Friend func

#include <iostream>

using namespace std;

class length {

private:

int meter;

friend int addsix(length);

public:

length() : meter(0) {}

};

int addsix(length l) {

l.meter += 6;

return l.meter;

}

int main() {

length l;

cout << "Length: " << addsix(l);

return 0;

}

Friend Class

#include <iostream>

using namespace std;

class C2;

class C1 {

private:

int n1;

friend class C2;

public:

C1(): n1(2) {}

};

class C2 {

private:

int n2;

public:

C2(): n2(2) {}

int multiply() {

C1 ob1;

return ob1.n1 + n2;

}

};

int main() {

C2 ob2;

cout << "Multiplication: " << ob2.multiply();

return 0;

}

#include <iostream>

using namespace std;

class square {

public:

static int objcount;

square(int s=2) {

side= s;

objcount++;

}

Long int Volume() {

return side \* side \* side;

}

private:

int side;

};

int square::objcount = 0;

int main(void) {

square x1(3);

square x2(8);

cout << "Total objects: " << square::objcount << endl;

return 0;

}

#include <iostream>

using namespace std;

class square {

public:

static int objcount;

square(int s=2) {

side= s;

objcount++;

}

Long int Volume() {

return side\*side\*side;

}

static int getCount() {

return objcount;

}

private:

int side;

};

int square::objcount = 0;

int main(void) {

cout << "Inital Stage Count: " << square::getCount()<< endl;

square x1(3);

square x2(8);

cout << "Final Stage Count: " << square::getCount() << endl;

return 0;

}

#include<iostream>

using namespace std;

class con {

   int val;

   public:

   con(int x = 0) {

      val = x;

   }

   int display() const {

      return val;

   }

};

int main() {

   const con c(28);

   con c1(8);

   cout << "The value using object c : " << c.display();

   cout << "\nThe value using object c1 : " << c1.display();

   return 0;

}

#include <iostream>

using namespace std;

int sum(int a, int b=10, int c=20);

int main(){

cout<<sum(1)<<endl;

cout<<sum(1, 2)<<endl;

cout<<sum(1, 2, 3)<<endl;

return 0;

}

int sum(int a, int b, int c){

int x;

x = a+b+c;

return x;

}

#include<iostream>

using namespace std;

class item {

  char Name [30];

  float price ;

  public:

     void getdata ();

     void putdata ();

} ;

void item :: getdata () {

   cout<<"Name:”;

   cin>> name;

   cout<<"Price:”;

   cin>>price;

}

void items :: putdata () {

   cout<<" Name:"<<name<< "\n";

   cout<<"Price:"<<price<< "\n”;

   const int size=3 ;

}

int main() {

  items item[size] ;

  for(int i=0;i<size;i++) {

    cout<<"Enter details of item: "<<(i+1)<<"\n";

    item[i].getdata();

}

   for(int i=0;i<size;i++) {

     cout<<"\nItem: "<<(i+l)<<"\n";

     item[i].putdata() ;

}

    return 0;

}

#include <iostream>

using namespace std;

int main () {

int i;

int& r = i;

i = 5;

cout << "Value of i : " << i << endl;

r++;

cout << "Value of i reference after incrementing: " << i << endl;

return 0;

}

#include <iostream>

using namespace std;

class Student {

public:

double marks;

Student(double m) {

marks = m;

}

};

void calculateAverage(Student s1, Student s2) {

double average = (s1.marks + s2.marks) / 2;

cout << "Average Marks = " << average << endl;

}

int main() {

Student s1(82.0), s2(58.0);

calculateAverage(s1, s2);

return 0;

}

Q2

#include<iostream>

#include<cstdlib>

using namespace std;

int flip()

{

return rand() % 2;

}

int main()

{

int coin,t=0,h=0;

for(int i=0;i<100;i++){

coin= flip();

if(coin==0){

cout<<"Tails \t"<<endl;

t= t+1;

}

else if(coin==1){

cout<<"Heads \t"<<endl;

h= h+1;

}

}

cout<<t<<" times Tails was result."<<endl;

cout<<h<<" times Heads was result."<<endl;

return 0;

}

Q3

#include<iostream>

#include<cstdlib>

#include<ctime>

using namespace std;

class levels

{

int a,b,c,d=9;

float p;

public:

void level(){

C: cout<<"Hello mate!"<<endl<<"Let's start!"<<endl;

B: int r=0,w=0;

for(int i=0; i<10;i++){

srand(time(0));

a= rand() % d +1;

b= rand() % d +1;

cout<<"\nHow much is "<<a<<" times "<<b<<"?"<<endl;

A: cin>>c;

if(c==(a\*b)){

int x;

srand(time(0));

x= rand() % 4 +1;

switch(x){

case 1: cout<<"Very good!"<<endl; break;

case 2: cout<<"Nice work!"<<endl; break;

case 3: cout<<"Keep up the good work!"<<endl; break;

case 4: cout<<"Excellent!"<<endl; break;

}

r++;

}

else{

int y;

srand(time(0));

y= rand() % 4 +1;

switch(y){

case 1: cout<<"No. Please try again."<<endl; break;

case 2: cout<<"Wrong. Try once more."<<endl; break;

case 3: cout<<"Don't give up!"<<endl; break;

case 4: cout<<"No. Keep trying."<<endl; break;

}

w++;

goto A;

}

}

cout<<"\nCorrect:"<<r<<" Incorrect:"<<w<<endl;

p= (r/((r+w)\*1.0))\*100;

if (p>75){

cout<<"Congratulations, you are ready to go to the next level!"<<endl;

cout<<"You may Proceed to next level"<<endl;

d= d\*10 +9;

goto B;

}

else{

cout<<"Please ask your teacher for extra help.\n"<<endl;

goto C;

}

cout<<"Thank You for being with us!\n\n"<<endl;

}

};

int main()

{

levels l;

l.level();

}