

Software Testing, Autumn 2005

Exercises V

8.12.2005

1. Design test cases for the *Withdraw* use case of the Automatic Teller Machine used as an example in Chapter 7.2 of the lecture slides of the course.
2. The program which was tested in Exercise 2 / IV (28.11-2.12.2005) has been modified into the following form, so it must be regression tested:

```
x=0; read(y);  
while (y > x) { x=x+y; read(y); }  
if (x < 100) print(x+x) else print(x);
```

Design test cases for reaching the complete *all-uses* coverage with respect to variable *x* in the modified program. If possible, reuse existing test cases from Exercise 2(d) / IV.

3. What are the principles and main challenges of testing Web applications?

You may use the following article as source (available both in paper format and in electronic format in the online materials of the Kumpula Science Library):

E. Hieatt, R. Mee: Going Faster: Testing the Web Application. *IEEE Software* 19, 2 (March / April), 2002, 60-65.

4. What is *self-testable code*? Does it make testing easier or harder?

You may use the following article as source (available both in paper format and in electronic format in the online materials of the Kumpula Science Library):

J.-M. Jézéquel, D. Deveaux, Y. Le Traon: Reliable Objects: Lightweight Testing for OO Languages. *IEEE Software* 18,4 (July / August), 2001, 76-83.