ASSIGNMENT 1
ANSWER 1

CSCI 5408 – DATA MANAGEMENT, WAREHOUSING & ANALYTICS

PRASHIT PATEL

B00896717

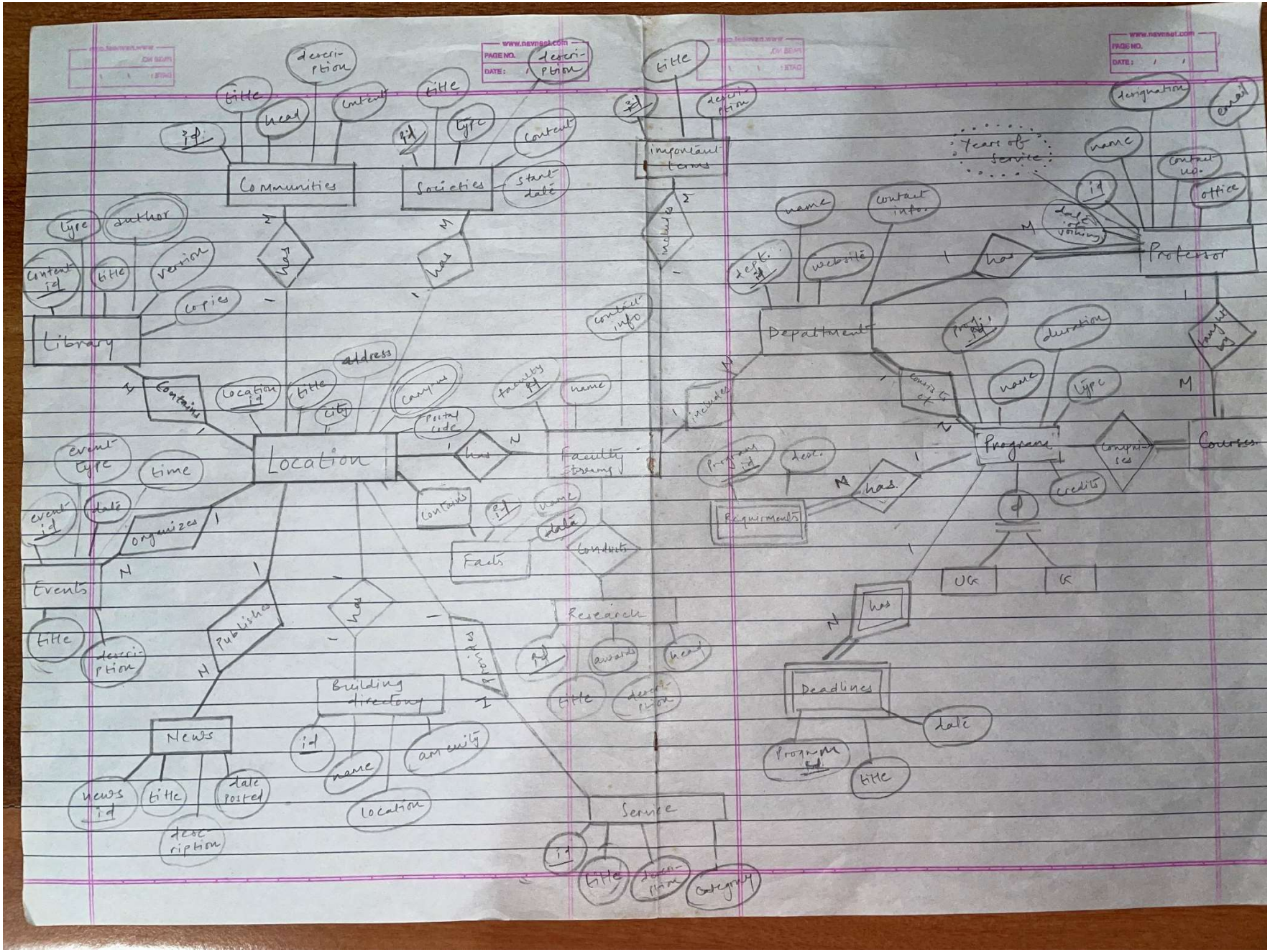
Entities

Entity	Reasons for considering	Source
Locations	This entity represents locations of different campuses for Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information such as address, contact information for different campuses of Dalhousie University.	Information related to this entity is found in https://www.dal.ca/about-dal.html
Facts	This entity represents facts and figures about Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide such as number of programs provided, number of students and other import figures about the university.	Information related to this entity is found in https://www.dal.ca/about-dal/dal-at-a-glance.html
Faculty Streams	This entity represents different faculties available at Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information about different faculties such as Agriculture, Architecture and Planning etc.	Information related to this entity is found in https://www.dal.ca/academics/faculties.html
Departments	This entity represents different departments available within each faculty. It is a weak entity because it depends on Faculties entity. This is a valid entity and will provide information such as department title, description and degrees offered by a particular department.	Information related to this entity is found in https://www.dal.ca/faculty/science/explore/departments-programs.html
Programs	This entity represents different programs available within each department. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information such as undergraduate and graduate programs available under each department.	Information related to this entity is found in https://www.dal.ca/faculty/computerscience/graduate-programs.html
Courses	This entity represents different types of courses provided by each department in each program at Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information about different courses a student can take under respective programs.	Information related to this entity is found in https://www.dal.ca/faculty/computerscience/undergraduate-programs/program-planning/suggested_courses.html

Admission Requirements	This entity represents admission requirements for different admission types and programs. It is a weak entity because it depends on Programs entity. This is a valid entity and will provide information about requirements specific to each program.	Information related to this entity is found in https://www.dal.ca/academics/programs/graduate/applied-computer-science/admissions.html
Admission Deadlines	This entity represents admission deadlines for different admission types and programs. It is a weak entity because it depends on Programs entity. This is a valid entity and will provide information about deadlines specific to each program.	Information related to this entity is found in https://www.dal.ca/admissions/application-deadlines.html
Important Terms	This entity represents important terms about university. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide definitions about important university terms.	Information related to this entity is found in https://www.dal.ca/campus_life/academic-support/register-for-courses/important-terms.html
Library	This entity represents library content information. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information about different content types, titles and author details available in library.	Information related to this entity is found in https://libraries.dal.ca/
Research	This entity represents research information carried out at the university. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information such as research domain, description, awards for that research and other related information.	Information related to this entity is found in https://www.dal.ca/research.html
Campus News	This entity represents important news about Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information such as topic, title, and other new related information.	Information related to this is found in https://www.dal.ca/news.html
Campus Events	This entity represents events held at Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information such as type, location, date, and other details of the events held at the university.	Information related to this is found in https://www.dal.ca/campus_life/student-events.html
Communities	This entity represents information about different communities at Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information about community details such as coordinator details, community description, contact information etc.	Information related to this is found in https://www.dal.ca/campus_life/communities.html

Societies	This entity represents different societies and organizations currently active at Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information about societies going on in campus.	Information related to this can be found in https://www.dal.ca/campus_life/student-societies-and-organizations.html
Professor	This entity represents professor details employed at Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information such as name, email, office and other details about the professor teaching at the university.	Information related to this can be found in https://www.dal.ca/faculty/computerscience/faculty-staff.html
Building Directory	This entity represents building details at Dalhousie University. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information such as location photo, address, amenities and purpose of buildings at the university.	Information related to this can be found in https://www.dal.ca/campus-maps/building-directory.html
Services	This entity represents different types of services available at the university. It is a strong entity because it does not depend on any other entity. This is a valid entity and will represent different types of services provided to students, faculty members and staff by the university.	Information related to this can be found in https://www.dal.ca/current_students.html https://www.dal.ca/faculty_staff.html

Initial EERD:



Design Issues:

- University information such as university name, ranking, DLI number and other information is not captured.
- As above entity is missing, relationships of many entities such as important dates, important terms and facts are incorrectly related with locations entity.
- Cardinality for admission deadlines and admission requirements are incorrect. Many programs can have same requirements and same deadlines.
- Information regarding important dates for university is missing.
- Alumni data for students passed out from university is missing.
- Dean attribute is missing for Faculty Streams entity

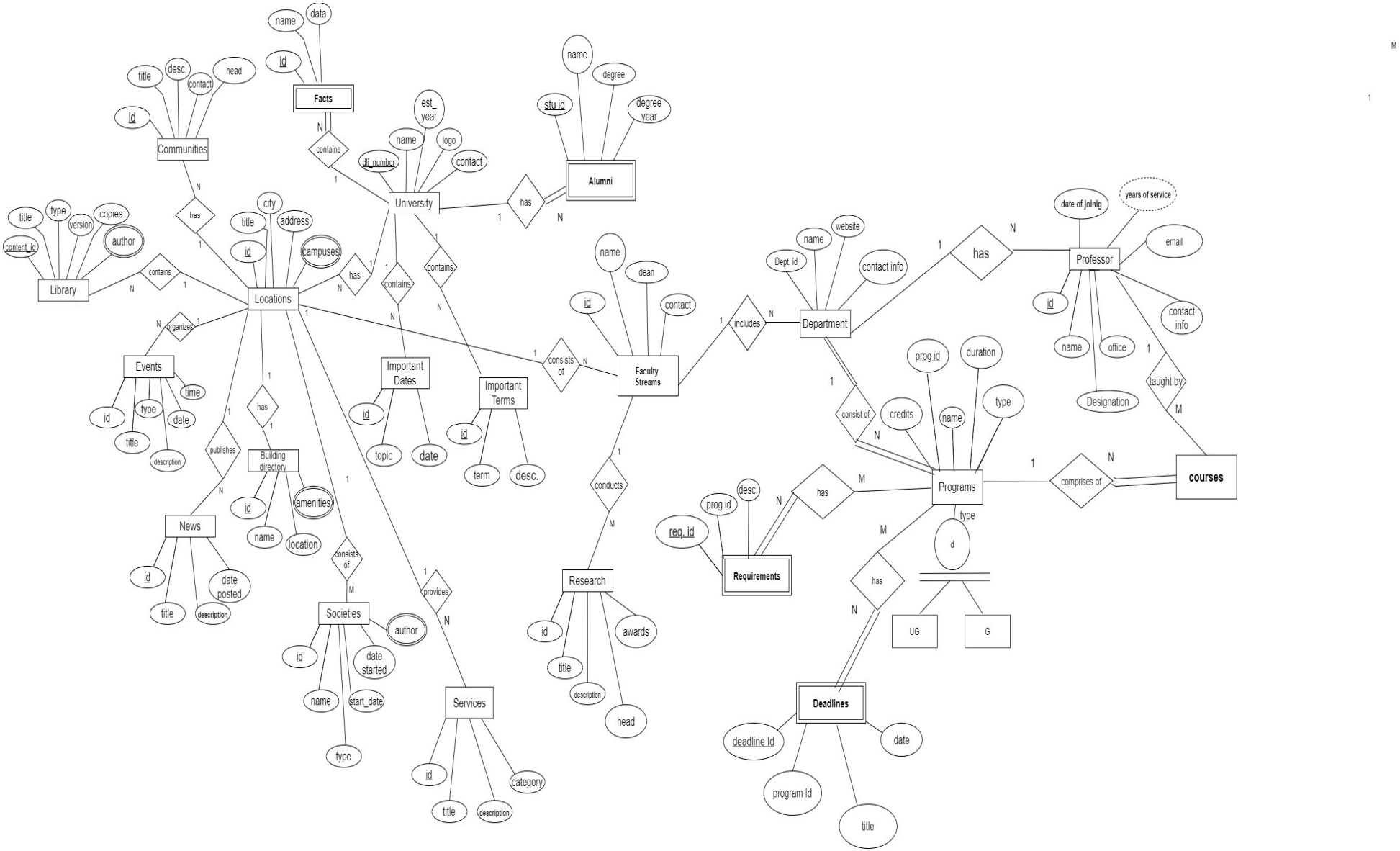
Solution for design issues:

- University entity is added with attributes such as name, DLI number as primary key, ranking, address, contact_info.
- Updated relationships for entities such as important dates, important terms and facts.
- Cardinality for admission deadlines and admission requirements is corrected to many to many and project_id attribute is made multi valued attribute as multiple programs can have same deadlines and requirements. Due to this deadline_id and requirement_id is added as unique identifiers for these weak entities.
- Important Dates entity for university entity is added to capture important dates such as holidays.
- Alumni entity is added to capture history of students passed out from Dalhousie University.
- Dean attribute is added to Faculty Streams entity.
- After addition of university entity, facts entity is dependent on university entity, so it is a weak entity set.

New Entities:

Entity	Reasons for considering	Source
University	This entity represents details about Dalhousie university. It is a strong entity because it does not depend on any other entity. This is a valid entity and will provide information such as address, contact information, dli number and other related information of Dalhousie University.	Information related to this entity is found in https://www.dal.ca/academics/programs/graduate/ot-Master-of-occupational-Science/admissions/international-students.html https://www.dal.ca/contact_us.html
Important Dates	This entity represents important university dates. It is a strong entity because it does not depend on any other entity. This is valid entity and will provide information about important dates such as holidays, term start and end dates, etc.	Information related to this entity is found in https://www.dal.ca/academics/important_dates.html
Alumni	This entity represents information about students passed out from Dalhousie University. It is a weak entity because it depends on university entity. This is a valid entity as it will provide information such as name, degree, degree year and other related information.	Information related to this entity is found in https://alumni.dal.ca/

Final EERD: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