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/*
Q4. Prepare a time class to store time at a given instance.Include following
methods:
a.    Methods to increment time and decrement time taking into account the
hour minute scale,
b.    Create or initialize object of type time using constructors.

*/

#include <iostream>
using namespace std;
class time
{   int h,m,s;
public:
    time()                  //default constructor
    {   m=0;h=0,s=0;
    }
    time(int hr,int mi,int sec)    //parametrized constructor
    {   h=hr;m=mi;s=sec;
    }
    void operator++(int)   //operator overloading to increment time
    { if(s==60)
        {  s=0;
            if(m==60)
            { m=0;
              h=h+1;
            }
            else
                m=m+1;
        }
        else
            s=s+1;
    }
    void operator --(int)   //operator overloading to decrement time
    { if(s==0)
       { s=59;
         if (m==0)
          {m=59;
           h--;
           }
          else
            m--;
       }
        else
            s--;
```

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    }
    void operator>(time &x)   //to compare time objects
    {   if(h>x.h)
         { cout<<"True";
         }
         else if(h==x.h)
         {
             if(m>x.h)
             {
                 cout<<"True";
             }
             else if(m==x.m)
             {  if(s>x.s)
                  cout<<"True";
                else
                   cout<<"False";
             }
             else
                cout<<"False";
         }
         else
            cout<<"False";
    }
    void input();
    void output();
    friend void addtwotime(time,time);
    friend void addsec(int,time);
};
void addtwotime(time x,time y)
{ time temp;
  int a,b;
  a=y.s+x.s;
  b=y.m+x.m;
  if(a>60)
   {  temp.s=a-60;
      if(b>60)
       {  temp.m=b-60;
          temp.h=temp.h+1;
       }
     else
       temp.m=temp.m+1;
        }
        else
            temp.s=a;
            temp.m=b;
```

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        temp.h=y.h+x.h;
        cout<<"Time: HH:MM:SS->
"<<temp.h<<":"<<temp.m<<":"<<temp.s<<endl;
}
void addsec(int x,time y)
{  time temp;
    int a,b;
     a=y.s+x;
     temp.h=y.h;
     temp.m=y.m;
  if(a>60)
   {  temp.s=a-60;
         if(y.m==60)
          {  temp.m=0;
             temp.h=temp.h+1;
              }
          else
             temp.m=temp.m+1;
        }
        else
            temp.s=a;
        cout<<"Time: HH:MM:SS->
"<<temp.h<<":"<<temp.m<<":"<<temp.s<<endl;
}
void time::input()
{ cout<<"Enter time in Format HH:MM -> ";
   cin>>h>>m>>s;
}
void time::output()
{    cout<<"Time: HH:MM:SS-> "<<h<<":"<<m<<":"<<s<<endl;
}

int main()
{  time t1(4,2,15),t2(4,2,5),t3;
   t1.output();
   t2.output();
   t1++;
   cout<<"time after increment :";
   t1.output();
   t2--;
   cout<<"time after decrement :";
   t2.output();
   addsec(15,t1);
   t1>t2;
```

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        return 0;
}
```

**OUTPUT**