

EDABA Homework 2

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November 6, 2022

1 Task 1

Find names of Students attending at least 3 lectures

$$\begin{aligned}LS1 &:= LS(L\# \rightarrow L1\#) \\LS2 &:= LS(L\# \rightarrow L2\#) \\R1 &:= LS \bowtie LS1 \\R2 &:= \sigma_{L\# \neq L1\#}(R1) \\R3 &:= R2 \bowtie LS2 \\RF &:= \sigma_{L\# \neq L2\# \text{ AND } L1\# \neq L2\#}(R1) \\S1 &= \pi_{S\#}(RF) \\RES &= \pi_{SName}(S1 \bowtie ST)\end{aligned}$$

2 Task 2

Find names of Students attending at least 2 lectures having ECTS > 5

$$\begin{aligned}LS51 &:= LS \bowtie \pi_{L\#}(\sigma_{ECTS > 5}(L)) \\LS52 &:= LS51(L\# \rightarrow L52\#) \\R1 &:= LS51 \bowtie LS52 \\R2 &:= \sigma_{L\# \neq LS52\#}(R1) \\R3 &:= \pi_{S\#}(R2) \\Res &:= \pi_{SName, S\#}(ST \bowtie R3)\end{aligned}$$

3 Task 3

Find the oldest students

$$R1 := \pi_{S\#,Age}(ST)$$

$$R2 := \pi_{S\#,Age}(ST)$$

$$R3 := R1 \bowtie R2 (AGE \rightarrow AGE2)$$

$$R4 := \sigma_{R1.age < R2.age2}(R3)$$

$$R5 := \pi_{S\#}(ST) - \pi_{S1}(R3)$$