Time. h

#pragma once

// Time.h

#ifndef TIME\_H

#define TIME\_H

class Time {

public:

public:

Time(int = 12, int = 0, int = 0);

void setTime(int, int, int);

void setHour(int);

void setMinute(int);

void setSecond(int);

int getHour();

int getMinute();

int getSecond();

void tick();

void printUniversal();

void printStandard();

static int getCount();

private:

int hour;

int minute;

int second;

static int count;

};

#endif

Time.cpp

#include <iostream>

#include <iomanip>

using namespace std;

#include "Time.h"

int Time::count = 0;

Time::Time(int hr, int min, int sec)

{

setTime(hr, min, sec);

count++;

}

void Time::setTime(int h, int m, int s)

{

setHour(h);

setMinute(m);

setSecond(s);

}

int Time::getHour()

{

return hour;

}

int Time::getMinute()

{

return minute;

}

int Time::getSecond()

{

return second;

}

void Time::printUniversal()

{

cout << setfill('0') << setw(2) << getHour() << ":"

<< setw(2) << getMinute() << ":" << setw(2) << getSecond();

}

void Time::printStandard()

{

cout << ((getHour() == 0 || getHour() == 12) ? 12 : getHour() % 12)

<< ":" << setfill('0') << setw(2) << getMinute()

<< ":" << setw(2) << getSecond() << (hour < 12 ? "AM" : "PM");

}

void Time::setHour(int h)

{

hour = (h >= 0 && h < 24) ? h : 0;

}

void Time::setMinute(int m)

{

minute = (m >= 0 && m < 60) ? m : 0;

}

void Time::setSecond(int s)

{

second = (s >= 0 && s < 60) ? s : 0;

}

void Time::tick()

{

setSecond(second + 1);

if (second == 0)

{

setMinute(minute + 1);

if (minute == 0)

{

setHour(hour + 1);

}

}

}

int Time::getCount()

{

return count;

}

main.cpp

#include <iostream>

#include "Time.h"

using namespace std;

int main()

{

Time t1(23, 59, 57);

Time t2(13, 30, 45);

Time t3(99, 99, 99);

Time t4;

for (int i = 0; i < 18; i++)

{

if (i < 9)

{

t1.printStandard();

}

else

{

t1.printUniversal();

}

t1.tick();

cout << endl;

}

cout << endl;

cout << "생성된 Time클래스의 객체 수 : " << Time::getCount() << endl;

return 0;

}

실행결과

