#include <stdio.h>

#include <stdlib.h>

#include <string.h>

//Franklyn Gonzalez, last edited 02/27/2019

int daysInMonth( int month, int year){ //used to validate the leap year date

if ( month== 4 || month == 6 || month == 9 || month == 11 ){

return 30;

} else if ( month == 2 ) {

if ( year % 4 == 0 && ( year % 100 == 0 || year % 400 == 0) )

return 29;

else

return 28;

} else {

return 31;

}

}

typedef struct person

{

char name[30]; //name

int dd, mm, yyyy; //date

char gender; //gender

double annualIncome; //annual income

} psn;

main() {

psn person;

//initalizing variables

strcpy(person.name, "John");

person.dd = 03;

person.mm = 05;

person.yyyy = 2003;

person.gender = '\0';

person.annualIncome = 0.00;

printf("Please enter person's name: \n");

scanf("%[a-z A-Z]s", &person.name);

printf("Please enter person's date of birth. i.e. 03 05 1995 with ' ' in between. \n");

while ( scanf( "%i%i%i", &person.dd, &person.mm, &person.yyyy) != 3 || person.dd <= 0 || person.mm <= 0 || person.yyyy < 0 || daysInMonth(person.mm, person.yyyy) < person.dd)

{

printf("Please enter a valid date.\n");

scanf("%i%i%i", &person.dd, &person.mm, &person.yyyy);

}

person.gender = '\0';

printf("Please enter person's gender. Choose one of the following: M, F, O.\n");

while (person.gender == '\0')

{

if (person.gender != 'M' || person.gender != 'F' || person.gender != 'O')

{

printf("Invalid selection for gender. Please try again.\n");

person.gender = '\0';

person.gender = getchar();

}

if (person.gender == '\n') {

person.gender = '\0';

}

}

printf("Please enter person's annual income.\n ");

scanf("%lf", &person.annualIncome);

while (person.annualIncome > 1000000.00 || person.annualIncome < 0.00) {

if (person.annualIncome > 1000000.00) {

printf("Invalid amount. Please try again.\n");

person.annualIncome = 0.00;

}

else if (person.annualIncome < 0.00) {

printf("Invalid amount. Please try again.\n");

person.annualIncome = 0.00;

}

}

printf("\n%s\n", person.name);

printf("%i/%i/%i\n", person.dd, person.mm, person.yyyy );

printf("%c\n", person.gender);

printf("%.2lf\n", person.annualIncome);

}