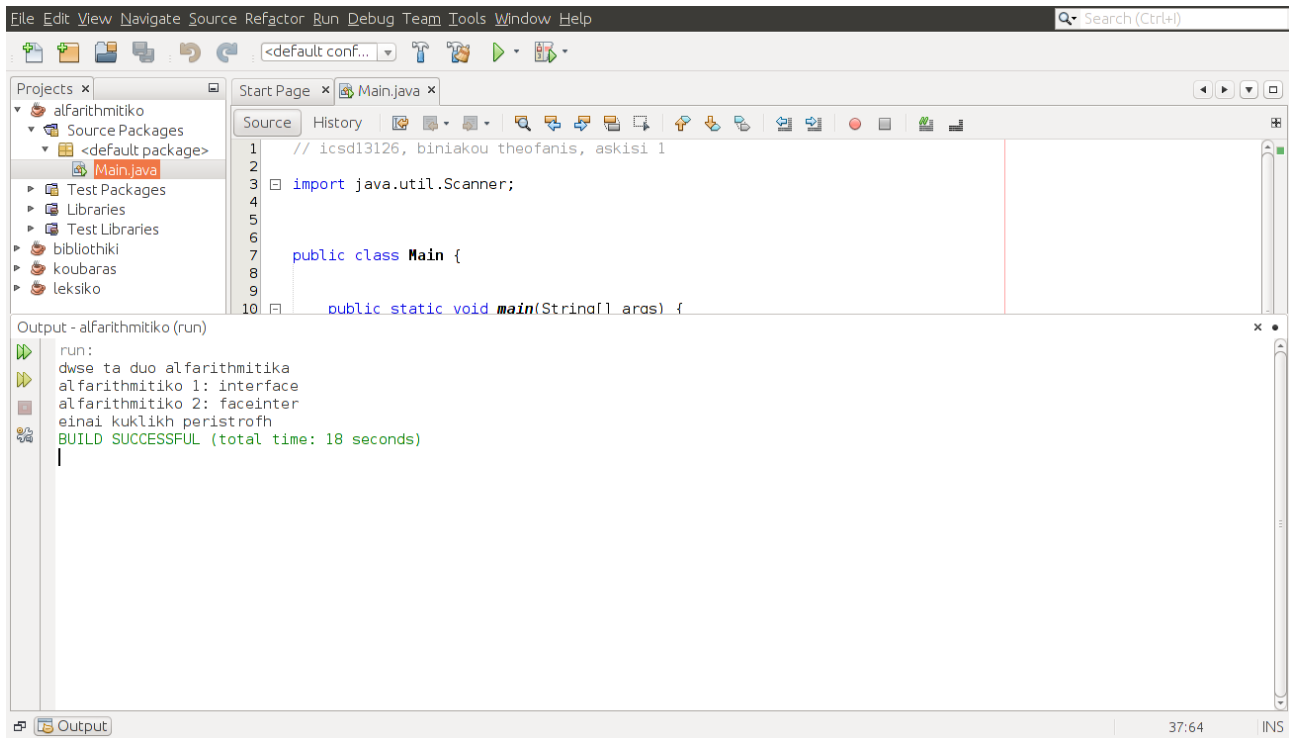


# **Αντικειμενοστρεφής Προγραμματισμός II – Εργαστήριο**

1ο ατομικό φυλλάδιο ασκήσεων

Μπινιάκου Θεοφάνης – 321/2013126

# Άσκηση 1



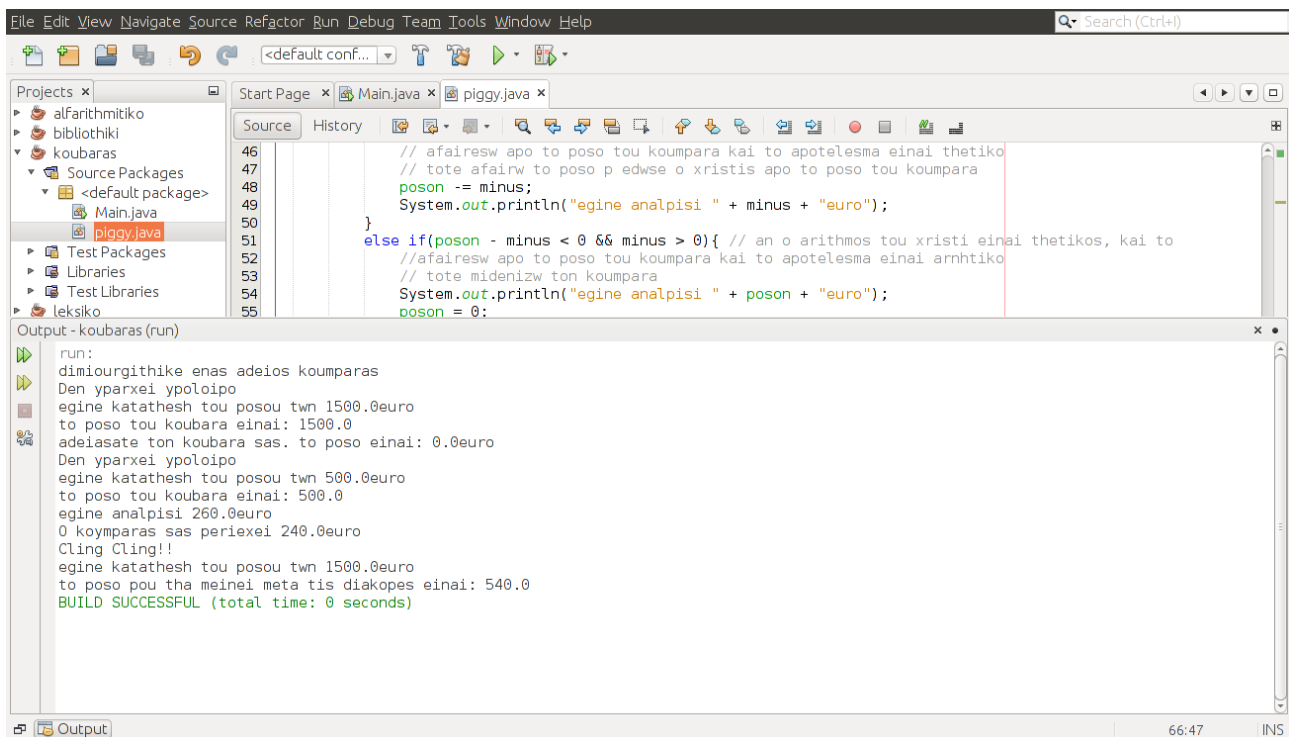
```
File Edit View Navigate Source Refactor Run Debug Team Tools Window Help
Search (Ctrl+)

Projects x
  alfarithmitiko
    Source Packages
      <default package>
        Main.java
    Test Packages
    Libraries
    Test Libraries
    bibliothiki
    koubaras
    leksiko

Start Page x Main.java x
Source History
1 // icsd13126, biniakou theofanis, askisi 1
2
3 import java.util.Scanner;
4
5
6
7 public class Main {
8
9
10 public static void main(String[] args) {

Output - alfarithmitiko (run)
run:
dwse ta duo alfarithmitika
alfarithmitiko 1: interface
alfarithmitiko 2: faceinter
einai kuklikh peristrofh
BUILD SUCCESSFUL (total time: 18 seconds)
```

# Άσκηση 2



```
File Edit View Navigate Source Refactor Run Debug Team Tools Window Help
Search (Ctrl+)

Projects x
  alfarithmitiko
  bibliothiki
  koubaras
    Source Packages
      <default package>
        Main.java
        piggy.java
    Test Packages
    Libraries
    Test Libraries
    leksiko

Start Page x Main.java x piggy.java x
Source History
46 // afairesw apo to poso tou koumpara kai to apotelesma einai thetiko
47 // tote afairw to poso p edwse o xristis apo to poso tou koumpara
48 poson -= minus;
49 System.out.println("egine analpisi " + minus + "euro");
50 }
51 else if(poson - minus < 0 && minus > 0){ // an o arithmos tou xristi einai thetikos, kai to
52 //afairesw apo to poso tou koumpara kai to apotelesma einai arnhtiko
53 // tote midenizw ton koumpara
54 System.out.println("egine analpisi " + poson + "euro");
55 poson = 0;

Output - koubaras (run)
run:
dimiourgithike enas adeios koumparas
Den yparxei ypoloipo
egine katathesh tou posou tw 1500.0euro
to poso tou koubara einai: 1500.0
adeiasate ton koubara sas. to poso einai: 0.0euro
Den yparxei ypoloipo
egine katathesh tou posou tw 500.0euro
to poso tou koubara einai: 500.0
egine analpisi 260.0euro
0 koymparas sas periexei 240.0euro
Cling Cling!!
egine katathesh tou posou tw 1500.0euro
to poso pou tha meinei meta tis diakopes einai: 540.0
BUILD SUCCESSFUL (total time: 0 seconds)
```

## Άσκηση 3

```
File Edit View Navigate Source Refactor Run Debug Team Tools Window Help
<default conf...
Projects
  alfarithmitiko
  bibliothiki
    Source Packages
      <default package>
        Main.java
        author.java
        book.java
        copy.java
        library.java
    Test Packages
    Libraries
Start Page
Main.java x author.java x book.java x copy.java x library.java x
Source
1 // icsd13126, biniakou theofanis, askisi 3
2
3 import java.util.HashSet;
4 import java.util.Set;
5
6
7 public class Main {
8
9
10 public static void main(String[] args) {
Output - bibliothiki (run)
run:
The library new library has opened!
New copy -> book1, author1, greek
New copy -> book1, author1, greek
New copy -> book1, author1, greek
New copy -> book1, author1, greek
New copy -> book1, author1, greek
New copy -> book1, author1, greek
New copy -> book2, author2, english
New copy -> book2, author2, english
New copy -> book2, author2, english
New copy -> book3, author2, english
New copy -> book3, author2, english
New copy -> book3, author2, english
New copy -> book3, author2, english
New copy -> book3, author2, english
New copy -> book3, author2, english
New copy -> book4, author3, italian
New copy -> book4, author3, italian
o arithmos twn antigrafn pou uparxoun sthn vivliothiki einai: 16
Output 1:1 INS
```

```
File Edit View Navigate Source Refactor Run Debug Team Tools Window Help
<default conf...
Projects
  alfarithmitiko
  bibliothiki
    Source Packages
      <default package>
        Main.java
        author.java
        book.java
        copy.java
        library.java
    Test Packages
    Libraries
Start Page
Main.java x author.java x book.java x copy.java x library.java x
Source
1 // icsd13126, biniakou theofanis, askisi 3
2
3 import java.util.HashSet;
4 import java.util.Set;
5
6
7 public class Main {
8
9
10 public static void main(String[] args) {
Output - bibliothiki (run)
New copy -> book3, author2, english
New copy -> book3, author2, english
New copy -> book3, author2, english
New copy -> book3, author2, english
New copy -> book3, author2, english
New copy -> book4, author3, italian
New copy -> book4, author3, italian
o arithmos twn antigrafn pou uparxoun sthn vivliothiki einai: 16
antigrafa p einai grammata se greek
tilos: book1, onoma suggrafea: author1, glwssa: greek
vrethikan 2 antigrafa tou vivliou :
tilos: book4, onoma suggrafea: author3, glwssa: italian
onomata suggrafewn twn opoiwn ta biblia uparxoun ws antigrafa sthn bibliothiki kai exoun brabeutei
author1
author3
BUILD SUCCESSFUL (total time: 0 seconds)
Output 1:1 INS
```

# Άσκηση 4

The screenshot shows an IDE with the following components:

- Projects:** A tree view on the left showing a project named 'leksiko' with sub-packages 'Source Packages' and 'Test Packages'. Under 'Source Packages', there is a package '<default package>' containing 'Main.java', 'dictionary.java', and 'menu.java'.
- Source:** The main editor window displays the code for 'Main.java'. The code is as follows:

```
1 // icstd13126, biniakou theofanis, askisi 4
2
3
4 public class Main {
5
6
7     public static void main(String[] args) {
8
9         menu m = new menu();
10    }
```
- Output - leksiko (run):** The output window shows the following text:

```
run:
dwste thn protash : Java Strings are immutable FYI.
thelete kanonikh h antistrofh metafrash?
kanonikh : 0 antistrofh : 1
apanthsh: 0
to metafrasmeno keimeno:
java strings are immutable for your information.
BUILD SUCCESSFUL (total time: 28 seconds)
```

The screenshot shows the same IDE as above, but with a different output:

- Source:** The code in 'Main.java' is identical to the previous screenshot.
- Output - leksiko (run):** The output window shows the following text:

```
run:
dwste thn protash : In case you missed it there is a deadline for the exercises
thelete kanonikh h antistrofh metafrash?
kanonikh : 0 antistrofh : 1
apanthsh: 1
to metafrasmeno keimeno:
icymi there is a deadline for the exercises
BUILD SUCCESSFUL (total time: 36 seconds)
```