DMD HW8

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1 Part A

Please see the solution here: https://github.com/ariser/Innopolis/tree/master/y3s1/DMD/HW8.

2 Part B

2.1

a) The closure for {AB} is {ABCDEF}.

b) ABC, CDE, EFA is

- Lossless - No
- Dependency Preserving - No

c) ABCE, ADC, ADEF is

- Lossless - Yes
- Dependency Preserving - Yes

2.2

a) QST, QR, PRSUV is

- Lossless - Yes
- Dependency Preserving - No

b) QST, QR, PRSUV, PRT is

- Lossless - Yes
- Dependency Preserving - Yes

2.3

a)

- 3NF - Yes
- BCNF - No

b) ABC, BD, AE

c) A → B, B → D

d) No.

e) ABC, CDE, AE, BD