**Write two classes to store distances in meter-centimeter and feet-inch system respectively. Write conversions functions so that the program can convert objects of both types.**

**#include <iostream>**

**using namespace std;**

**class Feet**

**{**

**private:**

**int feet;**

**int inches;**

**public:**

**Feet(int f, int i):feet(f),inches(i){};**

**Feet(float no)**

**{**

**feet = int (no);**

**inches = int( (no - int (no)) \* 12 );**

**}**

**float tofloat()**

**{**

**return float(feet + float(inches) / 12);**

**}**

**void display()**

**{**

**cout << feet << " f " << inches << " in " << endl;**

**}**

**};**

**class Metric{**

**private:**

**int meter;**

**int centimeter;**

**public:**

**Metric(int m,int cm):meter(m),centimeter(cm){};**

**Metric(float no)**

**{**

**meter = int (no);**

**centimeter = int( ( no - int(no) ) \* 100) ;**

**}**

**Metric(Feet f)**

**{**

**Metric(f.tofloat() \* 3.28);**

**}**

**void display()**

**{**

**cout << meter << " m " << centimeter << " cm " << endl;**

**}**

**float tofloat()**

**{**

**return float(meter + float(centimeter)/100.0);**

**}**

**operator Feet()**

**{**

**return Feet(tofloat() / 3.28);**

**}**

**};**

**int main()**

**{**

**cout << "Distance in Metric" << endl;**

**Metric d(10.34);**

**d.display();**

**cout << "Converting into Feet" << endl;**

**Feet(d).display();**

**cout << "Distance in Feet" << endl;**

**Feet f(20.34);**

**f.display();**

**cout << "Converting into Metric" << endl;**

**Metric(f).display();**

**return 1;**

**}**

**#include<iostream>//or**

**using namespace std;**

**class ft\_in**

**{**

**float feet,inch;**

**public:**

**ft\_in(float ft, float in)**

**{**

**feet=ft;**

**inch=in;**

**}**

**ft\_in()**

**{**

**feet=0;**

**inch=0;**

**}**

**float get\_feet()**

**{**

**return feet;**

**}**

**float get\_inch()**

**{**

**return inch;**

**}**

**void display()**

**{**

**cout<<feet<<" feet & "<<inch<<" inch"<<endl;**

**}**

**};**

**class m\_cm**

**{**

**float meter,centimeter;**

**public:**

**m\_cm(float m, float cm)**

**{**

**meter=m;**

**centimeter=cm;**

**}**

**m\_cm()**

**{**

**meter=0;**

**centimeter=0;**

**}**

**operator ft\_in()**

**{**

**float f,in,t,m;**

**m=meter+(centimeter/100);**

**t=m\*3.28084;**

**f=static\_cast<int>(t);**

**in=(t-f)\*12;**

**return ft\_in(f,in);**

**}**

**m\_cm(ft\_in fin)**

**{**

**float m,cm,t,f;**

**f=fin.get\_feet()+(fin.get\_inch()/12);**

**t=0.3048\*f;**

**meter=static\_cast<int>(t);**

**centimeter=(t-meter)\*100;**

**}**

**void display()**

**{**

**cout<<meter<<" meter & "<<centimeter<<" centimeter"<<endl;**

**}**

**};**

**int main()**

**{**

**m\_cm a1(3,50),a2;**

**ft\_in b1(4,9),b2;**

**b2=a1;**

**a2=b1;**

**b2.display();**

**a2.display();**

**}**