#include <iostream>

#include <cstdlib> // for rand() and srand()

#include <ctime> // for time()

#include <string>

#include <vector>

#include <cmath>

using namespace std;

void into\_vector(vector<int>& digits, int passpin);

bool check\_password(vector<int> digits, int random\_pin[], int password[],

int array\_size, int pin\_size);

int main() {

const int array\_size = 10, pin\_size = 5;

const int order\_pin[array\_size] = { 0,1,2,3,4,5,6,7,8,9 };

int random\_pin[array\_size], set\_password, password[pin\_size], passpin;

vector<int> digits;

bool password\_is\_correct = false;

cout << "SET PASSWORD: ";

cin >> set\_password;

cout << "\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n" << endl;

for (int i = 4; i >=0; i--) //put input into an array

password[4-i] = (set\_password / (static\_cast<int>(pow(10, i)))) %10; //BRUHHH I COULDA BEEN USING THIS THE ENTIRE TIMEE?

//for (int val : password)

// cout << val << endl;

cout << "Pin: ";

for (int val : order\_pin)

cout << val;

cout << endl << "Num: ";

srand(time(NULL)); // initialize random seed

for (int& x : random\_pin) {

x = rand() % 3 + 1; // generate a random integer between 1 to 3 and store it in the array

}

for (int val : random\_pin)

cout << val;

cout << "\nPassword: ";

cin >> passpin;

into\_vector(digits, passpin);

password\_is\_correct = check\_password(digits,random\_pin, password,

array\_size, pin\_size);

if (password\_is\_correct == true)

cout << "\nWelcome, you are being logged in...\n";

if(password\_is\_correct ==false)

cout << "\nPassword is incorrect\n";

}

void into\_vector(vector<int>& digits, int passpin) { //put passpin into an vector

// Convert the integer to a string

string passpin\_str = to\_string(passpin);

// Iterate through the string and store the digits in the vector

for (char digit\_char : passpin\_str) {

int digit = digit\_char - '0'; // Convert the character to its corresponding integer value

digits.push\_back(digit);

}

/\*cout << "Input Digits: ";

for (int digit : digits) {

cout << digit << "";

}

cout << endl;\*/

}

bool check\_password(vector<int> digits, int random\_pin[], int password[], int array\_size, int pin\_size)

{

bool password\_is\_correct = true;

bool correct\_pass[5] = { false,false,false,false,false };

bool verify[5] = { true, true, true, true, true };//or we coulda used a do while loop, to exit if it becomes false even once but whatever

int element\_counter = 0;

for (int i : digits)

{

if (i == random\_pin[(password[element\_counter])])

correct\_pass[element\_counter] = true;

element\_counter += 1;

}

for (int i = 0; i < pin\_size; i++)

if (correct\_pass[i] != verify[i])

password\_is\_correct = false;

return password\_is\_correct;

}