

1^η Άσκηση:

- Ο κώδικας στην main μαζί με την εκτέλεση του για τη κλάση προϊόν.

```
package vivliopolio;

public class Vivliopolio {

    public static void main(String[] args) {
        //Arxikopoihsh kai dhmiourgeia antikeimenou klashs proion
        Proion c=new Proion("vivlio",true,12.5,"istoriko");
        //entoles apo thn main gia thn klash proion
        c.check();//emfanish diathesimothtas tou proiontos
        c.notAvailable();//xarakthrismos proiontos ws mh diathesimo
        c.check();//emfanish diathesimothtas tou proiontos
        c.available();//xarakthrismos proiontos ws diathesimo
        c.check();//emfanish diathesimothtas tou proiontos
        System.out.println(c);//emfanish twm idiothtwn tou proiontos

        /*
        Ekatasthma ena=new Ekatasthma("www.ena.com","2107754585","ena@hotmail.com");
        ena.newProduct("vivlia",14.94,"Sygxronh logotexnia");
        ena.newProduct("vivlia",17.91,"istoriko mythistorima dokimio");
        ena.newProduct("vivlia",15.93,"astynomiko");
        ena.newProduct("vasika eidh grafeiou",5.36,"autokoliti taineia grafeiou");
        ena.newProduct("vasika eidh grafeiou",0.90,"autokolites shmeioseis");
        ena.newProduct("psalidi",1.45,"plastiko psalidi grafeiou");
        ena.newProduct("psalidi",2.39,"metalliko psalidi");
        ena.display();//emfanish twm proiontwn
        ena.changeAvailable("vivlia", "9f8a210a-9ae4-4ab2-b311-ea44dc141fc4");//allazei thn katas
        System.out.println();//ektypwsh allaghs grammhs
        System.out.println("Emfanish meta apo thn allagh ths diathesimothtas");//ektypwsh mhnimat
        ena.display();//emfanish twm proiontwn
        System.out.println();//allagh grammhs
        System.out.println("Emfanish gia sygkekrimenh kathgoria");//ektypwsh mhnimatos
        ena.printProductOfCategory("vivlia");//ektypwsh ta proionta gia thn kathgoria vivlia
        System.out.println();//allagh grammhs
        System.out.println("Emfanish gia sygkekrimenh kathgoria kai prooionta mikrokerhs timhs");
        ena.printProductOfCategoryWithMinPriceOf("vivlia", 15);//emfanish twm proiontwn gia thn k
        System.out.println();//allagh grammhs
        System.out.println("Emfanish diathesimwn proiontwn");//ektypwsh minimatos
        ena.availableProducts();//emfanish twm diathesimwn proiontwn
        System.out.println();//allagh grammhs
        System.out.println("Ektypwsh oikonomikwn proiontwn ana kathgoria");//ektypwnei ta proion
        System.out.println();//ektypwsh allaghs grammhs
        ena.emfanishEconomyProducts();//emfanizei ta oikono mikotera proionta ana kathgoria
    }
}
```

run:
To proion einai diathesimo
To proion den einai diathesimo
To proion einai diathesimo
Kategoria: vivlio| Diathesimo: yes| Timi: 12.5| Perigrafh: istoriko| Kwdikos Proiontos: 57996e93-cc4a-43ec-8140-d637346e2735

- Ο κώδικας στην main μαζί με την εκτέλεση του για τη κλάση Κατάστημα που χρησιμοποιεί και την κλάση προϊόν .

```
Ekatasthma ena=new Ekatasthma("www.ena.com","2107754585","ena@hotmail.com");//arxikopoihs
//edw xrhsimopoioume mono ena antikeimeno epeish i lista twm proiontwn tha einai sto kata
ena.newProduct("vivlia",14.94,"Sygxronh logotexnia");//prosthiki proiontos
ena.newProduct("vivlia",17.91,"istoriko mythistorima dokimio");
ena.newProduct("vivlia",15.93,"astynomiko");
ena.newProduct("vasika eidh grafeiou",5.36,"autokoliti taineia grafeiou");
ena.newProduct("vasika eidh grafeiou",0.90,"autokolites shmeioseis");
ena.newProduct("psalidi",1.45,"plastiko psalidi grafeiou");
ena.newProduct("psalidi",2.39,"metalliko psalidi");
ena.display();//emfanish twm proiontwn
ena.changeAvailable("vivlia", "9f8a210a-9ae4-4ab2-b311-ea44dc141fc4");//allazei thn katas
System.out.println();//ektypwsh allaghs grammhs
System.out.println("Emfanish meta apo thn allagh ths diathesimothtas");//ektypwsh mhnimat
ena.display();//emfanish twm proiontwn
System.out.println();//allagh grammhs
System.out.println("Emfanish gia sygkekrimenh kathgoria");//ektypwsh mhnimatos
ena.printProductOfCategory("vivlia");//ektypwsh ta proionta gia thn kathgoria vivlia
System.out.println();//allagh grammhs
System.out.println("Emfanish gia sygkekrimenh kathgoria kai prooionta mikrokerhs timhs");
ena.printProductOfCategoryWithMinPriceOf("vivlia", 15);//emfanish twm proiontwn gia thn k
System.out.println();//allagh grammhs
System.out.println("Emfanish diathesimwn proiontwn");//ektypwsh minimatos
ena.availableProducts();//emfanish twm diathesimwn proiontwn
System.out.println();//allagh grammhs
System.out.println("Ektypwsh oikonomikwn proiontwn ana kathgoria");//ektypwnei ta proion
System.out.println();//ektypwsh allaghs grammhs
ena.emfanishEconomyProducts();//emfanizei ta oikono mikotera proionta ana kathgoria

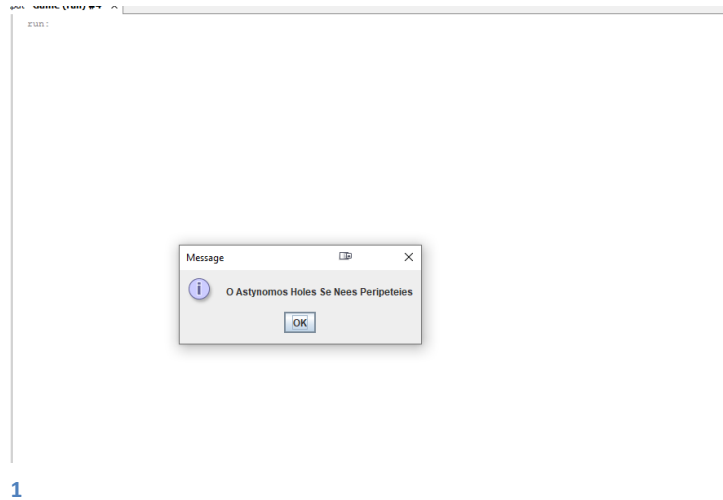
run:
[Kategoria: vivlia| Diathesimo: yes| Timi: 14.94| Perigrafh: Sygxronh logotexnia| Kwdikos Proiontos: e4322c35-2f7c-41ec-b67c-6fddfaadee901, Kategoria: vivlia| Diathesimo: yes| Timi: 1
Emfanish meta apo thn allagh ths diathesimothtas
[Kategoria: vivlia| Diathesimo: yes| Timi: 14.94| Perigrafh: Sygxronh logotexnia| Kwdikos Proiontos: e4322c35-2f7c-41ec-b67c-6fddfaadee901, Kategoria: vivlia| Diathesimo: yes| Timi: 1
Emfanish gia sygkekrimenh kathgoria
Kategoria: vivlia| Diathesimo: yes| Timi: 14.94| Perigrafh: Sygxronh logotexnia| Kwdikos Proiontos: e4322c35-2f7c-41ec-b67c-6fddfaadee901
Kategoria: vivlia| Diathesimo: yes| Timi: 17.91| Perigrafh: istoriko mythistorima dokimio| Kwdikos Proiontos: d99114b6-ac9f-4b74-840d-45b4750782f5
Kategoria: vivlia| Diathesimo: yes| Timi: 15.93| Perigrafh: astynomiko| Kwdikos Proiontos: 68bc3060-66b6-494a-8343-f3114d09b025
Emfanish gia sygkekrimenh kathgoria kai prooionta mikrokerhs timhs
Kategoria: vivlia| Diathesimo: yes| Timi: 14.94| Perigrafh: Sygxronh logotexnia| Kwdikos Proiontos: e4322c35-2f7c-41ec-b67c-6fddfaadee901
Emfanish diathesimwn proiontwn
Kategoria: vivlia| Diathesimo: yes| Timi: 14.94| Perigrafh: Sygxronh logotexnia| Kwdikos Proiontos: e4322c35-2f7c-41ec-b67c-6fddfaadee901
Kategoria: vivlia| Diathesimo: yes| Timi: 17.91| Perigrafh: istoriko mythistorima dokimio| Kwdikos Proiontos: d99114b6-ac9f-4b74-840d-45b4750782f5
Kategoria: vivlia| Diathesimo: yes| Timi: 15.93| Perigrafh: autokoliti taineia grafeiou| Kwdikos Proiontos: d96d5214-7252-40bd-9409-cdda084e7917
Kategoria: vasika eidh grafeiou| Diathesimo: yes| Timi: 0.9| Perigrafh: autokolites shmeioseis| Kwdikos Proiontos: ac2465a8-506e-49e3-be81-de347821ce37
Kategoria: psalidi| Diathesimo: yes| Timi: 1.45| Perigrafh: plastiko psalidi grafeiou| Kwdikos Proiontos: 8a6fb1fd-3778-4968-81fd-fbb220aa85c9
Kategoria: psalidi| Diathesimo: yes| Timi: 2.39| Perigrafh: metalliko psalidi| Kwdikos Proiontos: d4f66a55-43ee-48d2-bc90-5153e48eaeec
Ektypwsh oikonomikwn proiontwn ana kathgoria
Giathn kathgoria: psalidi To oikonomikotero proion einai to:
Kategoria: psalidi| Diathesimo: yes| Timi: 2.39| Perigrafh: metalliko psalidi| Kwdikos Proiontos: d4f66a55-43ee-48d2-bc90-5153e48eaeec
Giathn kathgoria: psalidi To oikonomikotero proion einai to:
Kategoria: psalidi| Diathesimo: yes| Timi: 1.45| Perigrafh: plastiko psalidi grafeiou| Kwdikos Proiontos: 8a6fb1fd-3778-4968-81fd-fbb220aa85c9
Giathn kathgoria: vasika eidh grafeiou To oikonomikotero proion einai to:
Kategoria: vasika eidh grafeiou| Diathesimo: yes| Timi: 5.36| Perigrafh: autokoliti taineia grafeiou| Kwdikos Proiontos: d96d5214-7252-40bd-9409-cdda084e7917
Giathn kathgoria: vivlia To oikonomikotero proion einai to:
Kategoria: vivlia| Diathesimo: yes| Timi: 14.94| Perigrafh: Sygxronh logotexnia| Kwdikos Proiontos: e4322c35-2f7c-41ec-b67c-6fddfaadee901

BUILD SUCCESSFUL (total time: 2 seconds)
```

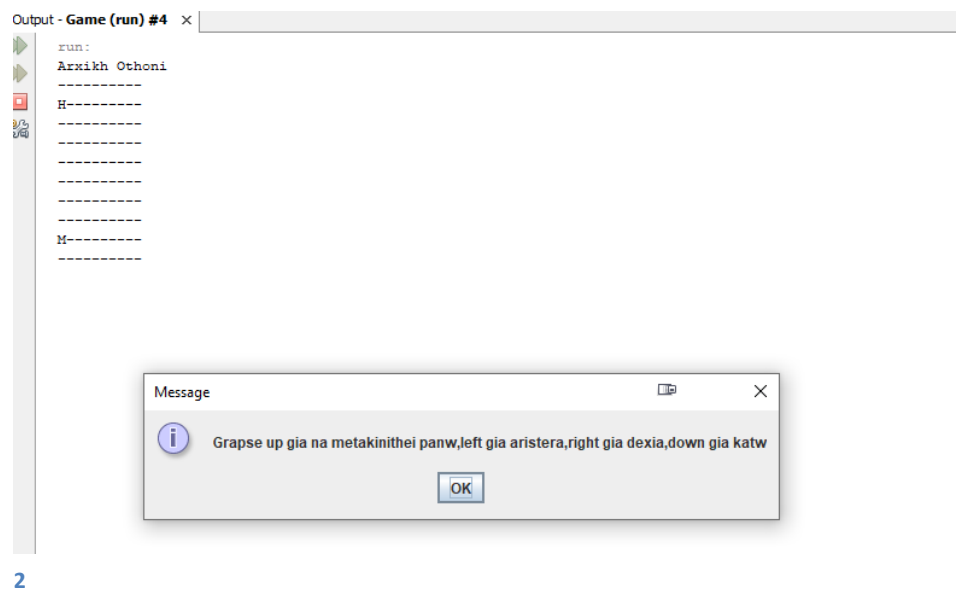
- Το εκτελέσιμο πρόγραμμα:

Άσκηση 2:

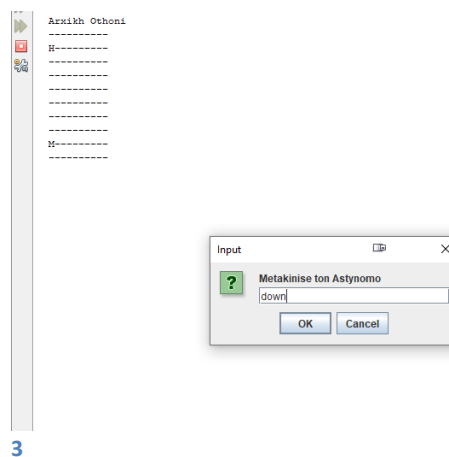
- Αρχή του προγράμματος



- Μήνυμα για την ενημέρωση του χρήστη για τις επιλογές.



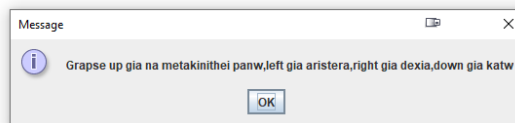
- Πρώτη εισαγωγή του χρήστη



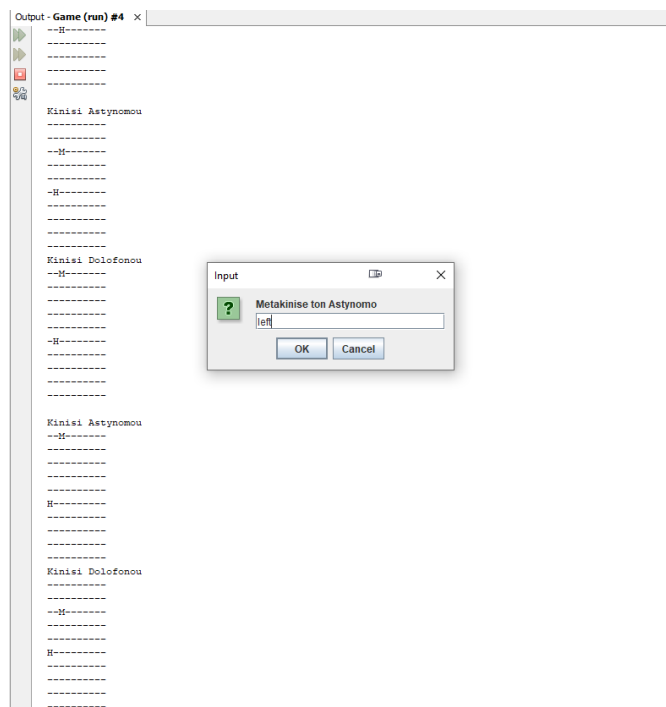
```
run:
Arxikh Othoni
-----
H-----
-----
-----
-----
-----
M-----
-----

Kinisi Astynomou
-----
H-----
-----
-----
-----
M-----
-----

Kinisi Dolofovou
-----
H-----
-----
-----
M-----
-----
```



4



5

- Μήνυμα για το ότι ξεπέρασε τα όρια ο χρήστης και να ξαναδώσει θέση.

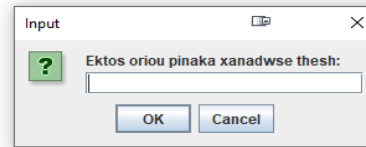
```

-H-----
-----
-----
Kinisi Dolofonou
--M-----
-----
-----
-H-----
-----
-----

Kinisi Astynomou
--M-----
-----
-----
H-----
-----
-----

Kinisi Dolofonou
-----
-----
--M-----
-----
H-----
-----
-----

```



6

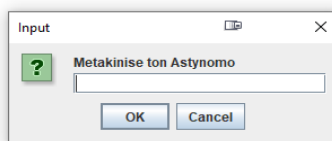
```

M-----
-----
Kinisi Dolofonou
-----
-----
-H-----
M-----
-----

Kinisi Astynomou
-----
-----
--H-----
M-----
-----

Kinisi Dolofonou
-----
-----
--H-----
--M-----
-----

```



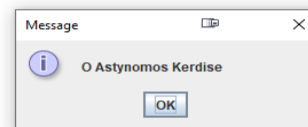
```

-----
M-----
-----
Kinisi Dolofonou
-----
-----
-H-----
M-----
-----

Kinisi Astynomou
-----
-----
--H-----
M-----
-----

Kinisi Dolofonou
-----
-----
--H-----
--M-----
-----

```



8

7

```

-----
-----
Kinisi Dolofonou
-----
-----
-----
-----
--H-----
--M-----
-----

```

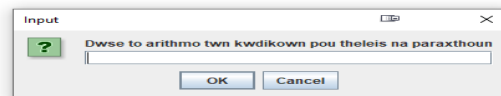
BUILD SUCCESSFUL (total time: 9 minutes 2 seconds)

9

Άσκηση 3:

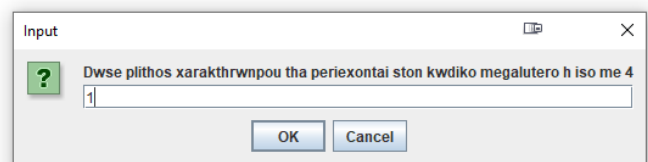
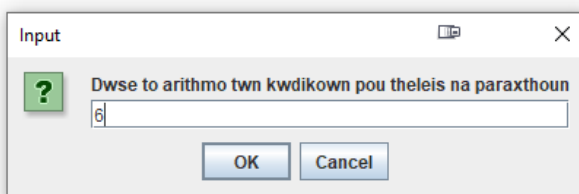
- Για την Περίπτωση εισαγωγής 6 κωδικών, με πλήθος χαρακτήρων 5. Επίσης φαίνεται και στις φωτογραφίες ότι δεν αφήνει να εισάγει ο χρήστης ,πλήθος χαρακτήρων μικρότερο του 4.

```
import javax.swing.JOptionPane;  
public class Passwords {  
    public static void main(String[] args) {  
        int a=Integer.parseInt(JOptionPane.showInputDialog("Dwse to arithmo tw n kwdikown pou theleis na paraxthoun  
        int b=Integer.parseInt(JOptionPane.showInputDialog("Dwse plithos  
        PasswordBuilder kwdikoi=new PasswordBuilder(a,b);  
        kwdikoi.build();  
        kwdikoi.display();  
    }  
}
```

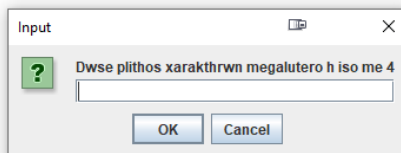


passwords.Passwords > main >
ut - Passwords (run) x

1



3



```
for(int i=0;i<numberOfCharacters-4;i++){//me auth thn loop efoson exoume idi v  
    temp=ena.nextInt(data.size()); //pairnei tyxaio dikti ths listas  
    pass+=data.get(temp); //pernaei sthn sumvoloseira pass to stoixeio ths listas  
}  
//Mperdeuei thn symvoloseira  
List<String> change = new ArrayList<String>(Arrays.asList(pass.split(""))); //met  
Collections.shuffle(change); //anakatei ta stoixeia  
String s=""; //arxikopoihs ths symvoloseiras s  
for(int i=0;i<change.size();i++){ //metatrepei thn lista se symvoloseira  
    if(i==0){ //etsi gemizei to prwth thesh thn symvoloseiras  
        s=change.get(i);  
    }  
    else  
        s+=change.get(i);  
}  
//apothyn  
pasSWord  
words (run) x
```

5

- Εδώ έτρεξα ακόμα μία φορά για πλήθος χαρακτήρων 4 και σύνολο παραγόμενων κωδικών 9, έτσι ώστε να φαίνεται η αλλαγή της γραμμής μετά από τους 8 κωδικούς.

```
for(int i=0;i<numberOfCharacters-4;i++){//me auth thn loop efoson exou  
    temp=ena.nextInt(data.size()); //pairnei tyxaio dikti ths listas  
    pass+=data.get(temp); //pernaei sthn sumvoloseira pass to stoixeio  
}  
//Mperdeuei thn symvoloseira  
List<String> change = new ArrayList<String>(Arrays.asList(pass.split(""))  
Collections.shuffle(change); //anakatei ta stoixeia  
String s=""; //arxikopoihs ths symvoloseiras s  
for(int i=0;i<change.size();i++){ //metatrepei thn lista se symvoloseira  
    if(i==0){ //etsi gemizei to prwth thesh thn symvoloseiras  
        s=change.get(i);  
    }  
    else  
        s+=change.get(i);  
}  
//apothyn  
pasSWord  
ords.PasswordBuilder > display  
sswords (run) x
```

Άσκηση 4:

```

import java.util.Map.Entry; //eisagwgh ths entry giati tha thn xrhsimopoihsoume gia na vr
import javax.swing.JOptionPane; //eisagwgh gia na mporesoume na ektypwsoume to parathyro
public class CarCompanies {

    public static void main(String[] args) {
        ArrayList<Car>cars=new ArrayList<>(); //arxikopoihsh arraylist gia ta autokinita
        //eisagwgh antikeimenwn sthn lista cars
        cars.add(new Car("Toyota","Yaris",14000));
        cars.add(new Car("Opel","Corsa",16000));
        cars.add(new Car("Toyota","Aygo",11000));
        cars.add(new Car("Toyota","Corolla",17000));
        cars.add(new Car("Fiat","Panda",12000));
        cars.add(new Car("Opel","Corsa",15500));
        cars.add(new Car("Toyota","Yaris",17000));
        cars.add(new Car("Opel","Astra",19000));
        cars.add(new Car("Fiat","Tipo",12000));
    }
}

```

Message

Fiat: 2[Tipo, Panda]
Opel: 2[Corsa, Astra]
Toyota: 3[Yaris, Corolla, Aygo]

OK

run: ut - CarCompanies (run) X

1

```

import javax.swing.JOptionPane; //eisagwgh gia na mporesoume na ektypwsoume to parathyro
public class CarCompanies {

    public static void main(String[] args) {
        ArrayList<Car>cars=new ArrayList<>(); //arxikopoihsh arraylist
        //eisagwgh antikeimenwn sthn lista cars
        cars.add(new Car("Toyota","Yaris",14000));
        cars.add(new Car("Opel","Corsa",16000));
        cars.add(new Car("Toyota","Aygo",11000));
        cars.add(new Car("Toyota","Corolla",17000));
        cars.add(new Car("Fiat","Panda",12000));
        cars.add(new Car("Opel","Corsa",15500));
        cars.add(new Car("Toyota","Yaris",17000));
        cars.add(new Car("Opel","Astra",19000));
        cars.add(new Car("Fiat","Tipo",12000));
    }
}

```

run: BUILD SUCCESSFUL (total time: 27 seconds)

run: ut - CarCompanies (run) X

2