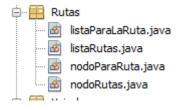
## Manual Tenido

## Método Main

```
1
      package edd proyecto2;
 2
 3  import BlockChain.listaBlock;
 4
     import Clientes.*;
 5
     import Conductores.*;
 6
      import Rutas.listaRutas;
 7
   import Veiculo.*;
 8
     public class EDD_Proyecto2 {
 9
10
11
          public static TablaH tablita = new TablaH();
12
          public static ListaC lista = new ListaC();
13
          public static ArbolB t = new ArbolB(3);
         public static listaRutas ListaRutas = new listaRutas();
14
         public static listaBlock ListaViajes = new listaBlock();
15
16
17 -
         public static void main(String[] args) {
18
              // TODO code application logic here
19
              ListaRutas.cargaMasiva();
20
21
          }
22
23
```

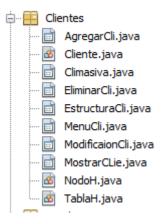
Paquete Rutas (Carga de Rutas, Nodo para Grafo, Nodo para Lista simple de rutas)



```
Start Page X 🚳 listaParaLaRuta.java X
Source History | 🕝 🔯 → 🔊 → | 🔾 🐶 🖶 📮 | 🚱 😓 | 😫 🚉 | 🍥 🔲 | 🐠 🚅
 1
      package Rutas;
 2
 3 + import ...4 lines
 8
      public class listaParaLaRuta {
 9
          public nodoParaRuta inicioRuta;
 10
 11
 12 +
         public listaParaLaRuta() {...3 lines }
 15
         public void insertar(String contenido, String tiempo) {...12 lines }
 16 +
 28
 29 +
         public void mostrarParaRuta(nodoParaRuta tempo) {...8 lines }
 37
          void graficar() {...20 lines }
 38 +
 58
          public void graficarDesdeRuta(nodoParaRuta tempo) {...20 lines }
 59 +
 79
          String graficar2(nodoParaRuta tempo_, FileWriter archivo) {...28 lines }
 80 +
```

```
Start Page × 🚳 listaRutas.java ×
Source History | 🚱 🐶 🐺 + 👼 + 💆 🖓 🐶 😓 📮 📫 | 🚱 😓 | 💇 💇 | 🥚 🔲 | 🐠 🚅
       package Rutas;
 3
    + import ...11 lines
 14
 15
      public class listaRutas {
 16
           public nodoRutas inicio;
 17
 18
          nodoRutas temporalOrigen;
 19
          String[][] distancias;
 20
           String[][] recorridos;
 21
 22 +
          void insertarRuta(String origen_, String destino_, int tiempo) {...27 lines }
 50 ±
          public listaRutas() {...3 lines }
 53
 54 +
           boolean existeOrigen(String origen_, nodoRutas temporal) {...12 lines }
 66
 67 +
           boolean existeDestino(String destino_, nodoRutas temporal) { ...9 lines }
 76
    +
 77
           boolean vacia() {...3 lines }
 80
    +
          nodoRutas insertarOrigenes(String origen_, nodoRutas temporal) {...9 lines }
 90
          nodoRutas insertarDestinos(String destino_, int tiempo_, nodoRutas temporal) {...8 lines }
    +
 91
 99
100 🛨
           public void mostrarOrigenes(nodoRutas tempo ) {...8 lines }
108
          void mostrarDestinos(nodoRutas tempo ) {...8 lines }
109 +
117
118 +
          public void cargarOrigenesCombobox(nodoRutas tempo_, JComboBox comboBox) {...8 lines }
126
127 +
           public void cargaMasiva() {...26 lines }
153
154 +
           void graficar() {...19 lines }
173
           void graficar2(nodoRutas tempo_, FileWriter archivo) {...24 lines }
174 +
198
199 +
          int calcularTamaño() {...9 lines }
208
209 🛨
          void llenarRutas() {...51 lines }
260
           void algoritmoFloyd() {...33 lines }
261 +
294
```

Paquete Clientes (Carga de Clientes, Tabla Hash, Agregar, eliminar, mostrar, modificar)

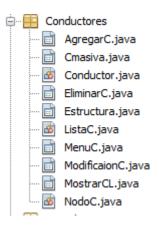


```
Start Page X Start Page X
Source History | 🚱 💀 🔻 🔻 🗸 🖓 🖶 🖫 | 🍄 😓 | 💇 💇 | 🧼 📦 | 👑 🚅
 1 + ...5 lines
      package Clientes;
8 ± /**...4 lines */
      public class Cliente {
12
13
         String dpi, nombre, apellido, genero, fechnac, telefono, direccion;
14
15 +
          public Cliente (String dpi, String nombre, String apellido, String
24
         public Cliente() {...9 lines }
25 +
34
          public String getDpi() {...3 lines }
35
   +
38
          public void setDpi(String dpi) {...3 lines }
39 +
42
          public String getNombre() {...3 lines }
43 +
46
47
   +
          public void setNombre(String nombre) {...3 lines }
50
          public String getApellido() {...3 lines }
51 +
54
          public void setApellido(String apellido) {...3 lines }
55 +
58
          public String getGenero() {...3 lines }
59
   +
62
63 +
          public void setGenero(String genero) {...3 lines }
66
67 +
          public String getFechnac() {...3 lines }
70
71
  +
          public void setFechnac(String fechnac) {...3 lines }
74
          public String getTelefono() {...3 lines }
75 +
78
          public void setTelefono(String telefono) {...3 lines }
79 +
82
83 +
          public String getDireccion() {...3 lines }
          public void setDireccion(String direccion) {...3 lines }
87
```

```
Start Page X 🚳 TablaH.java X
     History | 🚱 👨 - 👼 - | 🔩 🐶 🖶 🖫 | 🖓 😓 🗟 🖭 🗐 | 📵 🔲 | 🐠 🚅
  1 + ...5 lines
       package Clientes;
 ⊕ ± import ...7 lines
 15
 16 + /**...4 lines */
       public class TablaH {
 20
 21
 22
          int m = 37:
 23
          NodoH[] tabla = new NodoH[m];
 24
           int tama = 0;
 25
          float pm = 0;
 26
          public TablaH() {...5 lines }
 27 +
 32
          public BigInteger GenerarLLave(String valor) {...9 lines }
 33 +
 42
          public void Insertar(Cliente dato) {...26 lines }
 43 +
 69
          public float Porcentaje() {...9 lines }
 70 +
 79
           public void Imprimir() {...23 lines }
 80 +
103
          public void cargarCombobox(JComboBox comboBox) {...25 lines }
104 +
129
           public String DatosCargados() {...20 lines }
130 +
150
151 +
           public void Imprimir2() {...11 lines }
162
           private NodoH[] Rehash() {...23 lines }
163 +
186
187 +
           private void ITablaR(NodoH[] n, NodoH e) {...15 lines }
202
           public boolean Eliminar(String el) {...43 lines }
203 +
246
          public NodoH Busqueda(String d) {...18 lines }
247 +
265
           public boolean Modificicar(String d, Cliente mo) {...8 lines }
266 +
274
275 +
          public NodoH[] getTabla() {...3 lines }
278
           public void setTabla(NodoH[] tabla) {...3 lines }
279 +
282
```

```
Start Page X ModoH.java X
           History
Source
     ...5 lines
     package Clientes;
 6
 7
  + /**...4 lines */
 8
     public class NodoH {
12
         Cliente dato;
13
         NodoH derecha;
14
15
         public NodoH() {...4 lines }
16 +
20
  +
        public NodoH(Cliente dato, NodoH derecha) {...4 lines }
21
  +
         public NodoH(Cliente dato) {...4 lines }
25
29
        public Cliente getDato() {...3 lines }
30
  +
33
        public void setDato(Cliente dato) {...3 lines }
34
37
        public NodoH getDerecha() {...3 lines }
38 +
41
42
         public void setDerecha(NodoH derecha) {...3 lines }
45
```

Paquete Conductores (Carga masiva, lista circular, agregar, eliminar, modificar, mostrar estructura)



```
Start Page X 🚳 ListaC.java X
Source History | 🚱 👨 + 🐻 + | 🔩 🐶 😓 😭 | 🖓 😓 | 🔄 🖆 | 🍏 📵 | 📲 🚅
  1 + ...5 lines
       package Conductores;
  6
 7

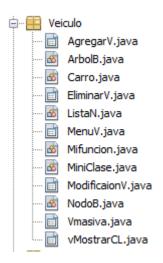
⊕ ± import ...7 lines

 15
 16 ± /**...4 lines */
      public class ListaC {
 20
 21
          int tam;
 22
          NodoC inicio;
 23
 24
          NodoC fin;
 25
          public ListaC() {...5 lines }
 26 +
 31
 32 +
          public int getTam() {...3 lines }
 35
          public void setTam(int tam) {...3 lines }
 36 +
 39
          // inserta de ultimo en la fila :)
 40
 41 +
          public void InsertarUltimo(Conductor d) {...25 lines }
 66
           // devuelve un nodo con el dato usado
 67
 68 +
          public NodoC Buscar(String d) {...14 lines }
 82
 83 +
          public boolean BuscarB(String d) {...14 lines }
 97
 98
          // metodo de modificacion
          public void ModificarD(String dato, Conductor modif) {...4 lines }
 99 +
103
           // elimina dato
104
           public void EliminarD(String dato) {...21 lines }
105 +
126
       // imprime en consola la lista
127
          public void Imprimir() {...11 lines }
128 +
139
          public void cargaCombobox(JComboBox comboBox) {...12 lines }
140 +
152
          public String DevolverCg() {...14 lines }
153 +
167
          // ordena la ista de mayor a menor
168
169 +
          public void ordenarListaMayorM() {...35 lines }
          // ordena la lista de menor a mayor
204
205
```

```
Start Page X  Conductor.java X
     History | 👺 👨 - 👼 - | 🔩 🐶 🖶 📑 | 🔗 😓 | 😉 💇 | ● 🔲 | 👑 🚅
  1 + ...5 lines
       package Conductores;
  6
   + /**...4 lines */
  8
 12
       public class Conductor {
           private String dpi, nombre, appelido, TdeL, genero, Fnac, telefono, dir
 13
 14
          public Conductor (String dpi, String nombre, String appelido, String Tde
 15 +
 25
 26
 27
 28 +
          public Conductor() {...10 lines }
 38
          public String getGenero() {...3 lines }
 39 +
 42
 43 +
          public void setGenero(String genero) {...3 lines }
 46
 47
   +
          public String getDpi() {...3 lines }
 50
          public void setDpi(String dpi) {...3 lines }
 51 +
 54
 55 +
          public String getNombre() {...3 lines }
 58
 59 +
           public void setNombre(String nombre) {...3 lines }
 62
           public String getAppelido() {...3 lines }
 63 +
 66
 67 +
           public void setAppelido(String appelido) {...3 lines }
 70
           public String getTdeL() {...3 lines }
 71
   +
 74
           public void setTdeL(String TdeL) {...3 lines }
 75 +
 78
 79
   +
          public String getFnac() {...3 lines }
 82
          public void setFnac(String Fnac) {...3 lines }
 83 +
 86
          public String getTelefono() {...3 lines }
 87
   +
 90
 91 +
          public void setTelefono(String telefono) {...3 lines }
 94
           public String getDireccion() {...3 lines }
 95
   +
```

```
Start Page X ModoC.java X
           Source
   + ...5 lines
     package Conductores;
 8
   + /**...4 lines */
12
     public class NodoC {
         Conductor dato;
13
14
         NodoC siguiente;
         NodoC atras;
15
16
         public NodoC() {...5 lines }
17 +
22
         public NodoC(Conductor dato) {...5 lines }
23
28
         public Conductor getDato() {...3 lines }
  +
29
32
33 +
         public void setDato(Conductor dato) {...3 lines }
36
         public NodoC getSiguiente() {...3 lines }
37
  +
40
41
         public void setSiguiente(NodoC siguiente) {...3 lines }
44
  +
         public NodoC getAtras() {...3 lines }
45
48
         public void setAtras(NodoC atras) {...3 lines }
   +
49
52
```

Paquete Vehículo (Carga masiva, agregar, eliminar, Árbol B, mostrar, modificar)

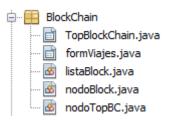


```
Start Page X ArbolB.java X
Source History | 🕝 🔯 + 💹 + | 🔩 🐶 🖶 📮 | 谷 😓 | 🖭 🖭 | ● 🔲 | 🐠 🚅
  1 + ...5 lines
       package Veiculo;
  6
  8 + import ...5 lines
 13
 14 + /**...4 lines */
 18
       public class ArbolB {
 19
 20
           NodoB raiz;
 21
           int gradoM;
 22
           int tam;
 23
           public ArbolB(int gradoM ) {...5 lines }
 24 +
 29
           public void Ge() {...54 lines }
 30 +
 84
           public void ImprimirB() {...5 lines }
 85 +
 90
           public void cargaVehiculos1(JComboBox combo) {...5 lines }
 91 +
 96
           public String Datos() {...6 lines }
 97 +
103
           public Carro BusquedaB(String n) {...6 lines }
104 +
110
111 +
           public int Indi(String n) {...6 lines }
117
118 +
           public void InsertarB(Carro n) {...24 lines }
142
143 +
           public boolean EliminarB(String n) {...16 lines }
159
           public int ValuString(String n) {...12 lines }
160 +
172
173 +
           public boolean Modificar(String n, Carro s) {...8 lines }
```

```
Start Page X ModoB.java X
Source History | 🔀 🛂 🔻 🗸 🗸 🞝 🖶 🖫 | 🍄 😓 | 🖆 🖆 | 🧼 🔲 | 🕮 🚅
  1 + ...5 lines
       package Veiculo;
  8 + import ...6 lines
 14
 15 + /**...4 lines */
       public class NodoB {
 19
 20
 21
           Carro LLave[];
 22
           int grado;
 23
           NodoB segun[];
           int nA;
 24
 25
           boolean hoja;
           String co;
 26
 27
           String map[] = new String[5];
 28
           NodoB(int gradol, boolean hojal) {...10 lines }
 29 +
 39
           public Carro[] getLLave() {...3 lines }
    +
 40
 43
           public void setLLave(Carro[] LLave) {...3 lines }
 44
    +
 47
           public int getGrado() {...3 lines }
 48
    +
           public void setGrado(int grado) {...3 lines }
    +
 52
 55
           public NodoB[] getSegun() {...3 lines }
    +
 56
 59
           public void setSegun(NodoB[] segun) {...3 lines }
 60
    +
 63
           public boolean isHoja() {...3 lines }
    +
 64
 67
           public void setHoja(boolean hoja) {...3 lines }
 68 +
 71
           public int getnA() {...3 lines }
 72
    +
 75
           public void setnA(int nA) {...3 lines }
 76
    +
 79
           public void Imprimir() {...16 lines }
    +
 80
 96
           public void cargaVehiculos2(JComboBox combo) {...16 lines }
 97
    +
113
           public String Texto() {...16 lines }
114 +
```

```
Start Page X ModoB.java X Carro.java X
Source History | 🕝 👺 ▼ 🐺 ▼ | 🔩 👺 🖶 📮 | 🔗 😓 | 🖆 🖆 | 🍥 🔲 | 🐠 🚅
 1 + ...5 lines
      package Veiculo;
 7 + /**...4 lines */
      public class Carro {
11
          String plasca, marca, modelo, ano, color, precio, transmision;
12
13
14 +
          public Carro() {...9 lines }
23
24 +
          public Carro (String plasca, String marca, String modelo, String ano, Stri
33
          public String getPlasca() {...3 lines }
34 +
37
          public void setPlasca(String plasca) {...3 lines }
38 +
41
          public String getMarca() {...3 lines }
42 +
45
46 +
          public void setMarca(String marca) {...3 lines }
49
          public String getModelo() {...3 lines }
50 +
53
          public void setModelo(String modelo) {...3 lines }
54 +
57
58 +
          public String getAno() {...3 lines }
61
62 +
          public void setAno(String ano) {...3 lines }
65
66 +
          public String getColor() {...3 lines }
69
          public void setColor(String color) {...3 lines }
70 +
73
          public String getPrecio() {...3 lines }
74 +
77
78 +
          public void setPrecio(String precio) {...3 lines }
81
          public String getTransmision() {...3 lines }
82 +
85
          public void setTransmision(String transmision) {...3 lines }
86
   +
```

Paquete Block Chain (Agregar viajes, mostrar estructuras, Tops, reportes)



```
Start Page X istaBlock.java X
Source History | 😭 🖫 ▼ 💹 ▼ | 🚭 😓 👺 🔒 😭 😓 | 🔄 💇 | 🥚 🔲 | 🐠 🚅
       package BlockChain;
 3 + import ...14 lines
 17
      public class listaBlock {
 18
 19
 20
          nodoBlock inicio;
 21
          nodoTopBC[] topActual;
 22
          public listaBlock() {...3 lines }
 23
 26
          public void insertarViaje(String origen , String destino , String cliente, String
 27
    +
 50
          String generarFechaHoraLlave() {...6 lines }
 51 +
 57
          String generarFechaHoraNodo() {...6 lines }
 58 +
 64
          String encriptarMD5(String llave_) {...16 lines }
 65 +
 81
 82 +
          public void graficar() {...19 lines }
101
102 +
          void graficar2(nodoBlock tempo_, FileWriter archivo) {...24 lines }
126
           public void topClientes(JTextArea area) {...17 lines }
127 +
144
          public void topConductores(JTextArea area) {...17 lines }
145 +
162
           public void topVehiculos(JTextArea area) {...17 lines }
163 +
180
          public void topViajes(JTextArea area) {...17 lines }
181 🛨
198
199 🛨
          void buscarEnTopViajes(String contenido, nodoParaRuta tempo) {...19 lines }
218
          void buscarEnTop(String contenido) {...19 lines }
219 +
238
          void ordenarTop() {...19 lines }
239 +
258
259 +
          public void rutaPorLlave(String llave_, JTextArea area) {...20 lines }
```

```
Start Page X 🚳 nodoBlock.java X
Source History 🔯 🔯 + 💹 + 💆 🔂 🐶 🖶 🖫 🔐 🚱 😓 🖭 🖭 🥚 🔲 🎥 🚅
      package BlockChain;
 3 ± import ...4 lines
      public class nodoBlock {
 8
 9
          String llave;
10
11
          nodoBlock derecha;
12
          String lugarOrigen;
13
          String lugarDestino;
14
          String fechaHora;
15
          nodoParaRuta ruta;
16
          NodoH cliente;
          NodoC conductor;
17
18
          Carro vechiculo;
19
          public Carro getVechiculo() {...3 lines }
20 +
23
          public void setVechiculo(Carro vechiculo) {...3 lines }
24 +
27
28 +
          public nodoBlock(String lugarOrigen, String lugarDestino) {...5 lines }
33
          public NodoH getCliente() {...3 lines }
34 +
37
          public void setCliente(NodoH cliente) {...3 lines }
38 +
41
          public NodoC getConductor() {...3 lines }
42 +
45
46 +
          public void setConductor(NodoC conductor) {...3 lines }
49
          public String getLlave() {...3 lines }
50 +
53
54 +
          public void setLlave(String llave) {...3 lines }
57
          public nodoBlock getDerecha() {...3 lines }
58 +
61
          public void setDerecha(nodoBlock derecha) {...3 lines }
62 +
66 +
          public String getLugarOrigen() {...3 lines }
69
70 +
          public void setLugarOrigen(String lugarOrigen) {...3 lines }
73
          public String getLugarDestino() {...3 lines }
```

```
Start Page X onodoBlock.java X onodoTopBC.java X
     History | 🚱 💀 🔻 🔻 💆 😓 | 🚭 💇 | 🍥 🔲
Source
      package BlockChain;
 3
      public class nodoTopBC {
 5
          String nombre;
 6
          int top;
 7
         public String getNombre() {...3 lines }
 8
   +
11
        public void setNombre(String nombre) {...3 lines }
12
        public int getTop() {...3 lines }
16
19
         public void setTop(int top) {...3 lines }
20
   +
23
          public nodoTopBC() {...4 lines }
24
   +
28
```

Paquete Huffman (método de huffman, diccionario, repitencias, librería)



```
Start Page X 🐼 Libreria.java X
Source History | 🚱 🐶 🐺 + 💹 → 💆 🗸 🐶 🖶 🖫 | 🍄 😓 | 🔄 🖆 🗐 | 📵 🔲 | 🐠 🚅
1 + ...5 lines
     package HuffmaLib;
8 + /**...4 lines */
12
     public class Libreria {
13
14
         NodoLib nol = null, no2 = null, no3;
15
         NodoLib raiz[] = new NodoLib[200];
16
         public Libreria() {...2 lines }
17 +
19
         public void LlenarR(Repitencia n[]) {...5 lines }
20 +
25
        void ParPeque(int numnodes) {...20 lines }
26 +
46
47 +
         public void GenerarArbol(Repitencia n[], Diccionario jd[]) {...19 lines }
66
         void LlenarDic(int ss,Diccionario dic[]) {...26 lines }
67 +
93
Start Page X 🙆 Diccionario.java X
Source History | 🚱 🐶 🔻 🔻 🗸 🖓 😓 📮 🖟 😓 🔯 🖆 📦 | 🐠 📲 🚅
 1 + ...5 lines
     package HuffmaLib;
 6
 8 + /**...4 lines */
      public class Diccionario {
12
13
          char simbolo;
14
          String binario;
15
          int cc;
16
          public Diccionario(char simbolo, String binario, int cc) {...5 lines }
17 +
22
23
24
          public String getBinario() {...3 lines }
25 +
28
          public void setBinario(String binario) {...3 lines }
29 +
32
33 +
          public char getSimbolo() {...3 lines }
36
          public void setSimbolo(char simbolo) {...3 lines }
37 +
40
41 +
          public int getCc() {...3 lines }
44
45 +
          public void setCc(int cc) {...3 lines }
48
```

```
Start Page X ModoLib.java X
Source History | 🔀 💀 🔻 🔻 🗸 🖓 😓 📮 🖟 🚱 🖓 🖭 🖭 | 🥚 🔲 | 👑 🚅
 1 + ...5 lines
 6
     package HuffmaLib;
8 + /**...4 lines */
12
     public class NodoLib {
       char letra;
13
14
        char tipoHijo;
15
       int repitencia;
       NodoLib siguiente;
16
17
         public NodoLib(char letra, int repitencia) {...6 lines }
18 +
         public NodoLib(char letra, int repitencia, NodoLib sig) {...6 lines }
24 +
30 +
         public NodoLib() {...6 lines }
36
37 +
         public char getLetra() {...3 lines }
40
41 +
         public NodoLib getSiguiente() {...3 lines }
44
45 +
         public void setSiguiente(NodoLib siguiente) {...3 lines }
48
         public void setLetra(char letra) {...3 lines }
49
   +
52
         public char getTipoHijo() {...3 lines }
53 +
56
57 +
         public void setTipoHijo(char tipoHijo) {...3 lines }
60
         public int getRepitencia() {...3 lines }
61
   +
64
         public void setRepitencia(int repitencia) {...3 lines }
65 +
68
69 +
         public NodoLib getPadre() {...3 lines }
72
73 +
         public void setPadre(NodoLib padre) {...3 lines }
```

```
Start Page X 🙆 Repitencia.java X
    + ...5 lines
     package HuffmaLib;
  + /**...4 lines */
8
     public class Repitencia {
12
13
14
        char letra;
15
        int repi;
16
        public Repitencia(char letra, int repi) {...4 lines }
17 +
21
       public Repitencia() {...4 lines }
22 +
26
       public char getLetra() {...3 lines }
27
30
       public void setLetra(char letra) {...3 lines }
       public int getRepi() {...3 lines }
35 +
38
        public void setRepi(int repi) {...3 lines }
39 +
42
```

Paquete Menu Principal (llamado a menú general)

