

# Virtual Machines

## Exercise Sheet 5

*Deadline: 27 Mai 2008, during lecture, by email, or in room 02.07.041*

### Exercise 1:

*5+5+10 Points*

Compute  $Code_V e \rho sd$  for the following values of  $e$ , with  $\rho = \{\}$  and  $sd = 0$ . Annotate each instruction with the current stack distance.

a) Function application

```
let a = 50;  
  f = fn x, y => x * y + a  
in (f 10 20)
```

b) Undersupply

```
let a = 50;  
  f = fn x, y => x * y + a;  
  g = (f 10)  
in (g 20); */
```

c) Oversupply

```
let a = 50;  
  f = fn x => (fn y => x * y + a)  
in (f 10 20)
```