

Peek algoritmi:

```
public void AlgorithmGenerational (){
```

```
    Vector a = new Vector (generatii );
```

```
    int i , j;
```

```
    Initializare();
```

```
    for (i =0; i <generatii ; i++) {
```

```
        Cromozom fiu= new Cromozom(dimPop);
```

```
        fiu=Selectie();
```

```
        fiu=Mutatie(fiu);
```

```
        if (fiu.getFitness(lungime)<populatie.get(celMaiSlab()).getFitness(lungime))
```

```
            populatie.set(celMaiSlab(),fiu);
```

```
            System.out.println("cel mai bun la pasul "+ i+ " : "+  
populatie.get(celMaiBun()).toString(lungime));
```

```
            String result= "cel mai bun la pasul "+ i+ " : "+ populatie.get(celMaiBun()).toString(lungime);
```

```
            a.add(i, result);
```

```
        }
```

```
        jList2.setListData(a);
```

```
        System.out.println("solutia cea mai buna " + populatie.get(celMaiBun()).toString(lungime));
```

```
        jTextField8.setText(populatie.get(celMaiBun()).toString());
```

```
        jTextField9.setText(populatie.get(celMaiBun()).getFitness(lungime)+"");
```

```
    }
```

```

public Cromozom Mutatie (Cromozom fiu ){

    System.out.println("inainte de mutatie "+ fiu.toString(lungime));

    int i ,ok=1, poz2,poz1 ;

    Pachet mut= null;

    mut = fiu.getListaPerechi().get(0);

    poz1= mut.getInapoi();

    if (mut.getDoi()==poz1)

        mut.setInapoi(mut.getUnu());

    else mut.setInapoi(mut.getDoi());

    poz2=mut.getInapoi();

    for (i=1 ;i< dimPop-3 && ok==1; i++)

    { if (fiu.getValAt(i).getInapoi()==poz1)

        { fiu.getValAt(i).setInapoi(poz2);

            if (fiu.getValAt(i).getUnu()==poz1)

                {fiu.getValAt(i).setDoi(poz2);

                    ok=0;}

            else

                { fiu.getValAt(i).setDoi(poz2);

                    ok=0;}

        }

    }

    if (ok==1)

        if ( fiu.getListaPerechi().get(i+1).getDoi()==poz1)

            fiu.getValAt(i+1).setDoi(poz2);

        else fiu.getValAt(i+1).setUnu(poz2);

    System.out.println("dupa mutatie "+ fiu.toString(lungime));

    return fiu; }

```

```
public Integer celMaiSlab ()
```

```
{ Integer cr=0;
```

```
Integer i,fit=Integer.MIN_VALUE;
```

```
for (i=0;i<nrPop;i++)
```

```
    if (populatie.get(i).getFitness(lungime)>fit)
```

```
    { cr=i;
```

```
      fit=populatie.get(i).getFitness(lungime);}
```

```
return cr;
```

```
}
```

```
    public Cromozom Selectie() { //binar
```

```
        Integer unu=0, doi=0 ,fit1=0,fit2=0;
```

```
        Integer ii = 0;
```

```
        System.out.println(" size " + populatie .size() );
```

```
        unu=Math.abs(random.nextInt(populatie.size()));
```

```
        doi=Math.abs(random.nextInt(populatie.size()));
```

```
        System.out.println( unu + " , " + doi );
```

```
        fit1=populatie.get(unu).getFitness(lungime);
```

```
        fit2=populatie.get(doi).getFitness(lungime);
```

```
        System.out.println( fit1 + " , " + fit2 );
```

```
        if (fit1>fit2 )
```

```
            ii=doi;
```

```
        else ii=unu;
```

```
        System.out.println( "populatie[" +ii+"]=" + afisCromozom( populatie.get(ii)));
```

```
        return populatie.get(ii);
```

```
}
```

**Mai exista binenteles, dar nu le voi include aici clasele Pachet, Cromozom. Etc. Sunt disponibile in pachetul proiectului.**