**Parte 2 exercicios**

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***DATE.H***

#include <string>

#include <sstream>

#include <iostream>

class Date

{

public: // access specifier; users can only access the PUBLIC members

Date(); // constructor; constructors have the name of the class

Date(unsigned int y, unsigned int m, unsigned int d);

Date(std::string yearMonthDay); // constructors can be overloaded

void setYear(unsigned int y); // member function OR method

void setMonth(unsigned int m);

void setDay(unsigned int d);

void setDate(unsigned int y, unsigned int m, unsigned int d);

unsigned int getYear();

unsigned int getMonth();

unsigned int getDay();

std::string getStr(); // get (return) date as a string

void show();

private: // PRIVATE data & function members are hidden from the user

unsigned int year; // data member

unsigned int month;

unsigned int day;

// the date could have been represented internally as a string

// the internal representation is hidden from the user

};

***DATE.CPP***

#include "Date.h"

Date::Date()

{

}

Date::Date(unsigned int y, unsigned int m, unsigned int d)

{

year = y;

month = m;

day = d;

}

Date::Date(std::string yearMonthDay)

{

year = std::stoi(yearMonthDay.substr(0, 4));

month = std::stoi(yearMonthDay.substr(5, 2));

day = std::stoi(yearMonthDay.substr(8, 2));

}

void Date::setYear(unsigned int y)

{

year = y;

}

void Date::setMonth(unsigned int m)

{

month = m;

}

void Date::setDay(unsigned int d)

{

day = d;

}

void Date::setDate(unsigned int y, unsigned int m, unsigned int d)

{

year = y;

month = m;

day = d;

}

unsigned int Date::getYear()

{

return year;

}

unsigned int Date::getMonth()

{

return month;

}

unsigned int Date::getDay()

{

return day;

}

std::string Date::getStr()

{

std::ostringstream yearMonthDay;

yearMonthDay << year << "/" << month << "/" << day;

return yearMonthDay.str();

}

void Date::show()

{

std::cout << getStr() << std::endl;

}

***MAIN.CPP***

#include "Date.h"

#include <iostream>

int main()

{

Date d1 = Date(2017, 04, 17);

Date d2 = Date("2017/04/17");

Date d3 = Date();

d1.show();

d2.show();

d3.show();

std::cout << std::endl << std::endl;

d1.setYear(1998);

d2.setDay(13);

d3.setDate(2007, 07, 01);

d1.show();

d2.show();

d3.show();

std::cout << std::endl << std::endl;

std::cout << "day d1: " << d1.getDay() << std::endl

<< "month d2: " << d2.getMonth() << std::endl

<< "year d3: " << d3.getYear() << std::endl;

system("pause");

return 0;

}