ΠΡΟΤΕΙΝΟΜΕΝΕΣ
ΛΥΣΕΙΣ ΑΣΚΗΣΕΩΝ

Εξαιρέσεις *(Exceptions)* – Λάθη *(Errors)*
Χειρισμός των Εξαιρέσεων
(Exception Handling)

ΑΣΚΗΣΗ-1η (Δημιουργία κλάσης εξαιρέσεων – έγερση/ρίξιμο εξαιρέσεων-**Checked**)

```java
class AgeException extends Exception {
  public AgeException(String message) {
    super(message); } }

class TooYoungException extends AgeException {
 public TooYoungException(String message) {
    super(message); } }

class TooOldException extends AgeException {
  public TooOldException(String message) {
    super(message); } }

class AgeUtils {
   public static void checkAge(int age) throws TooYoungException, TooOldException {
      if (age < 18) {
          throw new TooYoungException("Hlikia " + age + " einai poli mikros (epitreptes 18-30) - den epilegetai");
      } else if (age > 30) {
          throw new TooOldException("Hlikia " + age + " einai megalyteros (epitreptes 18-30) - den epilegetai");
      }
      System.out.println("Age " + age + " OK - epilegetai");
} }

class ExceptionDemo {
   public static void main(String[] args) {
   int age = 55;
   try {
    AgeUtils.checkAge(age);
     System.out.println("Epilegetai...!");

   } catch (TooYoungException e) {
     System.out.println("Poli mikros, den epilegetai...");
     System.out.println(e.getMessage());

   } catch (TooOldException e) {
     System.out.println("Poli megalos, den epilegetai...");
     System.out.println(e.getMessage());
   }
} }
```

```
Poli megalos, den epilegetai...
Hlikia 55 einai megalyteros (epitreptes 18-30) - den epilegetai
Press any key to continue . . .
```

ΑΣΚΗΣΗ-2η (Δημιουργία κλάσης εξαιρέσεων – έγερση/ρίξιμο εξαιρέσεων **- Unchecked**)

```java
class MyException extends RuntimeException {
   private String message;

   public MyException(String message) {
      this.message = message;  }

   public String getMessage() {
      return message;
}}


class Account {
   private int balance = 5000;

   public int balance() {
      return balance;  }

   public void withdraw(int amount) throws MyException {
      if (amount > balance) {
         throw new MyException(String.format("To ypoloipo %d einai mikrotero apo to poso pou apaiteitai %d",
             balance, amount));
      }
      balance = balance - amount;
   }

   public void deposit(int amount) throws MyException {
      if (amount <= 0) {
         throw new MyException(String.format("Lathos poso katathesis %s", amount));
      }
      balance = balance + amount;
}}

class TestAccount {
   public static void main(String args[]) {
      Account acct = new Account();
      System.out.println("Trehon Ypoloipo : " + acct.balance());
      String answ;
      int i;

      do {
                System.out.println("1 - Katathesi");
                System.out.println("2 - Analipsi");
                i=UserInput.getInteger();
                if (i==2) {
```

2

```java
        System.out.println("Dose poso analipsis ");
        int x=UserInput.getInteger();
        acct.withdraw(x);
        System.out.println("Trehon Ypoloipo : " + acct.balance());
          }else {
                    System.out.println("Dose poso katathesis ");
                    int y=UserInput.getInteger();
                    acct.deposit(y);
        System.out.println("Trehon Ypoloipo : " + acct.balance());
        }
      System.out.println("Syneheia ? (nai| oxi)");
      answ=UserInput.getString();
         }while(answ.equals("nai"));
}}
```



```
C:\Windows\system32\cmd.exe                                    —    □    ×

Trehon Ypoloipo : 5000
1 - Katathesi
2 - Analipsi
2
Dose poso analipsis
200
Trehon Ypoloipo : 4800
Syneheia ? (nai| oxi)
nai
1 - Katathesi
2 - Analipsi
2
Dose poso analipsis
5000
Exception in thread "main" MyException: To ypoloipo 4800 einai mikrotero apo to poso pou apaiteitai 5000
        at Account.withdraw(TestAccount.java:24)
        at TestAccount.main(TestAccount.java:55)
Press any key to continue . . .
```



```
C:\Windows\system32\cmd.exe                                    —    □    ×

Trehon Ypoloipo : 5000
1 - Katathesi
2 - Analipsi
1
Dose poso katathesis
300
Trehon Ypoloipo : 5300
Syneheia ? (nai| oxi)
nai
1 - Katathesi
2 - Analipsi
1
Dose poso katathesis
-200
Exception in thread "main" MyException: Lathos poso katathesis -200
        at Account.deposit(TestAccount.java:33)
        at TestAccount.main(TestAccount.java:60)
Press any key to continue . . .
```

3

```java
class MyException extends RuntimeException {
   private String message;

   public MyException(String message) {
      this.message = message; }

   public String getMessage() {
      return message; } }

class Account {
   private int balance = 5000;

   public int balance() {
      return balance;  }

   public void withdraw(int amount) throws MyException {
      if (amount > balance) {
         throw new MyException(String.format(
               "To ypoloipo %d einai mikrotero apo to poso pou apaiteitai %d",
               balance, amount));
      }
      balance = balance - amount;
   }

   public void deposit(int amount) throws MyException {
      if (amount <= 0) {
         throw new MyException(String.format(
               "Lathos poso katathesis %s", amount));
      }
      balance = balance + amount;
}}

class TestAccount1 {
   public static void main(String args[]) {
      Account acct = new Account();
      System.out.println("Trehon Ypoloipo : " + acct.balance());
      String answ;
      int i;
      do {
            System.out.println("1 - Katathesi");
               System.out.println("2 - Analipsi");
              i=UserInput.getInteger();
         if (i==2) {

               try {
            System.out.println("Dose poso analipsis ");
            int x=UserInput.getInteger();
            acct.withdraw(x);
            System.out.println("Trehon Ypoloipo : " + acct.balance());
         } catch(MyException e){
            System.out.println(e); }
```

```java
        }else {
            try {
                System.out.println("Dose poso katathesis ");
                int y=UserInput.getInteger();
                acct.deposit(y);
                System.out.println("Trehon Ypoloipo : " + acct.balance());
            } catch(MyException e){
                System.out.println(e);
            }
        }
    System.out.println("Syneheia ? (nai| oxi)");
    answ=UserInput.getString();
}while(answ.equals("nai"));
}}
```