BASIC PROGRAMS

1.Read radius of a circle and display the area of the same

#include <iostream>

using namespace std;

int main()

{

double r;

cout << "Enter radius of the circle:"<<endl;

cin >> r;

double area;

double rad = r \* r;

double pi = 22/7;

area = pi \* rad;

cout << "Area of the circle is: " <<area<<endl;

return 0;

}

2.Read length and breadth of a rectangle and display the area

#include <iostream>

using namespace std;

int main()

{

    double L,B;

    cout << "Enter length of the rectangle:"<<endl;

    cin >> L;

    cout << "Enter breadth of the rectangle:"<<endl;

    cin >> B;

    double area;

    area = L\*B;

    cout << "Area of the Rectangle is: " <<area<<endl;

    return 0;

}

3.Read 2 nos. and display the sum of the same

#include <iostream>

using namespace std;

int main()

{

    int a,b;

    cout << "Enter a number:"<<endl;

    cin >> a;

    cout << "Enter another number:"<<endl;

    cin >> b;

    int sum;

    sum = a+b;

    cout << "Sum of the two numbers = " <<sum<<endl;

    return 0;

}

4.Read 2 nos. and swap their values

#include <iostream>

using namespace std;

int main()

{

    int a,b,temp;

    cout << "Enter value of a:"<<endl;

    cin >> a;

    cout << "Enter value of b:"<<endl;

    cin >> b;

    temp = a;

    a = b;

    b = a;

    cout << "Swapped value of a is "<<a<<endl;

    cout << "Swapped value of b is "<<b<<endl;

    return 0;

}

5.Read the cost of an article. Display the amount to be paid after a discount of 10 %.

#include <iostream>

using namespace std;

int main()

{

    int a;

    cout << "Enter the price of the article:"<<endl;

    cin >> a;

    double d,disc;

    d = a\*0.1;

    disc = a - d;

    cout << "Discounted price of the article is:" << disc<<endl;

    return 0;

}

6.Read cost of 2 items .Give the final price after discount of 10 % on the first one and 15 % on the second one.

#include <iostream>

using namespace std;

int main()

{

    int a,b;

    cout << "Enter the price of the 1st article:"<<endl;

    cin >> a;

    cout << "Enter the price of the 2nd article:"<<endl;

    cin >> b;

    double d1,disc1,d2,disc2;

    d1 = a\*0.1;

    disc1 = a - d1;

    d2 = b\*0.15;

    disc2 = b - d2;

    cout << "Discounted price of the 1st article is:" << disc1<<endl;

    cout << "Discounted price of the 2nd article is:" << disc2<<endl;

    return 0;

}

7.Read 3 nos. Add last 2 .Multiply the result with the first one and display the result

#include <iostream>

using namespace std;

int main()

{

    int a,b,c;

    cout << "Enter three numbers:"<<endl;

    cin >> a;

    cin >> b;

    cin >> c;

    int sum;

    sum = b + c;

    int pro ;

    pro = sum \* a;

    cout << "Result:" << pro<<endl;

    return 0;

}

8.Read current account Balance and amount to be withdrawn. Display if the withdraw is possible and the balance after the withdraw

#include <iostream>

using namespace std;

int main()

{

    int cb,wa,b;

    cout << "Enter current account balance:"<<endl;

    cin >> cb;

    cout << "Enter the amount to be withdrawn:"<<endl;

    cin >> wa;

    if(cb >= wa)

    {

        cout<<"Withdrawal possible:" <<endl;

        b = cb - wa;

        cout<<"Amount after withdrawal = "<<b<<endl;

    }

    else

    {

        cout<<"Withdrawal not possible your current balance is less"<<endl;

    }

    return 0;

}

9. Write a program to calculate Simple Interest reading principle, Rate and Time

#include <iostream>

using namespace std;

int main()

{

    double p,r,t;

    cout << "Enter the principal:"<<endl;

    cin >> p;

    cout << "Enter the rate:"<<endl;

    cin >> r;

    cout << "Enter the time in years:"<<endl;

    cin >> t;

    double m = p \* r \* t;

    double si = m /100;

    cout << "Simple interest = "<<si <<endl;

    return 0;

}

10. Write a program to calculate Compound Interest reading principal, rate and time

#include <iostream>

#include <math.h>

using namespace std;

int main()

{

    double p,r,t;

    cout << "Enter the principal:"<<endl;

    cin >> p;

    cout << "Enter the rate:"<<endl;

    cin >> r;

    cout << "Enter the time in months:"<<endl;

    cin >> t;

    double R = r/100;

    double ra = R+1;

    double m = pow(ra,t);

    double am = p \* m;

    double ci = am-p;

    cout << "Compound interest = "<<ci <<endl;

    return 0;

}

11. Write a program to calculate the area of a square reading the side.

#include <iostream>

using namespace std;

int main()

{

    int s;

    cout << "Enter the side of the square:"<<endl;

    cin >> s;

    int area = s\*s;

    cout << "Area of the square = "<<area <<endl;

    return 0;

}

12. Write a program to display the last digit of a number. .

#include <iostream>

using namespace std;

int main()

{

    int n;

    cout << "Enter a number:"<<endl;

    cin >> n;

    int d = n%10;

    cout << "Last digit of the number = "<<d<<endl;

    return 0;

}

13. Write a program to display the first digit of a 3 digit number

#include <iostream>

using namespace std;

int main()

{

    int n;

    cout << "Enter a number:"<<endl;

    cin >> n;

    int d = n/100;

    cout << "first digit of the number = "<<d<<endl;

    return 0;

}

14. Write a program to read units, ten’s and hundreds of a number from the user and display the corresponding number.

#include <iostream>

using namespace std;

int main()

{

    int u,t,h;

    cout << "Enter units digit:"<<endl;

    cin >> u;

    cout << "Enter tens digit:"<<endl;

    cin >> t;

    cout << "Enter hundreds digit:"<<endl;

    cin >> h;

    int hu = h\*100;

    int ten = t\*10;

    int num = hu + ten + u;

    cout << "The number = "<<num<<endl;

    return 0;

}

15. Write a program to read the cost of 3 items. In case there is an offer of buy 2 get one free display the amount to be paid considering the free item is the one with least price

#include <iostream>

using namespace std;

int main()

{

    int i1,i2,i3;

    cout << "Enter the cost of three items:"<<endl;

    cin >> i1;

    cin >> i2;

    cin >> i2;

    int bill = 0;

    if(i1<i2 && i1<i3)

    {

        bill = i2+i3;

        cout<<"Total bill = "<<bill<<endl;

    }

    if(i2<i1 && i2<i3)

    {

        bill = i1+i3;

        cout<<"Total bill = "<<bill<<endl;

    }

    if(i3<i1 && i3<i2)

    {

        bill = i1+i2;

        cout<<"Total bill = "<<bill<<endl;

    }

    return 0;

}

16.Write a program to convert Celsius to Fahrenheit

#include <iostream>

using namespace std;

int main()

{

    double cel,fah;

    cout << "Enter the temperature in celsius scale:"<<endl;

    cin >> cel;

    fah = (cel \* 9/5)+32;

    cout<<"Temperature in Fahrenheit scale: "<<fah<<endl;

    return 0;

}

17.Write a program to convert minutes to hours

#include <iostream>

using namespace std;

int main()

{

    int min;

    cout << "Enter time in minutes:"<<endl;

    cin >> min;

    int h = min/60;

    int minu = min%60;

    cout<<"Time = "<<h<<" hours and "<< minu<< " minutes"<<endl;

    return 0;

}

18. Write a program to read time in seconds and display total hours, minutes and remaining seconds

#include <iostream>

using namespace std;

int main()

{

int sec;

    cout << "Enter time in seconds:"<<endl;

    cin >> sec;

    int h = sec/3600;

    int m = sec%3600;

    int min = m/60;

    int s = m%60;

    cout<<"Time = "<<h<<" hours, "<< min<< " minutes"<<s <<" seconds"<<endl;

    return 0;

}

19. Write a program to read the price of 2 items. Give a discount of 10% on the item with lesser price

#include <iostream>

using namespace std;

int main()

{

    int i1,i2;

    double d,disc,bill=0;

    cout << "Enter the price of 2 items:"<<endl;

    cin >> i1;

    cin >> i2;

    if(i1<i2)

    {

        d = i1\*0.1;

        disc = i1 - d;

        bill = i2+disc;

        cout<<"Your bill is "<<bill<<endl;

    }

    else

    {

        d = i2\*0.1;

        disc = i2 - d;

        bill = i1+disc;

        cout<<"Your bill is "<<bill<<endl;

    }

    return 0;

}

20. Write a program to read the price of 3 items. Add 10% of Service Tax and 14% VAT on the total and display the result.

#include <iostream>

using namespace std;

int main()

{

    int i1,i2,i3;

    cout << "Enter the price of 3 items:"<<endl;

    cin >> i1;

    cin >> i2;

    cin >> i3;

    int bill = i1+i2+i3;

    double st = (bill\*0.1);

    double vat = (bill\*0.14);

    double finalbill = bill + st + vat;

    cout<<"Your bill is "<<finalbill<<endl;

    return 0;

}