Program #4: Database Design and Implementation
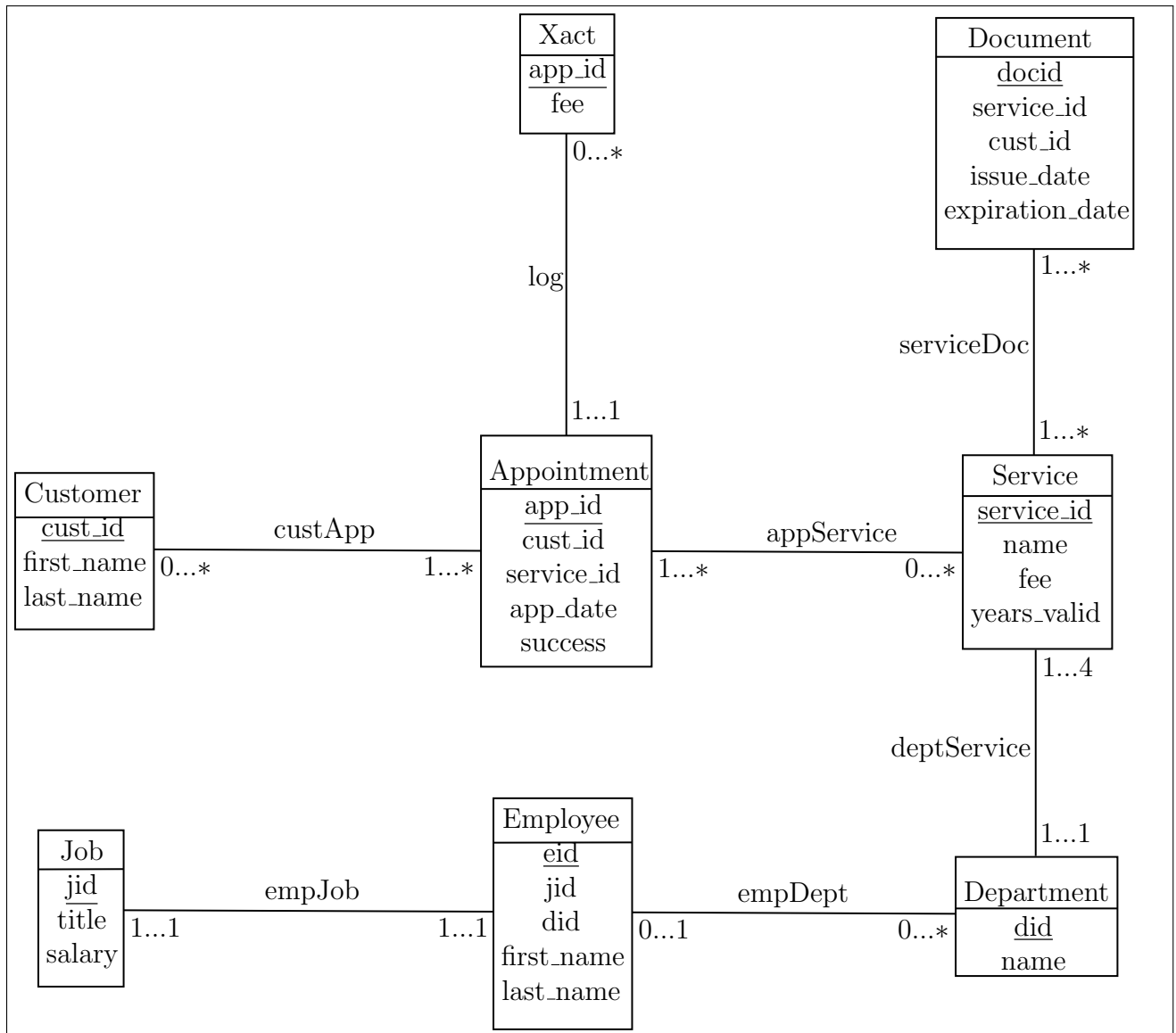
Due Date: December 6th, 2021, <u>at the beginning of class</u>

Danny Ryngler – <dryngler@email.arizona.edu>
James O'Connell – <oconnellj2@email.arizona.edu>

1 Conceptual Database Design

2 Logical database design

Customer | <u>cust_id</u> | first_name | last_name |

Appointment | <u>app_id</u> | cust_id | service_id | app_date | success |

Xact | <u>xact_id</u> | app_id | fee |

Service | <u>service_id</u> | name | fee | years_valid |

Document | <u>docid</u> | service_id | cust_id | issue_date | expiration_date |

Job | <u>jid</u> | title | salary |

Employee | <u>eid</u> | jid | did | first_name | last_name |

Department | <u>did</u> | name |

3 Normalization analysis

4 Query description

```
SELECT salary
FROM Job, Employee
WHERE Job.jid = Employee.jid
AND Employee.first_name = '%s'
AND Employee.last_name = '%s'
```

Our self–designed query answers the question: "What is the salary of a given Employee". Given the first and last name from the user and by preforming a join on the Employee and Job relations, we are able to determine the answer to this question. The utility of the query allows users to get insight into the people that work at the DMV.