#include <iostream>

#include <string>

#include <cctype>

using namespace std;

const int SPToiDa = 30;

struct SanPham

{

char masanpham[10];

string tensanpham;

double dongia;

int soluongtonkho;

};

void Nhap1SP( SanPham &sp)

{

cin.ignore();

cout <<" Nhap ma san pham: ";

cin.get(sp.masanpham, 10);

cout <<" Nhap ten san pham: ";

cin.ignore();

getline(cin, sp.tensanpham);

cout <<" Nhap don gia: ";

cin >> sp.dongia;

cout <<" Nhap so luong ton kho: ";

cin >> sp.soluongtonkho;

}

void Xuat1SP ( SanPham sp)

{

cout <<" Ma san pham: " << sp.masanpham << endl;

cout <<" Ten san pham: " << sp.tensanpham << endl;

cout <<" Don gia: " << sp.dongia << endl;

cout <<" So luong ton kho: " << sp.soluongtonkho << endl;

}

void NhapDSSanPham ( SanPham \*dssp, int n)

{

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

{

cout <<" \*\*\*\*NHAP VAO SAN PHAM THU " << i + 1 <<" \*\*\*\n";

Nhap1SP(\*(dssp+i));

}

}

void XuatDSSanPham ( SanPham \*dssp, int n)

{

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

{

cout <<" \*\*\*\*THONG TIN SAN PHAM THU " << i + 1 <<" \*\*\*\n";

Xuat1SP(\*(dssp+i));

}

}

void SuaThongTinSP ( SanPham \*dssp, int n, int vt)

{

int chon = 0;

do {cout <<" Ban can sua thong tin gi?\n1. Sua tat ca\n2. Sua ma san pham\n3. Sua ten san pham\n4. Sua don gia\n5. Sua so luong ton kho\n6. Thoat\n";

cout <<" Ban chon: ";

cin >> chon;

switch (chon)

{

case 1:

cout <<" Nhap Thong tin san pham can sua: \n";

Nhap1SP(dssp[vt-1]); // dssp[vt-1]

break;

case 2:

cin.ignore();

cout <<" Nhap ma san pham da sua: ";

cin.get(dssp[vt-1].masanpham, 10);

break;

case 3:

cin.ignore();

cout <<" Nhap ten san pham da sua: ";

getline ( cin, dssp[vt-1].tensanpham);

break;

case 4:

cout <<" Nhap don gia da sua: ";

cin >> dssp[vt-1].dongia;

break;

case 5:

cout <<" Nhap so luong ton khoa da sua: ";

cin >> dssp[vt-1].soluongtonkho;

break;

default :

cout <<" Chao tam biet\n";

}

} while (chon >=1 && chon <=5);

}

void XoaSp ( SanPham \*dssp, int &n, int vt)

{

for ( int i = vt; i < n - 1; i++)

dssp[i] = dssp[i+1];

n--;

}

void SapXepTangTheoTonKho ( SanPham \*dssp, int n)

{

for (int i = 0; i < n - 1; i++)

{

for ( int j =i+1; j < n; j++)

{

if ( dssp[i].soluongtonkho > dssp[j].soluongtonkho)

{

int tam = dssp[i].soluongtonkho;

dssp[i].soluongtonkho = dssp[j].soluongtonkho;

dssp[j].soluongtonkho = tam;

}

}

}

}

int main ()

{

SanPham \*dssp;

int n;

int vt;

int vtx;

do {cout <<" Ban muon nhap thong tin bao nhieu san pham: ";

cin >> n;

if ( n <= 0 || n > SPToiDa )

cout <<" Nhap sai. Nhap lai\n";

} while ( n <= 0 || n > SPToiDa );

dssp = new SanPham[n];

NhapDSSanPham(dssp, n);

cout <<" THONG TIN CAC SAN PHAM BAN VUA NHAP LA: \n";

XuatDSSanPham (dssp, n);

cout <<" Ban can sua thong tin cua san pham tai vi tri: ";

cin >> vt;

if ( vt >= 1 && vt <= 5)

{

SuaThongTinSP(dssp, n, vt);

cout <<" Thong tin cac san pham sau khi sua la\n";

XuatDSSanPham(dssp, n);

}

else

cout <<" Lua chon khong hop le\n";

cout <<" Ban muon xoa thong tin san pham so may: ";

cin >> vtx;

if ( vtx >= 1 && vtx <= 5)

{

XoaSp(dssp, n, vtx);

cout <<" Thong tin cac san pham sau khi sua la\n";

XuatDSSanPham(dssp, n);

}

else

cout <<" Lua chon khong hop le\n";

SapXepTangTheoTonKho(dssp, n);

cout <<" San pham sau khi sap xep la: \n";

XuatDSSanPham(dssp, n);

delete []dssp;

dssp = nullptr;

system("pause");

return 0;

}