

第三章

3. (1) $\sigma_{A=10}(S)$

SELECT * FROM S WHERE A=10;

(2) $\pi_{A,B}(S)$

SELECT A, B
FROM S;

(3) $S \bowtie T$

SELECT A, B, S.C, S.D, E, F
FROM S, T

WHERE S.C = T.C AND S.D = T.D;

(4) $S \bowtie_{S.C=T.C} T$

SELECT S.*, T.*
FROM S, T
WHERE S.C = T.C;

(5) $S \bowtie_{A < E} T$

SELECT S.*, T.*
FROM S, T
WHERE A < E;

(6) SELECT *

FROM (SELECT C, D
FROM S), T;

5. 关系模型的完整性规则是对关系的某种约束条件, 也就是说关系的值随着时间变化时应该满足一些约束条件。这些约束条件实际上是现实世界的要求。任何关系在任何时刻都要满足这些语义约束。

当参照关系外码属性的每个属性值均为空值

6. (1) $\pi_{sno}(\sigma_{jno='j_1'}(SPJ))$

(2) $\pi_{sno}(\sigma_{jno='j_1' \wedge pno='p_1'}(SPJ))$

(3) $\pi_{sno}(\sigma_{color='p'}(\pi_{pno, color}(P) \bowtie SPJ))$

(4) $\pi_{jno}(\sigma_{color='p'}(\pi_{pno, color}(P) \bowtie SPJ))$

(5) $\pi_{jno, pno}(SPJ) \div \pi_{pno}(\sigma_{sno='s_1'}(SPJ))$