



UNIVERSITÄT  
KOBLENZ · LANDAU

## **Business Process Management**

### **Exercise 2**

#### **Group 04**

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**TOTAL: 9,75/10**

You handed in the EXACT same solution as Group 12. I would highly recommend to refrain from copying each others results in the future!

## Exercise 2 (Business Process Management)

$$M = (V, E, C, L, TV, TE, \alpha, \beta, \chi)$$

$$V = \{v1, v2, v3, v4, \dots, v48\}$$

$$E = \{e1, e2, e3, e4, \dots, e49\}$$

$$E = ED \cup EU$$

$$ED = \{e1, e2, e3, e4, e5, e6, e7, e8, e9, e10, e11, e12, e24, e49\}$$

$$EU = \{e13, e14, e15, e16, e17, e18, e19, e20, e21, e22, e23, e24, e25, e26, e27, e28, e29, e30, e31, e32, e33, e34, e35, e36, e37, e38, e39, e40, e41, e42, e43, e44, e45, e46, e47, e48\}$$

$$C = \{\text{"Receipt of customer complaint"}, \text{"Verify information is complete"}, \text{"Incomplete information"}, \text{"Request missing information"}, \text{"Information complete"}, \text{"Process complaint"}, \text{"No customer answer"}, \text{"Decline Complaint"}, \text{"End process"}, \text{"Complaint information"}, \text{"CRM system"}, \text{"Customer service agent"}, \text{"10 , minutes"}, \text{"20 , minutes"}\}$$

$$TV = \{\underline{f}unction, \underline{e}vent, \underline{x}or, \underline{o}rgunit, \underline{i}nput, \underline{s}upportingsystem, \underline{d}uration, \underline{n}ame\}$$

$$TE = TED \cup TEU$$

$$TED = \{e\_f, f\_x, x\_e, x\_x\}$$

Here you also would have to define what these abbreviations actually stand for, e.g.,  $f\_org = \{function, orgunit, 1\} (-0,25)$

$$TEU = \{f\_inp, f\_sup, f\_dur, f\_org, f\_n, e\_n, inp\_n, sup\_n, org\_n\}$$

$$TE = \{e\_f, f\_x, x\_e, x\_x, f\_inp, f\_sup, f\_dur, f\_org, f\_n, e\_n, inp\_n, sup\_n, org\_n\}$$

$$L = (TV, TE)$$

$$\alpha(v1) = \alpha(v4) = \alpha(v8) = \alpha(v10) = \alpha(v13) = event,$$

$$\alpha(v2) = \alpha(v5) = \alpha(v9) = \alpha(v11) = function,$$

$$\alpha(v3) = \alpha(v6) = \alpha(v7) = \alpha(v12) = xor,$$

$$\alpha(v14) = \alpha(v18) = \alpha(v20) = \alpha(v25) = input,$$

$$\alpha(v17) = \alpha(v20) = \alpha(v22) = \alpha(v26) = orgunit,$$

$$\alpha(v16) = \alpha(v19) = \alpha(v24) = \alpha(v28) = duration,$$

$$\alpha(v15) = \alpha(v17) = \alpha(v23) = \alpha(v27) = supportingsystem,$$

$$\alpha(v29) = \alpha(v30) = \alpha(v31) = \alpha(v32) = \alpha(v33) = \alpha(v34) = \alpha(v35) = \alpha(v36) =$$

$$\alpha(v37) = \alpha(v38) = \alpha(v39) = \alpha(v40) = \alpha(v41) = \alpha(v42) = \alpha(v43) = \alpha(v44) =$$

$$\alpha(v45) = \alpha(v46) = \alpha(v47) = \alpha(v48) = name$$

$\beta(e1) = \beta(e4) = \beta(e8) = \beta(e10) = e\_f$ ,  
 $\beta(e2) = \beta(e5) = \beta(e11) = \beta(e24) = f\_x$ ,  
 $\beta(e3) = \beta(e7) = \beta(e9) = \beta(e12) = x\_e$ ,  
 $\beta(e6) = \beta(e49) = x\_x$ ,  
 $\beta(e13) = \beta(e17) = \beta(e20) = \beta(e25) = f\_inp$ ,  
 $\beta(e14) = \beta(e22) = \beta(e27) = f\_sup$ ,  
 $\beta(e15) = \beta(e18) = \beta(e23) = \beta(e28) = f\_dur$ ,  
 $\beta(e16) = \beta(e19) = \beta(e21) = \beta(e26) = f\_org$ ,  
 $\beta(e29) = \beta(e31) = \beta(e33) = \beta(e35) = \beta(e37) = e\_n$ ,  
 $\beta(e30) = \beta(e32) = \beta(e34) = \beta(e36) = f\_n$ ,  
 $\beta(e38) = \beta(e41) = \beta(e43) = \beta(e46) = inp\_n$ ,  
 $\beta(e39) = \beta(e45) = \beta(e48) = sup\_n$ ,  
 $\beta(e40) = \beta(e42) = \beta(e44) = \beta(e47) = org\_n$ ,

$\chi(v29) = \text{"Receipt of customer complaint"}$ ,  
 $\chi(v30) = \text{"Verify information is complete"}$ ,  
 $\chi(v31) = \text{"Incomplete information"}$ ,  
 $\chi(v32) = \text{"Request missing information"}$ ,  
 $\chi(v33) = \text{"Information complete"}$ ,  
 $\chi(v34) = \text{"Process complaint"}$ ,  
 $\chi(v35) = \text{"No customer answer"}$ ,  
 $\chi(v36) = \text{"Decline Complaint"}$ ,  
 $\chi(v37) = \text{"End process"}$ ,  
 $\chi(v38) = \chi(v41) = \chi(v43) = \chi(v46) = \text{"Complaint information"}$ ,  
 $\chi(v39) = \chi(v45) = \chi(v48) = \text{"CRM system"}$ ,  
 $\chi(v40) = \chi(v42) = \chi(v44) = \chi(v47) = \text{"Customer service agent"}$ ,  
 $\chi(v16) = \chi(v19) = \text{"10 , minutes"}$ ,  
 $\chi(v24) = \chi(v28) = \text{"20 , minutes"}$