



Instituto Politécnico Nacional.
Unidad Profesional Interdisciplinaria de Ingeniería campus
Zacatecas.

Ingeniería en Sistemas Computacionales

Analisis de algoritmos.

Profesor: Roberto Oswaldo Cruz Leija.

Grupo: 3CM1

“ALGORITMOS GENETICOS”

ALUMNA;

Alejandra Monserrath Esparza Ríos.

Zacatecas, Zac., a 29 de noviembre del 2019.

Resolver para un tamaño genético de 8.

```
ArrayList<Configuracion> configuraciones = new ArrayList<>();
```

```
Configuracion c1 = new Configuracion(50000, 50, 0.2, 0.1, new Seleccion.TipoSeleccion[]{Seleccion.TipoSeleccion.RANDOM, Seleccion.TipoSeleccion.TORNEO}, 8);
```

```
configuraciones.add(c1);
```

```
Manager m = new Manager("Manager1", c1.getTamGenotipo());
```

```
m.generarGeneticos(configuraciones);
```

```
m.ejecutarGeneticos();
```

```
System.out.println();
```

```
g: 1 f:6 id:820301827
g: 2 f:6 id:820301827
g: 3 f:6 id:820301827
g: 4 f:6 id:820301827
g: 5 f:6 id:820301827
g: 6 f:6 id:820301827
g: 7 f:6 id:820301827
g: 8 f:6 id:820301827
g: 9 f:6 id:820301827
g: 10 f:6 id:820301827
g: 11 f:4 id:820301827
g: 12 f:4 id:820301827
g: 13 f:4 id:820301827
g: 14 f:4 id:820301827
g: 15 f:4 id:820301827
g: 16 f:4 id:820301827
g: 17 f:4 id:820301827
g: 18 f:4 id:820301827
g: 19 f:4 id:820301827
g: 20 f:4 id:820301827
g: 21 f:4 id:820301827
g: 22 f:2 id:820301827
g: 23 f:2 id:820301827
g: 24 f:2 id:820301827
g: 25 f:2 id:820301827
g: 26 f:0 id:820301827
g: 26 [5, 2, 4, 7, 0, 3, 1, 6]
```

g:26[5,2,4,,7,0,3,1,6]

Resolver para un tamaño genético de 15.

```
ArrayList<Configuracion> configuraciones = new ArrayList<>();
```

```
Configuracion c1 = new Configuracion(5000, 30, 0.2, 0.01, new Seleccion.TipoSeleccion[]{Seleccion.TipoSeleccion.RANDOM,Seleccion.TipoSeleccion.TORNEO},  
15 );
```

```
configuraciones.add(c1);
```

```
Manager m = new Manager("Manager1",c1.getTamGenotipo());
```

```
m.generarGeneticos(configuraciones);
```

```
m.ejecutarGeneticos();
```

```
System.out.println();
```

```

-
g: 894 f:2 id:312640012
g: 895 f:2 id:312640012
g: 896 f:2 id:312640012
g: 897 f:2 id:312640012
g: 898 f:2 id:312640012
g: 899 f:2 id:312640012
g: 900 f:2 id:312640012
g: 901 f:2 id:312640012
g: 902 f:2 id:312640012
g: 903 f:2 id:312640012
g: 904 f:2 id:312640012
g: 905 f:2 id:312640012
g: 906 f:2 id:312640012
g: 907 f:2 id:312640012
g: 908 f:2 id:312640012
g: 909 f:2 id:312640012
g: 910 f:2 id:312640012
g: 911 f:2 id:312640012
g: 912 f:2 id:312640012
g: 913 f:2 id:312640012
g: 914 f:2 id:312640012
g: 915 f:2 id:312640012
g: 916 f:0 id:312640012
g: 916 [5, 8, 4, 12, 3, 13, 2, 10, 6, 1, 14, 11, 0, 7, 9]
BUILD SUCCESSFUL (total time: 21 seconds)

```

g:916[5,8,4,12,3,13,2,10,6,1,14,11,0,7,9]

Resolver para un tamaño genético de 30.

```

ArrayList<Configuracion> configuraciones = new ArrayList<>();

Configuracion c1 = new Configuracion(20000, 30, 0.2, 0.01, new
Seleccion.TipoSeleccion[]{Seleccion.TipoSeleccion.RANDOM,Seleccion.TipoSeleccion.TORNEO}, 30 );

configuraciones.add(c1);

Manager m = new Manager("Manager1",c1.getTamGenotipo());

m.generarGeneticos(configuraciones);

m.ejecutarGeneticos();

System.out.println();

```

```
g: 6360 f:2 id:312640012
g: 6361 f:2 id:312640012
g: 6362 f:2 id:312640012
g: 6363 f:2 id:312640012
g: 6364 f:2 id:312640012
g: 6365 f:2 id:312640012
g: 6366 f:2 id:312640012
g: 6367 f:2 id:312640012
g: 6368 f:2 id:312640012
g: 6369 f:2 id:312640012
g: 6370 f:2 id:312640012
g: 6371 f:2 id:312640012
g: 6372 f:2 id:312640012
g: 6373 f:2 id:312640012
g: 6374 f:2 id:312640012
g: 6375 f:2 id:312640012
g: 6376 f:2 id:312640012
g: 6377 f:2 id:312640012
g: 6378 f:2 id:312640012
g: 6379 f:2 id:312640012
g: 6380 f:2 id:312640012
g: 6381 f:2 id:312640012
g: 6382 f:2 id:312640012
g: 6383 f:0 id:312640012
g: 6383 [8, 19, 15, 22, 20, 4, 27, 21, 2, 14, 6, 23, 7, 0, 24, 12, 5, 1, 18, 10, 29, 11, 25, 16, 28, 26, 9, 3, 13, 17]
BUILD SUCCESSFUL (total time: 1 minute 14 seconds)
```

[g:6383\[8,19,15,22,20,4,27,21,2,14,6,23,7,0,24,12,5,1,18,10,29,11,25,16,28,26,9,3,13,17\]](#)

Resolver para un tamaño genético de 70.

```
ArrayList<Configuracion> configuraciones = new ArrayList<>();
```

```
Configuracion c1 = new Configuracion(50000, 60, 0.2, 0.01, new  
Seleccion.TipoSeleccion[]{Seleccion.TipoSeleccion.RANDOM,Seleccion.TipoSeleccion.TORNEO}, 70);
```

```
configuraciones.add(c1);
```

```
Manager m = new Manager("Manager1",c1.getTamGenotipo());
```

```
m.generarGeneticos(configuraciones);
```

```
m.ejecutarGeneticos();
```

System.out.println();

```
g: 21413 f:2 id:312640012
g: 21414 f:2 id:312640012
g: 21415 f:2 id:312640012
g: 21416 f:2 id:312640012
g: 21417 f:2 id:312640012
g: 21418 f:2 id:312640012
g: 21419 f:2 id:312640012
g: 21420 f:2 id:312640012
g: 21421 f:2 id:312640012
g: 21422 f:2 id:312640012
g: 21423 f:2 id:312640012
g: 21424 f:2 id:312640012
g: 21425 f:2 id:312640012
g: 21426 f:2 id:312640012
g: 21427 f:2 id:312640012
g: 21428 f:2 id:312640012
g: 21429 f:2 id:312640012
g: 21430 f:2 id:312640012
g: 21431 f:2 id:312640012
g: 21432 f:2 id:312640012
g: 21433 f:2 id:312640012
g: 21434 f:2 id:312640012
g: 21435 f:0 id:312640012
g: 21435 [67, 34, 44, 35, 11, 29, 58, 53, 57, 36, 1, 9, 56, 10, 52, 15, 59, 27, 22, 40, 13, 20, 39, 4, 65, 28, 37, 49, 3, 0, 48,
BUILD SUCCESSFUL (total time: 4 minutes 47 seconds)
|
. 17, 41, 23, 16, 63, 51, 14, 61, 68, 46, 6, 50, 19, 5, 7, 62, 43, 31, 8, 69, 45, 2, 32, 18, 33, 24, 26, 42, 25, 55, 21, 47, 64,

66, 38, 54, 30, 60, 12]
```

g: 21435 [67, 34, 44, 35, 11, 29, 58, 53, 57, 36, 1, 9, 56, 10, 52, 15, 59, 27, 22, 40, 13, 20, 39, 4, 65, 28, 37, 49, 3, 0, 48, 17, 41, 23, 16, 63, 51, 14, 61, 68, 46, 6, 50, 19, 5, 7, 62, 43, 31, 8, 69, 45, 2, 32, 18, 33, 24, 26, 42, 25, 55, 21, 47, 64, 66, 38, 54, 30, 60, 12]

Resolver para un tamaño genético de 90.

```
ArrayList<Configuracion> configuraciones = new ArrayList<>();
```

```
Configuracion c1 = new Configuracion(50000, 50, 0.2, 0.01, new  
Seleccion.TipoSeleccion[]{Seleccion.TipoSeleccion.RANDOM, Seleccion.TipoSeleccion.TORNEO}, 90);
```

```
configuraciones.add(c1);
```

```
Manager m = new Manager("Manager1", c1.getTamGenotipo());
```

```
m.generarGeneticos(configuraciones);
```

```
m.ejecutarGeneticos();
```

```
System.out.println();
```

```
g: 9371 f:2 id:312640012
```

```
g: 9372 f:2 id:312640012
```

```
g: 9373 f:2 id:312640012
```

```
g: 9374 f:2 id:312640012
```

```
g: 9375 f:2 id:312640012
```

```
g: 9376 f:2 id:312640012
```

```
g: 9377 f:2 id:312640012
```

```
g: 9378 f:2 id:312640012
```

```
g: 9379 f:2 id:312640012
```

```
g: 9380 f:2 id:312640012
```

```
g: 9381 f:2 id:312640012
```

```
g: 9382 f:2 id:312640012
```

```
g: 9383 f:2 id:312640012
```

```
g: 9384 f:2 id:312640012
```

```
g: 9385 f:2 id:312640012
```

```
g: 9386 f:2 id:312640012
```

```
g: 9387 f:2 id:312640012
```

```
g: 9388 f:2 id:312640012
```

```
g: 9389 f:2 id:312640012
```

```
g: 9390 f:2 id:312640012
```

```
g: 9391 f:2 id:312640012
```

```
g: 9392 f:2 id:312640012
```

```
g: 9393 f:0 id:312640012
```

```
g: 9393 [14, 72, 85, 55, 86, 26, 12, 60, 41, 50, 17, 21, 42, 47, 6, 31, 61, 48, 46, 63, 58, 9, 7, 83, 10, 79, 45, 8, 77, 27, 65,  
BUILD SUCCESSFUL (total time: 3 minutes 4 seconds)
```

```
32, 25, 69, 4, 64, 38, 74, 15, 11, 3, 20, 84, 19, 68, 44, 29, 51, 88, 76, 16, 18, 67, 2, 22, 75, 82, 80, 49, 33, 54, 57, 71, 81
```

53, 62, 28, 1, 73, 34, 13, 30, 59, 24, 87, 70, 40, 52, 78, 0, 35, 89, 39, 56, 66, 37, 5, 23, 36, 43]

g: 9393 [14, 72, 85, 55, 86, 26, 12, 60, 41, 50, 17, 21, 42, 47, 6, 31, 61, 48, 46, 63, 58, 9, 7, 83, 10, 79, 45, 8, 77, 27, 65, 32, 25, 69, 4, 64, 38, 74, 15, 11, 3, 20, 84, 19, 68, 44, 29, 51, 88, 76, 16, 18, 67, 2, 22, 75, 82, 80, 49, 33, 54, 57, 71, 81, 53, 62, 28, 1, 73, 34, 13, 30, 59, 24, 87, 70, 40, 52, 78, 0, 35, 89, 39, 56, 66, 37, 5, 23, 36, 43]