// 15 Program Begainer 2nd Versin.cpp : Defines the entry point for the console application.

//

#include "stdafx.h"

#include "iostream"

using namespace std;

int largest(int n[5]) {

int i = 0, smallest;

while (i < 5) {

if (!i) { smallest = n[i]; }

else if (n[i] < smallest) { smallest = n[i]; }

i++;

}

return smallest;

}

struct CITY {

char name[15];

double population;

};

void cities(CITY city1, CITY city2) {

if (city1.population < city2.population) { cout << "First city '" << city1.name << "' has less POPULATION of " << city1.population; }

else if (city1.population > city2.population) { cout << "Second city '" << city2.name << "' has less POPULATION of " << city2.population; }

else { cout << "Both cities have same POPULATION of " << city1.population; }

}

float ArrayReverse(float n[10]) {

int i = 0, j = 9;

float a[10];

while (i < 10) {

a[j] = n[i];

i++;

j--;

}

return a[10];

}

int ArrayAddition(int a[10], int b[10], int result[10], int length) {

int i = 0;

while (i < length) {

result[i] = a[i] + b[i];

i++;

}

return result[10];

}

void Display(int n[5][5]) {

int i = 0, j;

while (i < 5) {

j = 0;

while (j < 5) {

cout << n[i][j] << " ";

j++;

}

cout << endl;

i++;

}

}

void ArrayDouble(int n[5][5]) {

int i = 0, j;

while (i < 5) {

j = 0;

while (j < 5) {

n[i][j] \*= 2;

j++;

}

i++;

}

Display(n);

}

int main()

{

int PriOpraSelector = 2, SecOpraSelector = 20;

do{

if (SecOpraSelector == 20)

{

cout << " List of Programs" << endl;

cout << "To exit whole program enter '0'." << endl;

cout << "Or enter any number to rum that program" << endl;

cout << "1) Largest number in ARRAY 2) Population of two cities 3) Count Zeros Even Odd in Number" << endl;

cout << "4) Reverses Float ARRAY 5) Two ARRAYS 6) Double the 2D ARRAY" << endl;

}

if (SecOpraSelector != 1)

{

cout << endl << endl;

cout << " Enter here the number = ";

cin >> PriOpraSelector;

while (PriOpraSelector < 0 || PriOpraSelector > 6)

{

cout << "Enter a number from '0' to '6'" << endl;

cout << " Enter here the number = ";

cin >> PriOpraSelector;

}

}

if (PriOpraSelector == 1)

{

int n[5], i = 0, answer;

while (i < 5) {

cout << "Enter the " << i + 1 << "'s number = ";

cin >> n[i];

i++;

}

answer = largest(n);

cout << endl << "The Largest number is = " << answer;

}

else if (PriOpraSelector == 2)

{

CITY city1, city2;

cout << "Enter the NAME of First city = ";

cin >> city1.name;

cout << "Enter the First city POPULATION = ";

cin >> city1.population;

cout << endl;

cout << "Enter the Second city NAME = ";

cin >> city2.name;

cout << "Enter the Second city POPULATION = ";

cin >> city2.population;

cities(city1, city2);

}

else if (PriOpraSelector == 3)

{

float n[10];

int i = 0;

while (i < 10) {

cout << "Enter the " << i + 1 << " number = ";

cin >> n[i];

i++;

}

cout << endl << "Bofore reversing the array." << endl;

i = 0;

while (i < 10) {

cout << endl << "The " << i + 1 << "'s number is = " << n[i];

i++;

}

n[10] = ArrayReverse(n);

cout << endl << endl << "After reversing the Array the result is." << endl;

i = 0;

while (i < 10) {

cout << endl << "The " << i + 1 << "'s number is = " << n[i];

i++;

}

}

else if (PriOpraSelector == 4)

{

int a[10], b[10], i = 0, c[10] = { 0 }, result[10];

while (i < 10) {

cout << "Enter the " << i << "'s value of first ARRAY = ";

cin >> a[i];

i++;

}

i = 0;

cout << endl;

while (i < 10) {

cout << "Enter the " << i << "'s value value of Second ARRAY = ";

cin >> b[i];

i++;

}

result[10] = ArrayAddition(a, b, c, 10);

cout << endl << "By ADDITION them the result is" << endl << endl;

i = 0;

while (i < 10) {

cout << "The " << i << "'s index number is = " << result[i] << endl;

i++;

}

}

else if (PriOpraSelector == 5)

{

int a[10], b[10], i = 0, c[10] = { 0 }, result[10];

while (i < 10) {

cout << "Enter the " << i << "'s value of first ARRAY = ";

cin >> a[i];

i++;

}

i = 0;

cout << endl;

while (i < 10) {

cout << "Enter the " << i << "'s value value of Second ARRAY = ";

cin >> b[i];

i++;

}

result[10] = ArrayAddition(a, b, c, 10);

cout << endl << "By ADDITION them the result is" << endl << endl;

i = 0;

while (i < 10) {

cout << "The " << i << "'s index number is = " << result[i] << endl;

i++;

}

}

else if (PriOpraSelector == 6)

{

int n[5][5], i = 0, j;

while (i < 5) {

j = 0;

while (j < 5) {

cout << "Enter the " << i << "\*" << j << "'s index number = ";

cin >> n[i][j];

j++;

}

i++;

}

cout << endl << "The values before DOUBLING." << endl << endl;

Display(n);

cout << endl << "The values after DOUBLING." << endl << endl;

ArrayDouble(n);

}

} while (PriOpraSelector != 0 && SecOpraSelector != 0);

cout << endl;

return 0;

}