >= 60)

{

grade = "C";

}

else if (total >= 57)

{

grade = "C-";

}

else if (total >= 53)

{

grade = "D+";

}

else if (total >= 50)

{

grade = "D";

}

Console.WriteLine("Total Marks: {0:0.00}\nGrade: {1}",total,grade);

}

}

}

}

}

}

}

**Program to check if match is playable**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

string olook, hum, wind;

Console.WriteLine("Enter the outlook of weather:S for Sunny, O for Overcast, R for rainy");

olook = Console.ReadLine();

if(olook=="s"||olook=="S")

{

Console.WriteLine("Is humidity normal or high?reply with n or h");

hum = Console.ReadLine();

if (hum == "n" || hum == "N")

{

Console.WriteLine("Match is playable");

}

else if (hum == "h" || hum == "H")

{

Console.WriteLine("Match is not playable");

}

else

{

Console.WriteLine("Invalid Input");

}

}

else if (olook == "o" || olook == "O")

{

Console.WriteLine("Match is Playable");

}

else if(olook=="r"|| olook == "R")

{

Console.WriteLine("Is wind strong or weak?reply with s or w");

hum = Console.ReadLine();

if (hum == "w" || hum == "W")

{

Console.WriteLine("Match is playable");

}

else if (hum == "s" || hum == "S")

{

Console.WriteLine("Match is not playable");

}

else

{

Console.WriteLine("Invalid Input");

}

}

else

{

Console.WriteLine("Invalid Input");

}

}

}

}

**Calculating Weekly Expense**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

int de, te=0, min=0, max=0;

for (int i = 1; i <= 7; i++)

{

Console.WriteLine("Enter Expense for Day {0}",i);

de = int.Parse(Console.ReadLine());

if (i==1)

{

min = de;

max = de;

}

if (min > de)

{

min = de;

}

if (max < de)

{

max = de;

}

te += de;

}

Console.WriteLine("Total Expense: {0:C}\nMinimum Expense: {1:C}\nMaximum Expense: {2:C}",te,min,max);

}

}

}

**Deciding if Lab and Theory class will be conducted**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Is electricity is avaliable? (Reply with y or n)");

string electricity = Console.ReadLine();

Console.WriteLine("Is Door is open (Reply with y or n)");

string dooropen = Console.ReadLine();

if (electricity == ("Y")|| electricity == ("y") && dooropen == ("Y")||dooropen == ("y"))

{

Console.WriteLine("Both Theory and Lab will be conducted");

}

else if (dooropen == ("Y") || dooropen == ("y"))

{

Console.WriteLine("Only Theory will be conducted");

}

else if (electricity == ("Y") || electricity == ("y"))

{

Console.WriteLine("Only Lab will be conducted");

}

else

{

Console.WriteLine("Neither theory nor lab will be conducted");

}

}

}

}

**Switch case**

Console.WriteLine("\ta=123 b=675\t");

double a=123, b=675;

string op;

Console.WriteLine("Enter the correspoding letter for the operation you would like to perform\n1) Addition - '+'\n2) Subtraction - '-'\n3) Division - '/'\n4)Multiplication - '\*'\n");

op = Console.ReadLine();

switch (op)

{

case "+":

Console.WriteLine(a + b);

break;

case "-":

Console.WriteLine(a - b);

break;

case "/":

Console.WriteLine(a / b);

break;

case "\*":

Console.WriteLine(a \* b);

break;

case "%":

Console.WriteLine(a % b);

break;

default:

Console.WriteLine("The user have entered an incorrect input!");

break;

}

**Vowels**

namespace calculator

{

class Program

{

static void Main(string[] args)

{

char letter;

Console.WriteLine("Enter any letter");

letter = Convert.ToChar(Console.ReadLine());

switch(letter)

{

case 'A':

case 'a':

case 'E':

case 'e':

case 'I':

case 'i':

case 'O':

case 'o':

case 'U':

case 'u':

Console.WriteLine("It is a vowel!");

break;

default:

Console.WriteLine("It is not a vowel!");

break;

}

}

}

}

**Calculating Semester Fee:**

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

double ch, tch = 0, tfpch, course, tf, libFee = 0, examFee = 0, fee,disc;

char rep;

Console.WriteLine("How many courses do you have in this semester?");

course = double.Parse(Console.ReadLine());

Console.WriteLine("What is the Total Fee per Credit Hour?");

tfpch = double.Parse(Console.ReadLine());

for (int i = 1; i <= course; i++)

{

Console.WriteLine("Course {0}", i);

Console.WriteLine("Enter the Total Credit Hour ");

ch = double.Parse(Console.ReadLine());

tch += ch;

}

tf = tch \* tfpch;

disc = 0;

Console.WriteLine("What is your type? N for Navy, C for Civilian, A for Armed Forces");

rep = Convert.ToChar(Console.ReadLine());

switch (rep)

{

case 'N':

case 'n':

disc = tf \* 0.5;

libFee = 1000;

examFee = 1000 \* course;

break;

case 'C':

case 'c':

libFee = 3000;

examFee = 2000 \* course;

break;

case 'A':

case 'a':

disc = tf \* 0.25;

libFee = 3000;

examFee = 1500 \* course;

break;

default:

Console.WriteLine("Wrong Input");

break;

}

fee = tf + libFee + examFee;

Console.WriteLine("Total Credit Hours = {0}\nTution Fee = {1:C}\nLibrary Fee = {2:C}\nExam Fee = {3:C}\n\nTotal Fee = {4:C}", tch, tf, libFee, examFee, fee);

fee -= disc;

Console.WriteLine("Discount = {0:C}-\n\nGrand Total = {1:C}", disc,fee);

}

}

}

**Calculating Midterm Marks**

using System;

class HelloWorld {

static void Main() {

int[] marks=new int[5];

string[] cTitle=new string[5];

int max=0,min=0,tot=0;

double avg;

for(int i=0;i<5;i++){

Console.WriteLine("Enter Course {0} Title",i+1);

string str=Console.ReadLine();

cTitle[i]=str.ToLower();

Console.WriteLine("Enter Course {0} marks",i+1);

marks[i]=int.Parse(Console.ReadLine());

tot+=marks[i];

if(i==0){

min=marks[i];

max=marks[i];

}

if(min>marks[i]){

min=marks[i];

}

if(max<marks[i]){

max=marks[i];

}

}

avg=tot/5;

char repTry;

do{

Console.Clear();

Console.WriteLine("Please select one of the option from the following");

Console.WriteLine("1) Press 1 to get total marks");

Console.WriteLine("2) Press 2 for Average Marks");

Console.WriteLine("3) Press 3 for Maximum marks");

Console.WriteLine("4) Press 4 for Minimum marks");

Console.WriteLine("5) Press 5 for individual course mark");

Console.WriteLine("6)Press 6 for all course marks");

char rep=char.Parse(Console.ReadLine());

Console.Clear();

switch(rep)

{

case '1':

Console.WriteLine("Total marks= {0}",tot);

break;

case '2':

Console.WriteLine("Average marks= {0}",avg);

break;

case '3':

Console.WriteLine("Maximum marks= {0}",max);

break;

case '4':

Console.WriteLine("Minimum marks= {0}",min);

break;

case '5':

Console.WriteLine("Please enter course title");

string cName=Console.ReadLine();

for(int j=0;j<5;j++){

if(cTitle[j].Equals(cName.ToLower())){

Console.WriteLine("{0} {1}",cTitle[j],marks[j]);

}

}

break;

case '6':

for(int k=0;k<5;k++){

Console.WriteLine("{0} {1}",cTitle[k],marks[k]);

}

break;

default:

Console.WriteLine("Invalid Input");

break;

}

Console.WriteLine("Do you want to check another value?");

repTry=char.Parse(Console.ReadLine());

}while(repTry=='y'||repTry=='Y');

}

}

**Calculating Daily Expense:**

using System;

class HelloWorld

{

static void Main()

{

int[] dailyExp = new int[100];

int max = 0, min = 0, tot = 0;

double avg;

char repExp;

int i = 0;

do

{

Console.WriteLine("Enter Expense {0}", i + 1);

dailyExp[i] = int.Parse(Console.ReadLine());

tot += dailyExp[i];

if (i == 0)

{

min = dailyExp[i];

max = dailyExp[i];

}

if (min > dailyExp[i])

{

min = dailyExp[i];

}

if (max < dailyExp[i])

{

max = dailyExp[i];

}

i++;

Console.WriteLine("Do you want to enter another expense?");

repExp = char.Parse(Console.ReadLine());

} while (repExp == 'y' || repExp == 'Y');

avg = tot / i;

char repTry;

do

{

Console.Clear();

Console.WriteLine("Please select one of the option from the following");

Console.WriteLine("1) Press 1 to get total Expense");

Console.WriteLine("2) Press 2 for Average Expense");

Console.WriteLine("3) Press 3 for Maximum Expense");

Console.WriteLine("4) Press 4 for Minimum Expense");

Console.WriteLine("5) Press 5 for individual day Expense");

Console.WriteLine("6) Press 6 for all course marks");

char rep = char.Parse(Console.ReadLine());

Console.Clear();

switch (rep)

{

case '1':

Console.WriteLine("Total marks= {0}", tot);

break;

case '2':

Console.WriteLine("Average marks= {0}", avg);

break;

case '3':

Console.WriteLine("Maximum marks= {0}", max);

break;

case '4':

Console.WriteLine("Minimum marks= {0}", min);

break;

case '5':

Console.WriteLine("Please Day of expense");

int singleExp = int.Parse(Console.ReadLine());

Console.WriteLine("Day {0} Expense: {1:C}",dailyExp,dailyExp[singleExp]);

break;

case '6':

for (int k = 0; k < i; k++)

{

Console.WriteLine("{0}", dailyExp[k]);

}

break;

default:

Console.WriteLine("Invalid Input");

break;

}

Console.WriteLine("Do you want to check another value?");

repTry = char.Parse(Console.ReadLine());

} while (repTry == 'y' || repTry == 'Y');

}

}

**Printing result of students and calculating their Average and Percentage**

using System;

using System.Linq;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

double tot, perc, avg;

string[,] result = new string[6, 5];

for (int i = 0; i < 6; i++)

{

for (int j = 0; j < 5; j++)

{

if (i == 0 && j == 0)

{

continue;

}

if (i == 0 && j < 4)

{

Console.WriteLine("Enter Subject {0}:", j);

result[i, j] = Console.ReadLine();

}

if (j == 0 && i < 5)

{

Console.WriteLine("Enter Student {0}", i);

result[i, j] = Console.ReadLine();

}

if (j > 0 && i > 0 && j < 4 && i < 5)

{

Console.WriteLine("Enter {0} Marks of {1}", result[0, j], result[i, 0]);

result[i, j] = Console.ReadLine();

}

if (j == 4 && i == 0)

{

result[i, j] = "Percentage";

}

if (j == 4 && i != 0)

{

tot = 0;

for (int q = 1; q <= 3; q++)

{

tot += Convert.ToDouble(result[i, q]);

}

perc = (tot / 300) \* 100;

string percent = Convert.ToString(perc);

result[i, j] = percent;

}

if (i == 5 && j == 0)

{

result[i, j] = "Average";

}

if (i == 5 && j != 0)

{

tot = 0;

for (int q = 1; q <= 4; q++)

{

tot += Convert.ToDouble(result[q, j]);

}

avg = tot / 4;

string average = Convert.ToString(avg);

result[i, j] = average;

}

}

}

Console.Clear();

for (int k = 0; k < 6; k++)

{

for (int l = 0; l < 5; l++)

{

if (l==4&&k!=0)

{

Console.Write("\t\t{0:0.00}",result[k,l]);

}

else if(k==5&&l!=0)

{

Console.Write("\t\t{0:0.00}", result[k, l]);

}

else

{

Console.Write("\t\t" + result[k, l]);

}

}

Console.WriteLine();

}

}

}

}