#include <stdio.h>

#include <stdlib.h>

struct Time {

int ngay;

int thang;

int nam;

};

bool laNgayHopLe(Time time) {

switch (time.thang) {

case 1:

case 3:

case 5:

case 7:

case 8:

case 10:

case 12:

if (1 <= time.ngay && time.ngay <= 31) return 1;

break;

case 4:

case 6:

case 9:

case 11:

if (1 <= time.ngay && time.ngay <= 30) return 1;

break;

case 2:

if (time.nam % 4 == 0 && (time.nam % 100 != 0 || time.nam % 400 == 0)) {

if (1 <= time.ngay && time.ngay <= 29) return 1;

}

else {

if (1 <= time.ngay && time.ngay <= 28) return 1;

}

}

return 0;

}

bool kiemTraLapGach(int L, int N, int M) {

if (5 \* M <= L) return (5 \* M + N >= L);

return(N >= (L % 5));

}

void xoaPhanTuTrung(int A[], int &N) {

int n = 0;

for (int i = 0; i < N; i++) {

bool check = 1;

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

if (A[i] == A[j]) check = 0;

if (check) {

A[n] = A[i];

n++;

}

}

N = n;

}

void taoCuuChuong(char fileName[]) {

FILE \*fr = fopen(fileName, "w");

for (int i = 1; i <= 9; i++) {

for (int j = 2; j <= 5; j++) fprintf(fr, "%d x %d = %2d\t", j, i, i\*j);

fprintf(fr, "\n");

}

fprintf(fr, "\n");

for (int i = 1; i <= 9; i++) {

for (int j = 6; j <= 9; j++) fprintf(fr, "%d x %d = %2d\t", j, i, i\*j);

fprintf(fr, "\n");

}

}

void inViTriAn(int banco[8][8]) {

int xMa, yMa;

for (int i = 0; i < 8; i++)

for (int j = 0; j < 8; j++)

if (banco[i][j] == 5) {

xMa = i;

yMa = j;

}

int p[8] = { -2, -2, -1, 1, 2, 2, 1, -1 };

int q[8] = { -1, 1, 2, 2, 1, -1, -2, -2 };

for (int i = 0; i < 8; i++) {

int xMoi, yMoi;

xMoi = xMa + p[i];

yMoi = yMa + q[i];

if (0 <= xMoi && xMoi < 8 && 0 <= yMoi && yMoi < 8 && 16 <= banco[xMoi][yMoi] && banco[xMoi][yMoi] <= 31) {

printf("dong %d cot %d: an quan %d\n", xMoi, yMoi, banco[xMoi][yMoi]);

}

}

}

int main() {

//Bai1

Time time = { 29, 2, 1900 };

if (laNgayHopLe(time)) printf("Hop le\n"); else printf("Khong hop le\n");

//Bai2

printf("\n");

printf("%d\n", kiemTraLapGach(8, 3, 1));

printf("%d\n", kiemTraLapGach(9, 3, 1));

printf("%d\n", kiemTraLapGach(10, 3, 2));

//Bai3

printf("\n");

int A[] = { 3, 7, 3, 5, 6, 5 };

int N = 6;

xoaPhanTuTrung(A, N);

for (int i = 0; i < N; i++) printf("%d ", A[i]); printf("\n");

//Bai4

taoCuuChuong("ahjhj.txt");

//Bai5

int banco[8][8];

banco[0][0] = 21;

banco[0][5] = 19;

banco[1][2] = 16;

banco[2][3] = 5;

banco[2][5] = 22;

banco[3][1] = 18;

banco[4][4] = 31;

banco[7][3] = 29;

printf("\n");

inViTriAn(banco);

system("pause");

}