**Universidad Autónoma de Baja California**

**Grupo: 541**

**Docente:**

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**Alumno:**

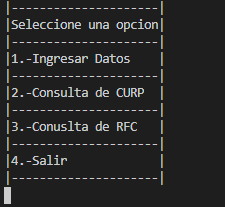
**Landa Luna Edgar Miguel 1263337**

**Programación orientada a objetos**

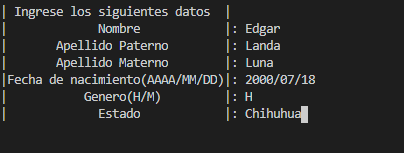
**Practica #3**

**Fecha de entrega: 13-octubre-2020**

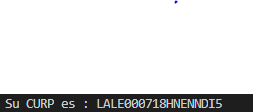
1. Menú principal



1. Ingresar datos



1. Cálculo de CURP



1. Cálculo de RFC



1. Main.

import java.util.\*;

public class Practica3{

    public static void main(String [] args){

        Visual menu = new Visual();

        Scanner sc= new Scanner(System.in);

        CalcularCurp calc1 = new CalcularCurp();

        CalcularRfc calc2 = new CalcularRfc();

        Persona persona1 = new Persona("","","","","","","","");

        int op;

        char resp='n';

        do{

            menu.Menu();///llamar al menu

            op = sc.nextInt();///capturar la opcion op

            switch (op) {

                case 1:System.out.println("| Ingrese los siguientes datos  |");

                        persona1.setName(CapturaEntrada.capturaString("|             Nombre            |"));

                        persona1.setLastNameP(CapturaEntrada.capturaString("|       Apellido Paterno        |"));

                        persona1.setLastNameM(CapturaEntrada.capturaString("|       Apellido Materno        |"));

                        persona1.setBirthdate(CapturaEntrada.capturaString("|Fecha de nacimiento(AAAA/MM/DD)|"));

                        persona1.setGender(CapturaEntrada.capturaString("|           Genero(H/M)         |"));

                        persona1.setState(CapturaEntrada.capturaString("|             Estado            |"));

                        persona1.setCURP(calc1.calcularCurp(persona1.getName(),

                                           persona1.getLastNameP(),

                                           persona1.getLastNameM(),

                                           persona1.getBirthdate(),

                                           persona1.getGender(),

                                           persona1.getState()));

                        persona1.setRFC(calc2.calcularRfc(persona1.getName(),

                                          persona1.getLastNameP(),

                                          persona1.getLastNameM(),

                                          persona1.getBirthdate()));

                    break;

                case 2:

                    System.out.println("Su CURP es : "+ persona1.getCURP());

                    break;

                case 3:

                    System.out.println("Su RFC es : "+ persona1.getRFC());

                    break;

                case 4:System.exit(0);

                    break;

                default:

                    break;

            }

            System.out.println("Desea continuar y/n");///pregunta si desea continuar

            resp = sc.next().charAt(0);/// capturar respuesta

        }while(resp!='n');

    }

}

1. Menú visual

class Visual{

    public static void Menu(){

        System.out.println("|---------------------|");

        System.out.println("|Seleccione una opcion|");

        System.out.println("|---------------------|");

        System.out.println("|1.-Ingresar Datos    |");

        System.out.println("|---------------------|");

        System.out.println("|2.-Consulta de CURP  |");

        System.out.println("|---------------------|");

        System.out.println("|3.-Conuslta de RFC   |");

        System.out.println("|---------------------|");

        System.out.println("|4.-Salir             |");

        System.out.println("|---------------------|");

    }

}

1. Clase persona

class Persona{

    String name,lastNameP,lastNameM,birthdate,gender,state,curp,rfc;

    public Persona(String name,String lastNameP, String lastNameM,String birthdate,String gender, String state, String curp, String rfc){

        this.name=name;

        this.lastNameP=lastNameP;

        this.lastNameM=lastNameM;

        this.birthdate=birthdate;

        this.gender=gender;

        this.state=state;

        this.curp=curp;

        this.rfc=rfc;

    }

    public void setName(String name){

        this.name=name;

    }

    public void setLastNameP(String lastNameP){

        this.lastNameP=lastNameP;

    }

    public void setLastNameM(String lastNameM){

        this.lastNameM=lastNameM;

    }

    public void setBirthdate(String birthdate){

        this.birthdate=birthdate;

    }

    public void setGender(String gender){

        this.gender=gender;

    }

    public void setState(String state){

        this.state=state;

    }

    public void setCURP(String curp){

        this.curp=curp;

    }

    public void setRFC(String rfc){

        this.rfc=rfc;

    }

    public String getName(){

        return name;

    }

    public String getLastNameP(){

        return lastNameP;

    }

    public String getLastNameM(){

        return lastNameM;

    }

    public String getBirthdate(){

        return birthdate;

    }

    public String getGender(){

        return gender;

    }

    public String getState(){

        return state;

    }

    public String getCURP(){

        return curp;

    }

    public String getRFC(){

        return rfc;

    }

}

1. Calcular entrada

import java.util.\*;

class CapturaEntrada{

    public static float capturaFloat(String msg){

        Scanner sc= new Scanner(System.in);

        System.out.print(""+ msg + ": ");

        return(sc.nextFloat());

    }

    public static String capturaString(String msg){

        Scanner sc= new Scanner(System.in);

        System.out.print(""+ msg + ": ");

        return(sc.nextLine());

    }

    public static int capturaEntero(String msg){

        Scanner sc =new Scanner(System.in);

        System.out.println(""+ msg + ": ");

        return(sc.nextInt());

    }

}

1. Calcular CURP

import java.util.\*;

class CalcularCurp{

    public static String calcularCurp(String name,String lastNameP, String lastNameM,String birthdate,String gender, String state){

        String curp="                  ";

        char car1[];

        int i,r;

        name = name.toUpperCase();

        lastNameP = lastNameP.toUpperCase();

        lastNameM = lastNameM.toUpperCase();

        car1 = curp.toCharArray();

        car1[0] = lastNameP.charAt(0);

        for(i = 1; i<lastNameP.length(); i++){

            char lNP = lastNameP.charAt(i);

            if(lNP=='A'|| lNP =='E' || lNP =='I'|| lNP == 'O' || lNP =='U'){

                car1[1]=lastNameP.charAt(i);

                break;

            }

        }

        car1[2] = lastNameM.charAt(0);

        car1[3] = name.charAt(0);

        car1[4] = birthdate.charAt(2);

        car1[5] = birthdate.charAt(3);

        car1[6] = birthdate.charAt(5);

        car1[7] = birthdate.charAt(6);

        car1[8] = birthdate.charAt(8);

        car1[9] = birthdate.charAt(9);

        car1[10] = gender.charAt(0);

        String st = Estados.Estados(state);

        car1[11] = st.charAt(0);

        car1[12] = st.charAt(1);

        for(i = 1; i<lastNameP.length() ;i++){

            char lNP = lastNameP.charAt(i);

            if(lNP !='A'&& lNP !='E' && lNP !='I'&& lNP != 'O' && lNP !='U'){

                car1[13]=lastNameP.charAt(i);

                break;

            }

        }

        for(i = 1; i<lastNameM.length(); i++){

            char lNM = lastNameM.charAt(i);

            if(lNM!='A'&& lNM !='E' && lNM !='I'&& lNM != 'O' && lNM !='U'){

                car1[14]=lastNameM.charAt(i);

                break;

            }

        }

        for(i = 1; i<name.length(); i++){

            char n= name.charAt(i);

            if(n!='A'&& n !='E' && n !='I'&& n != 'O' && n !='U'){

                car1[15]=name.charAt(i);

                break;

            }

        }

        if(birthdate.charAt(0)<2){

            r = (int)(Math.random()\*10)+48;

            car1[16] = (char)r;

        }else{

            r = (int)(Math.random()\*10)+65;

            car1[16] = (char)r;

        }

        r = (int)(Math.random()\*10)+48;

        car1[17] = (char)r;

        curp = String.valueOf(car1);

        return curp;

    }

}

1. Calcular RFC

import java.util.\*;

class CalcularRfc{

    public static String calcularRfc(String name,String lastNameP, String lastNameM,String birthdate){

        String curp="AAAAAAAAAAAAA";

        char car1[];

        int r,b;

        boolean b2;

        name = name.toUpperCase();

        lastNameP = lastNameP.toUpperCase();

        lastNameM = lastNameM.toUpperCase();

        car1 = curp.toCharArray();

        car1[0] = lastNameP.charAt(0);

        car1[1] = lastNameP.charAt(1);

        car1[2] = lastNameM.charAt(0);

        car1[3] = name.charAt(0);

        car1[4] = birthdate.charAt(2);

        car1[5] = birthdate.charAt(3);

        car1[6] = birthdate.charAt(5);

        car1[7] = birthdate.charAt(6);

        car1[8] = birthdate.charAt(8);

        car1[9] = birthdate.charAt(9);

        for(int i = 10; i < 13 ; i++ ){

            b = (int)(Math.random()\*2);

            if(b >= 1) {

                b2 = true;

            }else{

                b2 = false;

            }

            if(b2){

                r = (int)(Math.random()\*10)+48;

                car1[i] = (char)r;

            }else{

                r = (int)(Math.random()\*10)+65;

                car1[i] = (char)r;

            }

        }

        curp = String.valueOf(car1);

        return curp;

    }

}

1. Estados

class Estados{

public static String Estados(String state){

String curp;

state = state.toLowerCase();

switch (state) {

case "aguascalientes":

curp="AS"; break;

case "baja California":

curp="BC"; break;

case "baja california sur":

curp="BS"; break;

case "campeche":

curp="CC"; break;

case "chiapas":

curp="CS"; break;

case "chihuahua":

curp="CH"; break;

case "coahuila":

curp="CL"; break;

case "colima":

curp="CM"; break;

case "distrito federal":

curp="DF"; break;

case "durango":

curp="DG"; break;

case "estado de mexico":

curp="MC"; break;

case "guanajuato":

curp="GT"; break;

case "guerrero":

curp="GR"; break;

case "hidalgo":

curp="HG"; break;

case "jalisco":

curp="JC"; break;

case "michoacan":

curp="MN"; break;

case "morelos":

curp="MS"; break;

case "nayarit":

curp="NT"; break;

case "nuevo leon":

curp="NL"; break;

case "oaxaca":

curp="OC"; break;

case "puebla":

curp="PL"; break;

case "queretaro":

curp="QT"; break;

case "quintanaroo":

curp="QR"; break;

case "san luis potisi":

curp="SP"; break;

case "sinaloa":

curp="SL"; break;

case "sonora":

curp="SR"; break;

case "tabasco":

curp="TC"; break;

case "tamaulipas":

curp="TS"; break;

case "tlaxcala":

curp="TL"; break;

case "veracruz":

curp="VZ"; break;

case "yucatan":

curp="YN"; break;

case "zacatecas":

curp="ZS"; break;

default:

curp="NE";

break;

}

return curp;

}

}