

Assignment 3 Task 3

(1)

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-- (1)
(i) Find full information about the applicants who applied for a position offered by a given employer.
APPLICANT JOIN APPLIES JOIN POSITION

(ii) Find full information about the applicants who possess a given skill.
APPLICANT JOIN SPOSSESSED

(iii) Find full information about the skills possessed by a given applicant.
SKILL JOIN SPOSSESSED

(iv) Find full information about the positions applied by a given applicant.
POSITION JOIN APPLIES

(v) Find full information about employers who advertise more than a given number positions.
EMPLOYER JOIN POSITION
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(2)

Clustering graph without labels



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-- (2)

(i) APPLICANT JOIN APPLIES JOIN POSITION broken down INTO
APPLICANT JOIN APPLIES ==>
Savings = [3 x (1000 + 600) - (1000 + 600)] x 10 = 32000 read block operations
APPLIES JOIN POSITION ==>
Savings = [3 x (600 + 400) - (600 + 400)] x 10 = 20000 read block operations

(ii) APPLICANT JOIN SPOSSESSED ==>
Savings = [3 x (1000 + 500) - (1000 + 500)] x 10 = 30000 read block operations

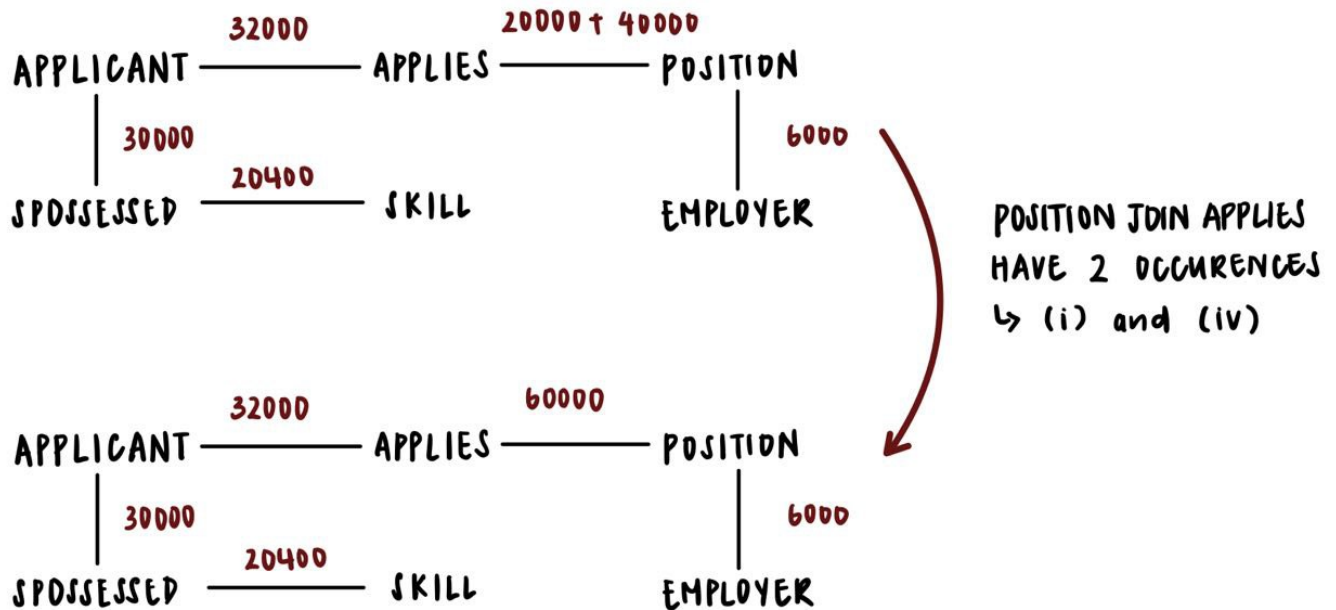
(iii) SKILL JOIN SPOSSESSED ==>
Savings = [3 x (10 + 500) - (10 + 500)] x 20 = 20400 read block operations

(iv) POSITION JOIN APPLIES ==>
Savings = [3 x (400 + 600) - (400 + 600)] x 20 = 40000 read block operations

(v) EMPLOYER JOIN POSITION ==>
Savings = [3 x (200 + 400) - (200 + 400)] x 5 = 6000 read block operations
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(3)

Clustering graph with labels



(4)

STEP 1 (Identify V_{max})

Cluster : APPLIES + POSITION



STEP 2 (Identify next V_{max})

Cluster : APPLICANT + SPOSSESSED



The clustering graph has no more edges.

Clusters present : APPLIES and POSITION, APPLICANT and SPOSSESSED