Student Name: Jing Ma

Tuesday Labs

#include "library.h"

//Part 1: What time is it?

/\*

void main(){

int date = get\_calendar\_date();

int time = get\_clock\_time();

int year = (date/10000);

int month = ((date/100)%100);

int day = (date%100);

//int sec = time%100;

int min = time/100%100;

int hr = time/10000;

print(" year: "); print(year); new\_line();

print(" month: "); print(month); new\_line();

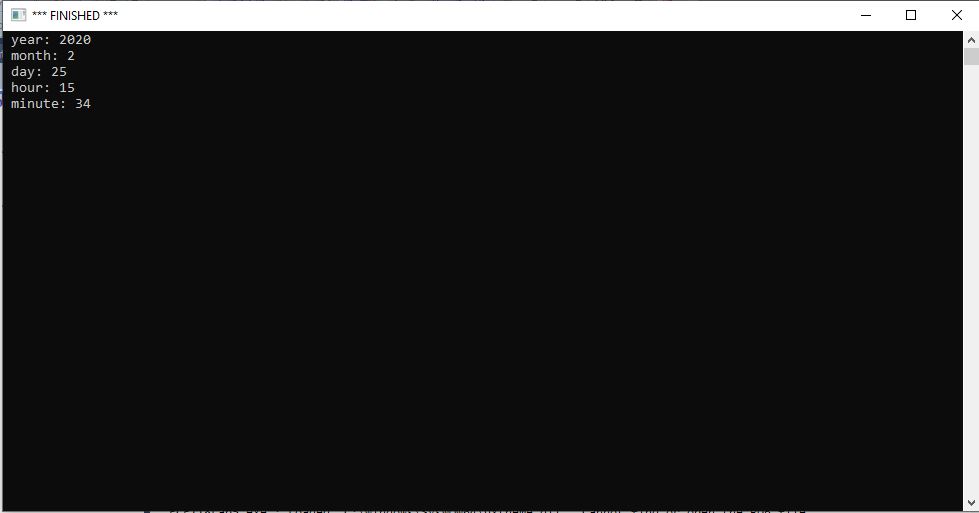
print(" day: "); print(day); new\_line();

print(" hour: "); print(hr); new\_line();

print(" minute: "); print(min); new\_line();

}

\*/



// Part 2: Monroe Doctrine

/\*

void am\_pm(double hr){

if(hr >= 12){

print(hr-12);

print(" p.m.");

}

else{

print(hr);

print(" a.m.");

}

}

void main(){

int date = get\_calendar\_date();

int time = get\_clock\_time();

int year = (date/10000);

int month = ((date/100)%100);

int day = (date%100);

//int sec = time%100;

int min = time/100%100;

int hr = time/10000;

print(" year: "); print(year); new\_line();

print(" month: "); print(month); new\_line();

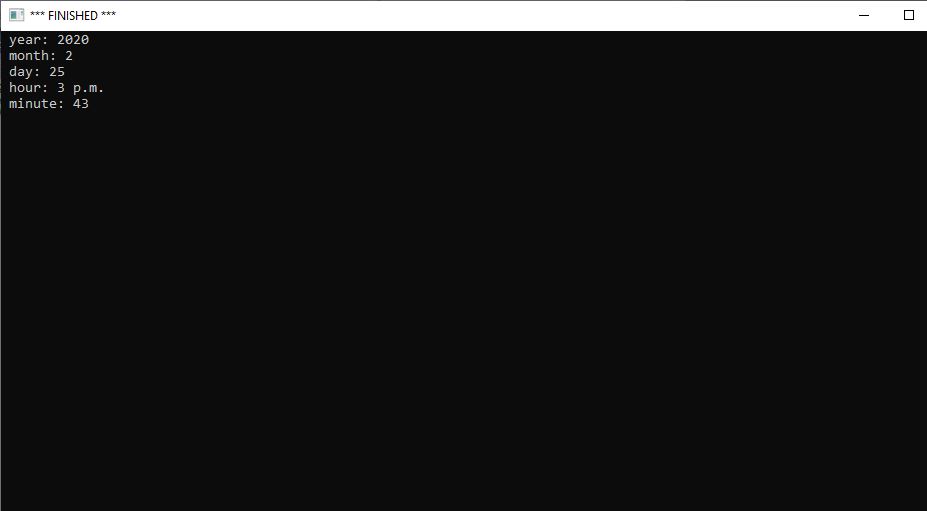
print(" day: "); print(day); new\_line();

print(" hour: "); am\_pm(hr); new\_line();

print(" minute: "); print(min); new\_line();

}

\*/



//Part 3: Clock Face

/\*

void draw\_ticks(double const n, double const degree){

if(n <= 12){

move\_to(200,175);

set\_pen\_width(2);

set\_heading\_degrees(degree);

move\_distance(115);

draw\_distance(10);

draw\_ticks(n+1, degree+30);

}

}

void draw\_square(){

move\_to(65, 40);

set\_pen\_width(1);

set\_heading\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

}

void main(){

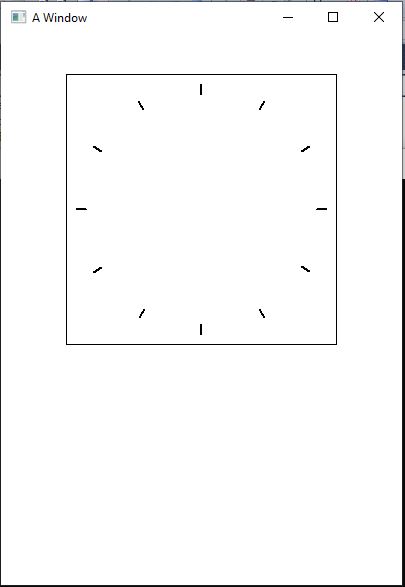
make\_window(400, 550);

draw\_square();

draw\_ticks(1,0);

}

\*/



//Part 4: A whole clock

/\*

void draw\_ticks(double const n, double const degree){

if(n <= 12){

move\_to(200,175);

set\_pen\_width(2);

set\_heading\_degrees(degree);

move\_distance(115);

draw\_distance(10);

draw\_ticks(n+1, degree+30);

}

}

void draw\_hands(){

int date = get\_calendar\_date();

int time = get\_clock\_time();

int year = (date/10000);

int month = ((date/100)%100);

int day = (date%100);

int sec = time%100;

int min = time/100%100;

int hr = time/10000;

move\_to(200,175);

set\_heading\_degrees((6\*hr\*5)+(.5\*min));

set\_pen\_color(color::black);

set\_pen\_width(5);

draw\_distance(50);

move\_to(200,175);

set\_heading\_degrees(6\*min);

draw\_distance(75);

}

void draw\_square(){

move\_to(65, 40);

set\_pen\_width(1);

set\_heading\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

}

void main(){

make\_window(400, 550);

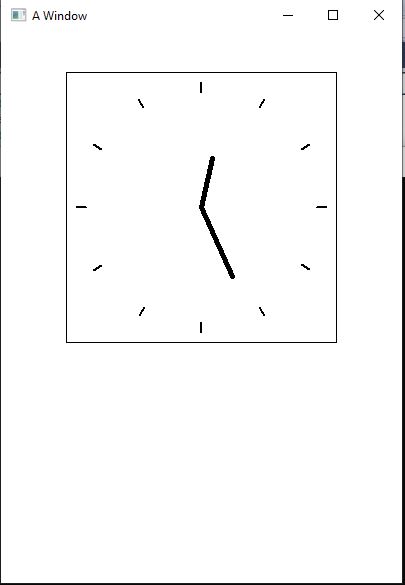
draw\_square();

draw\_hands();

draw\_ticks(1,0);

}

\*/



//Part 5: Animate Your Clock

/\*

void draw\_ticks(double const n, double const degree){

if(n <= 12){

move\_to(200,175);

set\_pen\_width(2);

set\_heading\_degrees(degree);

move\_distance(115);

draw\_distance(10);

draw\_ticks(n+1, degree+30);

}

}

void draw\_hands(){

int date = get\_calendar\_date();

int time = get\_clock\_time();

int year = (date/10000);

int month = ((date/100)%100);

int day = (date%100);

int sec = time%100;

int min = time/100%100;

int hr = time/10000;

move\_to(200,175);

set\_heading\_degrees((6\*hr\*5)+(.5\*min));

set\_pen\_color(color::black);

set\_pen\_width(5);

draw\_distance(50);

move\_to(200,175);

set\_heading\_degrees(6\*min);

draw\_distance(75);

move\_to(200,175);

set\_pen\_width(1);

set\_pen\_color(color::red);

set\_heading\_degrees(6\*sec);

draw\_distance(90);

set\_pen\_color(color::black);

}

void draw\_square(){

move\_to(65, 40);

set\_pen\_width(1);

set\_heading\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

}

void animate\_clock(){

while(true){

draw\_square();

draw\_ticks(1,0);

draw\_hands();

wait(.2);

clear();

}

}

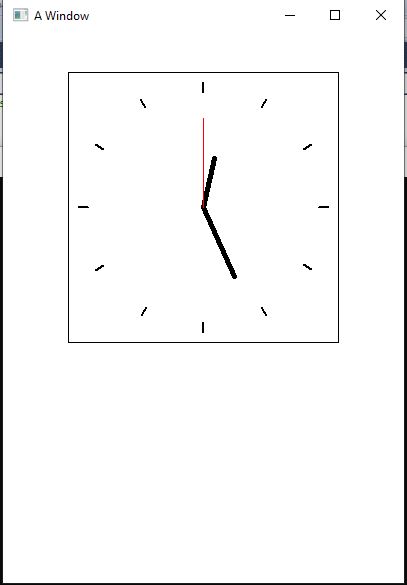
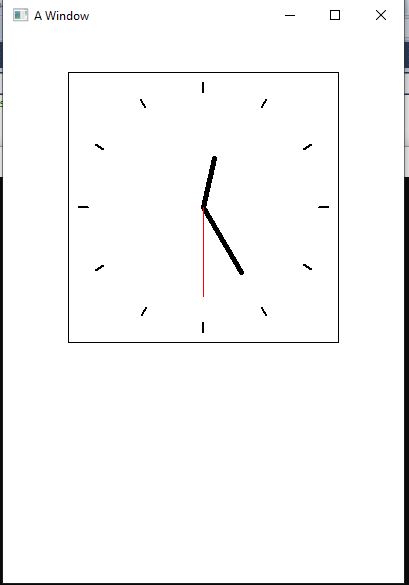
void main(){

make\_window(400, 550);

animate\_clock();

}

\*/



//Part 6: A Complete Product

/\*

void draw\_ticks(double const n, double const degree){

if(n <= 12){

move\_to(200,175);

set\_pen\_width(2);

set\_heading\_degrees(degree);

move\_distance(115);

draw\_distance(10);

draw\_ticks(n+1, degree+30);

}

}

void draw\_hands(){

int date = get\_calendar\_date();

int time = get\_clock\_time();

int year = (date/10000);

int month = ((date/100)%100);

int day = (date%100);

int sec = time%100;

int min = time/100%100;

int hr = time/10000;

move\_to(200,175);

set\_heading\_degrees((6\*hr\*5)+(.5\*min));

set\_pen\_color(color::black);

set\_pen\_width(5);

draw\_distance(50);

move\_to(200,175);

set\_heading\_degrees(6\*min);

draw\_distance(75);

move\_to(200,175);

set\_pen\_width(1);

set\_pen\_color(color::red);

set\_heading\_degrees(6\*sec);

draw\_distance(90);

set\_pen\_color(color::black);

}

void draw\_square(){

move\_to(65, 40);

set\_pen\_width(1);

set\_heading\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

turn\_right\_by\_degrees(90);

draw\_distance(270);

}

void write\_date(){

int date = get\_calendar\_date();

int time = get\_clock\_time();

int year = (date/10000);

int month = ((date/100)%100);

int day = (date%100);

int sec = time%100;

int min = time/100%100;

int hr = time/10000;

int x = hr - 12;

move\_to(155,350);

if(hr>12) write\_string(x);

else write\_string(hr);

write\_string(" : ");

if(min <10){

write\_string("0");

write\_string(min);

}

else{

write\_string(min);

write\_string(" ");

}

if(hr >= 12){

write\_string("p.m.");

}

else{

write\_string("a.m.");

}

move\_to(115,370);

write\_string(day);

if(day%10 ==1){

write\_string("st ");

}

else if(day%10 == 2){

write\_string("nd ");

}

else if(day%10 == 3){

write\_string("rd ");

}

else{

write\_string("th ");

}

if(month ==1){

write\_string("January ");

}

else if( month== 2){

write\_string("February ");

}

else if(month == 3){

write\_string("March ");

}

else if(month == 4){

write\_string("April ");

}

else if(month == 5){

write\_string("May ");

}

else if(month == 6){

write\_string("June ");

}

else if(month == 7){

write\_string("July ");

}

else if(month == 8){

write\_string("August ");

}

else if(month == 9){

write\_string("September ");

}

else if(month == 10){

write\_string("October ");

}

else if(month == 11){

write\_string("November ");

}

else{

write\_string("December ");

}

write\_string(year);

}

void animate\_clock(){

while(true){

draw\_square();

draw\_ticks(1,0);

draw\_hands();

write\_date();

wait(.2);

clear();

}

}

void main(){

make\_window(400, 550);

animate\_clock();

}

\*/

