

1)

a) ALTER TABLE CUAHANG ADD CONSTRAINT
CK_CHIEUCAO CHECK (~~CAOTB~~ && CAOMC ≥ 475)

b) UPDATE XANGDAU

SET GIACOSO = GIACOSO * 0,9
TENXD

WHERE ~~TENXANGDAU~~ = 'Xã không chi ES'

c) DELETE FROM DNNK

WHERE (MADN = 'DN002') AND (LOAIDN = 'Nhà nước')

2)

a) $\pi_{MACH, MAXD}$ (NHAP)
 $\sigma_{MONTH(NGAYNHAP)} = 10 \wedge YEAR(NGAY$

NHAP) = 2021 \wedge SOLUONG > 1000)

b) $A \leftarrow \sigma_{TENLX = 'Xăng không chi ES'}$ (LOAI XANG)

$B \leftarrow \sigma_{THUEPHI > 1}$ (XANG DAU)

$AB \leftarrow A \bowtie_{MALX} B$

$C \leftarrow AB \bowtie_{MADN} DNNK$

$\pi_{MADN, TENDN}$ (C)

c) $Q \leftarrow \pi_{MALX, TENLX}$ (LOAI XANG)
 $\sigma_{MODQ = 'V'}$

$Q_1 \leftarrow Q \bowtie_{MALX} XANGDAU$

$\pi_{MALX, TENLX, TENXD}$ (Q_1)

d) $A \leftarrow \sigma_{\text{TENXD} = \text{'Xăng không chỉ R95'}} \text{ (XANGDAU)}$
 (NHAP)
 $B \leftarrow \sigma_{\text{NGAYNHAP} = \text{'09/10/2022'}} \text{ (NHAP)}$
 $AB \leftarrow A \bowtie B$

$\pi_{\text{MACH, TENCH}} (\pi_{\text{CUAHANG}} - \pi_{\text{MACH}} (AB))$

e) $A \leftarrow \sigma_{\text{YEAR(NGAYNHAP)} = 2022} \text{ (NHAP)}$

$B \leftarrow \text{MACH } \int_{\text{count AS SO_LAN_NHAP}} (R_1)$

$\pi_{\text{MACH, TENCH, SO_LAN_NHAP}} (B \bowtie \text{CUAHANG})$
 (DUNK)

f) $R_1 \leftarrow \sigma_{\text{YEAR(NGAYTL)} = 1990}$

$R_2 \leftarrow \pi_{\text{MADN, TENON, MAXD}} (R_1 \bowtie \text{XANGDAU})$
 (MADN)

$R_3 \leftarrow \pi_{\text{MAXD}} (\text{XANGDAU})$

$R_4 \leftarrow R_2 \div R_3$