**Student:** *s3955624* **Practical Data Model:** *Want-2-Work*

**Business Question**

1. Which companies provide internship opportunity? List out the company name and the number of internship opportunities posted.

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| SELECT employer.name, COUNT(\*) AS number\_of\_internship  FROM vacancy  JOIN employer ON vacancy.employer\_no = employer.employer\_no  WHERE vacancy.job\_type = 'I'  GROUP BY vacancy.employer\_no; |

1. The agency would like to contact employer which did not has any vacancy posted. Can you find out its staff details (full name, email, phone (if have)) for the agency to contact?

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| SELECT CONCAT(staff.first\_name, ' ', staff.last\_name) AS full\_name, staff.email, staff.phone  FROM staff  JOIN employer ON staff.employer\_no = employer.employer\_no  WHERE staff.employer\_no NOT IN (SELECT DISTINCT employer\_no FROM vacancy); |

1. The agency would like to know the demographic of its applicants. Provide the number of applicant for each declared residency status by the applicant.

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| SELECT residency\_status, COUNT(\*) AS number\_of\_applicant  FROM applicant  GROUP BY residency\_status; |

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1. The agency would like to know the number of application for each posted vacancy. List the company name, vacancy title and number of application.

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| SELECT e.name AS company\_name, v.title, COUNT(a.application\_no) AS number\_of\_application  FROM vacancy v  LEFT JOIN application a ON v.vacancy\_no = a.vacancy\_no  JOIN employer e ON v.employer\_no = e.employer\_no  GROUP BY v.vacancy\_no; |

1. Assume the current date is 1st June 2024. The agency would like to have a list of outstanding job vacancy (This refer to vacancy which its offer is not sent yet). Provide the company name, vacancy title, number days since posted. Sort from oldest vacancy.

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| SELECT e.name AS company\_name, v.title, DATEDIFF('2024-06-01', v.post\_date) AS day\_since\_posted  FROM vacancy v  JOIN employer e ON v.employer\_no = e.employer\_no  WHERE v.post\_date < '2024-06-01' AND '2024-06-01' < v.end\_date  AND v.vacancy\_no NOT IN (  SELECT DISTINCT v.vacancy\_no  FROM vacancy v  LEFT JOIN application a ON v.vacancy\_no = a.vacancy\_no  WHERE a.status = 'O'  ) ORDER BY DATEDIFF('2024-06-01', v.post\_date) DESC; |

1. What is the progress of each applicant’s placement? List out their full name, number of applications, interview, and job offer. Sort by their full name in alphabetical order.

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| SELECT  CONCAT(first\_name, ' ', last\_name) AS full\_name,  COUNT(DISTINCT application.application\_no) AS number\_of\_application,  COUNT(interview.application\_no) AS number\_of\_interview,  SUM(CASE WHEN application.status = 'O' THEN 1 ELSE 0 END) AS number\_of\_offer  FROM applicant  LEFT JOIN application ON applicant.applicant\_no = application.applicant\_no  LEFT JOIN interview ON application.application\_no = interview.application\_no  GROUP BY applicant.applicant\_no  ORDER BY full\_name ASC; |

1. What is the progress of each vacancy? List out company name, title, number of applications, interview, and job offer. Sort by the company name and title.

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| SELECT  employer.name AS company,  vacancy.title,  COUNT(DISTINCT application.application\_no) AS number\_of\_application,  COUNT(interview.application\_no) AS number\_of\_interview,  SUM(CASE WHEN application.status = 'O' THEN 1 ELSE 0 END) AS number\_of\_offer  FROM vacancy  JOIN employer ON vacancy.employer\_no = employer.employer\_no  LEFT JOIN application ON vacancy.vacancy\_no = application.vacancy\_no  LEFT JOIN interview ON application.application\_no = interview.application\_no  GROUP BY vacancy.vacancy\_no  ORDER BY company, title ASC; |

1. Which skills are common among applicants who were offered a job as “Software Engineer Internship” at Canva? Sort the skill in alphabetical order.

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| SELECT skill\_name  FROM applicant  JOIN applicant\_skill ON applicant.applicant\_no = applicant\_skill.applicant\_no  JOIN application ON applicant.applicant\_no = application.applicant\_no  JOIN vacancy ON application.vacancy\_no = vacancy.vacancy\_no  JOIN employer ON vacancy.employer\_no = employer.employer\_no  WHERE vacancy.title = 'Software Engineer Internship' AND  employer.name = 'Canva' AND  application.status = 'O'  GROUP BY skill\_name HAVING COUNT(\*) = (  SELECT COUNT(\*)  FROM applicant  JOIN application ON applicant.applicant\_no = application.applicant\_no  JOIN vacancy ON application.vacancy\_no = vacancy.vacancy\_no  JOIN employer ON vacancy.employer\_no = employer.employer\_no  WHERE vacancy.title = 'Software Engineer Internship' AND  employer.name = 'Canva' AND  application.status = 'O'  ) ORDER BY skill\_name ASC; |

1. List out all the skills of applicant who has ‘finance manager’ in their experience. Sort the skill in alphabetical order.

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| SELECT DISTINCT skill\_name  FROM applicant  JOIN applicant\_skill ON applicant.applicant\_no = applicant\_skill.applicant\_no  JOIN applicant\_experience ON applicant.applicant\_no = applicant\_experience.applicant\_no  WHERE applicant\_experience.title LIKE '%Finance Manager%'  ORDER BY skill\_name ASC; |

1. Provide the company name, job title, applicant’s full name, residency status, qualification degree title(s) and its instuition name, and the number of skills for those who received job offers.

Hint: if required, use GROUP\_CONCAT() to list out multiple value in a single cell connected using ‘/’. Tips: Display their qualification in the format, Bachelor of Science @ RMIT University.

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| SELECT  employer.name,  vacancy.title,  CONCAT(first\_name, ' ', last\_name) AS full\_name,  applicant.residency\_status,  GROUP\_CONCAT(DISTINCT CONCAT(degree\_title, ' @ ', institution) SEPARATOR '/') AS qualification,  COUNT(DISTINCT skill\_name) AS number\_of\_skill  FROM applicant  JOIN applicant\_qualification ON applicant.applicant\_no = applicant\_qualification.applicant\_no  JOIN applicant\_skill ON applicant.applicant\_no = applicant\_skill.applicant\_no  JOIN application ON applicant.applicant\_no = application.applicant\_no  JOIN vacancy ON application.vacancy\_no = vacancy.vacancy\_no  JOIN employer ON vacancy.employer\_no = employer.employer\_no  WHERE application.status = 'O'  GROUP BY employer.name, vacancy.title, full\_name, residency\_status; |