



Project Design Report

SYRACUSE UNIVERSITY STUDENT EMPLOYMENT SYSTEM

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IST 659: Data Administration Concepts and
Database Management



Project Summary

The project focuses on designing a database for the Syracuse University Student Employment System. It is for the Syracuse University to simplify the process of gaining an Employer Verification form (I-9) for international students. A student who plans to work for an on-campus job needs to have an I-9 work authorization form from a potential employer. The potential employers could be one of the food services or Schools providing Faculty Assistantship and various other projects.

This system will make things easier for students as well as will simplify the process for the offices to keep track of the employment of each student and from each employer. This database system will also help the employment services to find out answers to various questions like which employer is giving out the most employment, total amount spent in international student employment, etc.

The entire process from securing a job to the EVF form for SSN requires a student to go from office to office and even the offices right now work on photocopies rather than soft copies of the document. To make the process less troublesome, we propose an online portal that uses the database system which will keep track of the employment process of the student employees. Making everything online would not require the students to carry the original & sensitive documents everywhere for verification. This will also help the office to track a student record easily and without having to maintain so many hard copies of documents.

This database system will store the data from the start of the application of employment to the time when the I-9 form is received by the student. To obtain employment at the University, students apply for various jobs posted on the online portal SUJobopps. On being accepted for a job, they receive a email from the employer which has an employment letter and a link to upload the documents required. Only after receiving an employment letter, a student is registered in the system and then the employment record is created.

The report consists of the design of the proposed system in the form of entity relationship diagram and the function of every entity and corresponding attributes. It also states the relationships between these entities and dependencies between attributes in the form of foreign keys. The project is analyzed in detail and addresses various issues in the current management system. The report also states business rules of this database management system. Various users may require different kind of information and this report states the major queries that a user may use to get this information.

Entities and their attributes

Entity Name: User_List	Data of all the users using the system and involved in the employment process
User_ID	Primary Key: Each user has a unique user ID
User_FName	First Name of the user
User_LName	Last Name of the user
User_Email	Email ID of the user
User_Phone	Phone number of the user
User_Password	Password of the account

Entity Name: Student	Data of all the international students whose employment has been accepted
SUID	Primary Key: Each student has a unique ID
S_Major	Program in which student is majoring
S_Degree	Degree pursued by the student
S_Gender	Student's gender
S_DocumentLink	Hyperlink to a location having user's documents

Entity Name: Office	Data of the Offices involved in the process
Office_ID	Primary Key: Each office has a unique office ID
Office_Location	Location of the office

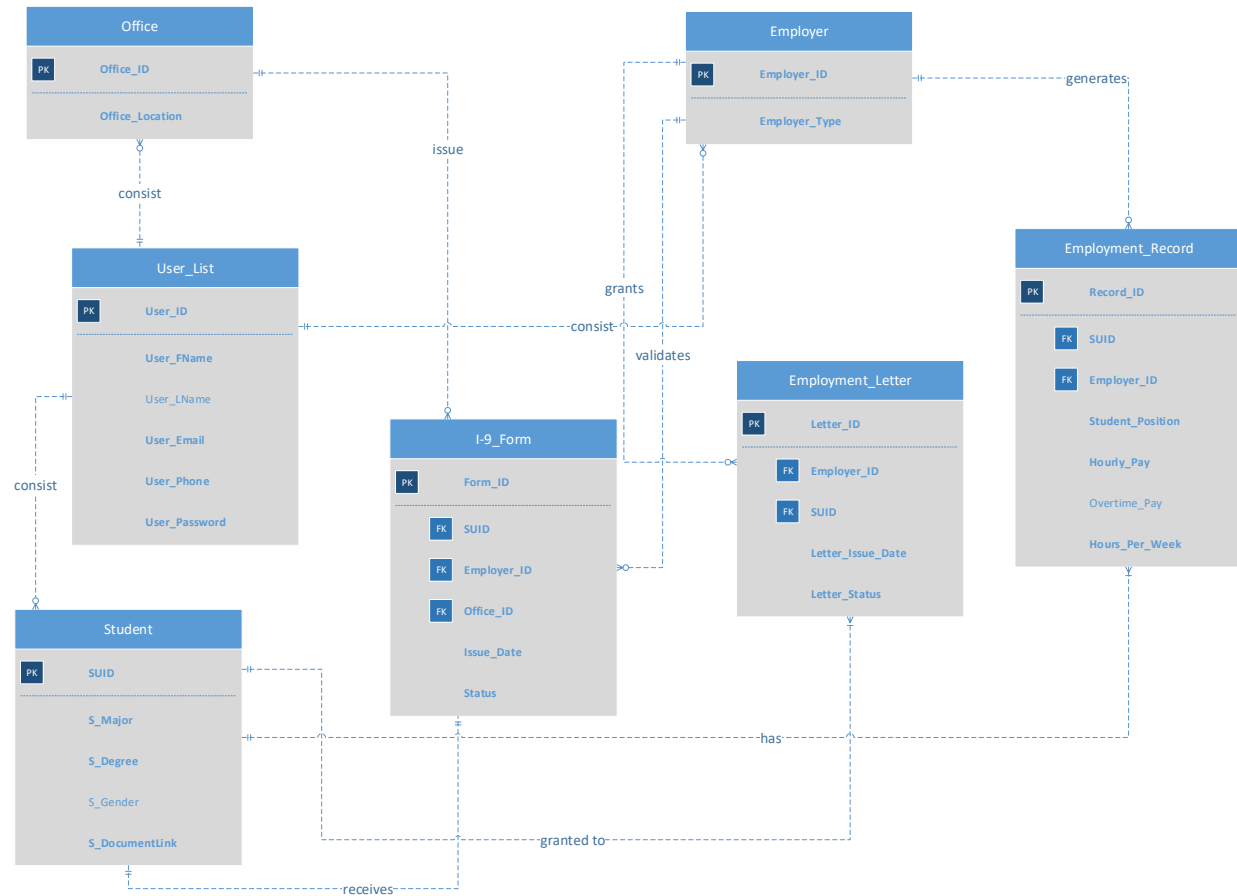
Entity Name: Employer	Employer's details that provide employment to on-campus students
Employer_ID	Primary Key: Each employee has a unique user ID
Employer_Type	Type of Organization: Food Services, School, etc.

Entity Name: Employment_Record	Entries of all the records of employment given by an organization to a student
Record_ID	Primary Key: Each employment record entry has a unique record ID
SUID	Foreign Key: Unique student ID
Employer_ID	Foreign Key: Unique employer ID
Student_Position	Position a student holds in the organization
Hourly_Pay	Payment per hour for the employment
Overtime_Pay	Payment when student works beyond the assigned hours
Hours_Per_Week	Permitted hours to work

Entity Name: Employment_Letter	Intermediate between Employer and Student to indicate confirmation of employment
Letter_ID	Primary Key: Each employment letter has unique letter ID
Employer_ID	Foreign Key: Unique employer ID
SUID	Foreign Key: Unique student ID
Letter_Issue_Date	Date of Issuance
Letter_Status	Status of letter

Entity Name: I-9_Form	Consists of all the I-9 form information
Form_ID	Primary Key: Each form has a unique form id
SUID	Foreign Key: Unique student ID
Employer_ID	Foreign Key: Unique employer ID
Office_ID	Foreign Key: Unique office ID
Issue_Date	Date of Issuance
Status	Status of the form

Entity Relationship Diagram



Business Rules

1. All users must have the valid credentials to access the system.
2. International students must have a valid passport, visa and I-20 form.
3. A student must be full-time matriculated in the Syracuse University.
4. The Slutzker office must provide confirmation of I-9 form completion to the student.
5. The employer must be an on-campus registered organization.
6. A student entrée will be made only after he gets employed.
7. Possible values of a degree are master, undergraduate and PHD/Doctoral.
8. International students are allowed to work only for 20 hours per week.
9. A student can have multiple employments and employers.
10. Students must successfully upload the required documents and information in order to start the processing of I-9 form.

Major Data Questions

1. Which employing organization is spending the most in student employments?
2. How many students are working for more than one employer?
3. What is the total number of employees working for an employer?
4. How many students are waitlisted for acceptance from a particular employing organization?
5. What is the total number of pending I-9 form in each office?
6. List of the students whose I-9 forms are pending.
7. Check if a student is exceeding 20-hours per week.
8. What is the total amount spent by an organization on each employee?
9. Which course has the maximum number of students working?
10. What is student's average weekly income?