Universidad Autónoma de Baja California

Grupo: 541

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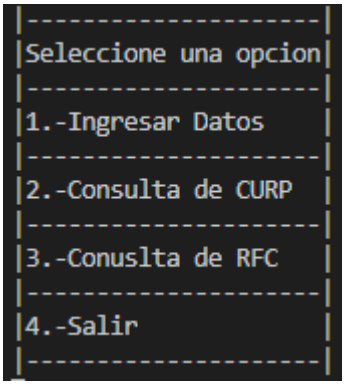
Programación orientada a objetos

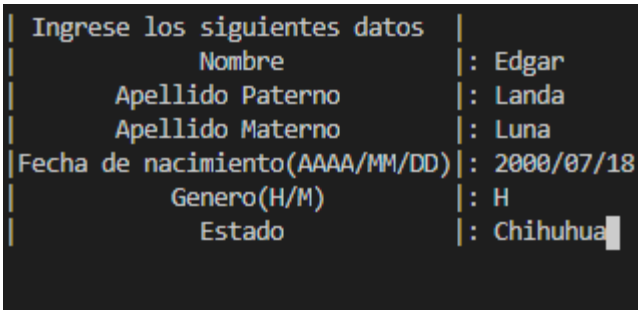
Practica #3

Fecha de entrega: 13-octubre-2020

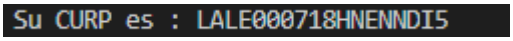
1. Menú principal



2. Ingresar datos



3. Cálculo de CURP



4. 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 c
ontinuar
            resp = sc.next().charAt(0);/// capturar respuesta
        }while(resp!='n');
    }
}
```

2. 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("|---------------------|");
    }
}
```

3. Clase persona

```
class Persona{
    String name,lastNameP,lastNameM,birthdate,gender,state,curp,rfc;
    public Persona(String name,String lastNameP, String lastNameM,String bir
thdate,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;
    }
}
```

4. 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());
    }
}
```

5. Calcular CURP

```
import java.util.*;

class CalcularCurp{
    public static String calcularCurp(String name,String lastNameP, String l
astNameM,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;
    }
}
```

6. Calcular RFC

```
import java.util.*;

class CalcularRfc{
    public static String calcularRfc(String name,String lastNameP, String la
stNameM,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;
    }
}
```

7. 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;
}
}
```