Team Jedi Report
- Temporary Employment Corporation -

Abstract: The purpose of this project was to design a database system for Temporary Employment Corporation (TEC) to efficiently manage and track temporary employees. This system would enable TEC to manage its temporary employment services, track candidate qualifications, handle placements, and coordinate training sessions. We created an ERD to model the relationships and dependencies between entities in the system. The ERD serves as a blueprint for implementing the database, ensuring data integrity, and optimal system performance.

Business Rules:

- TEC has a file of candidates who are willing to work.
- Any candidate who has worked before has a specific job history. (Naturally, no job history exists if the candidate has never worked.) Each time the candidate works, one additional job history record is created.
- Each candidate has earned several qualifications. Each qualification may be earned by more than one candidate. (For example, more than one candidate may have earned a Bachelor of Business Administration degree or a Microsoft Network Certification, and clearly a candidate may have earned both a BBA and a Microsoft Network Certification.)
- TEC offers courses to help candidates improve their qualifications.
- Every course develops one specific qualification; however, TEC does not offer a course for every qualification. Some qualifications are developed through multiple courses.
- Some courses cover advanced topics that require specific qualifications as prerequisites. Some courses cover basic topics that do not require any prerequisite qualifications. A course can have several prerequisites. A qualification can be a prerequisite for more than one course.
- Courses are taught during training sessions. A training session is the presentation of a single course. Over time, TEC will offer many training sessions for each course; however, new courses may not have any training sessions scheduled right away.

- Candidates can pay a fee to attend a training session. A training session can accommodate several candidates, although new training sessions will not have any candidates registered at first.
- TEC also has a list of companies that request temporaries.
- Each time a company requests a temporary employee, TEC makes an entry in the Openings folder. That folder contains an opening number, a company name, required qualifications, a starting date, an anticipated ending date, and hourly pay.
- Each opening requires only one specific or main qualification.
- When a candidate matches the qualification, the job is assigned, and an entry is made in the Placement Record folder. The folder contains such information as an opening number, candidate number, and total hours worked. In addition, an entry is made in the job history for the candidate.
- An opening can be filled by many candidates, and a candidate can fill many openings.
- TEC uses special codes to describe a candidate's qualifications for an opening.

Entities and Attributes:

- COMPANY
    - Company ID
    - Company Name
- OPENING
    - Opening ID
    - Company ID
    - Qualification ID
    - ST Date
    - End Date
    - Hourly Pay
- QUALIFICATIONS
    - Qualification ID
- CANDIDATE
    - Candidate ID

    - First Name
    - Last Name
- JOB_HISTORY
    - Opening ID
    - Candidate ID
    - Start Date
    - End Date
- PLACEMENT
    - Placement ID
    - Candidate ID
    - Opening ID
    - Hours Worked
- COURSE
    - Course ID
    - Course Name
    - FEE
- SESSION
    - Session ID
    - Course ID
- QUALIFICATION STATUS
    - Candidate ID
    - Qualification ID
- PREREQUISITE
    - Course ID
    - Qualification ID

Relationships:

- Company has a one to many (Mandatory) relationship with Opening.
- Opening has a many to one (Mandatory) relationship with Qualifications.
- Opening has a one (Mandatory) to many (Optional) relationship with Placement.
- Placement has a one to many relationship with Job History.
- Placement has a many (Optional) to one (Mandatory) relationship with Candidate.
- Candidate has a one to many relationship with Job History.
- Candidate has a one to many relationship with Qualification Status.
- Candidate has a many to one relationship with Enrollment.

- Enrollment has a one to many relationship with Course.
- Course has a one (Mandatory) to many (Optional) with Session.
- Course has a one (Optional) to many (Mandatory) relationship with Qualifications..
- Course has a many (optional) to many relationship with Prerequisite.
- Prerequisite has a one to many (optional) relationship with Qualifications.

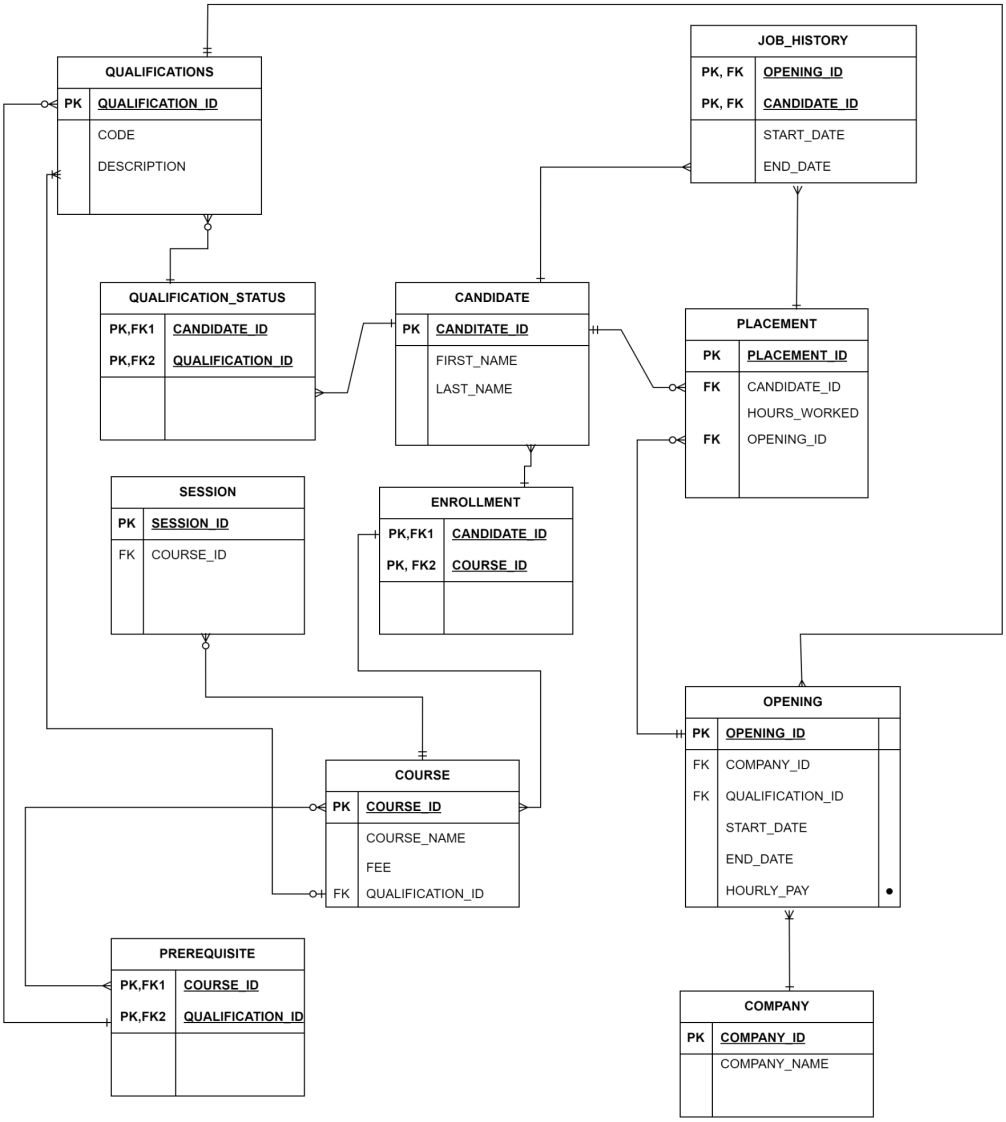
Data Dictionary: (there is a full one included in the zip folder)

Table Name	Attribute Name	Contents	Type	Format	Range	Required	PK OR FK	FK Referenced Table
CANDIDATE	CANDIDATE_ID	The candidate's ID	INT	999999		Y	PK	
	FIRST_NAME	The candidates first name	VARCHAR(20)	Xxxxxx		Y		
	LAST_NAME	The candidates last name	VARCHAR(25)	Xxxxxx		Y		
COURSE	COURSE_ID	Course ID	INT	999999		Y	PK	
	COURSE_NAME	Name of the course	VARCHAR(50)	Xxxxxx		Y		
	FEE	Fee for the course	FLOAT(7,2)	99999.99		Y		
	QUALIFICATION_ID	Qualification ID	INT	999999		Y	FK	QUALIFICATIONS
QUALIFICATIONS	QUALIFICAITION_ID	Qualification ID	INT	999999		Y	PK	
	CODE	Code of the qualification	VARCHAR(20)	Xxxxxx		Y		
	DESCRIPTION	Description of the qualification	VARCHAR(100)	Xxxxxx		Y		
OPENING	OPENING_ID	Opening ID	INT	999999		Y	PK	
	COMPANY_ID	Company ID	INT	999999		Y	FK	COMPANY
	QUALIFICATION_ID	Qualification ID	INT	999999		Y	FK	QUALIFICATIONS
	ST_DATE	Start date of the opening	DATE	mm/dd/yyyy		Y		
	END_DATE	End date of the	DATE	mm/dd/		Y		

		opening		yyyy				
	HOURLY_PAY	Hourly pay for the opening	FLOAT(7,2)	99999.99		Y		
COMPANY	COMPANY_ID	Company ID	INT	999999		Y	PK	
	COMPANY_NAME	Name of the company	VARCHAR(20)	Xxxxxx				
PLACEMENT	PLACEMENT_ID	Placement ID	INT	999999		Y	PK	
	CANDIDATE_ID	The candidate's ID	INT	999999		Y	FK	CANDIDATE
	OPENING_ID	Opening ID	INT	999999		Y	FK	OPENING
	HOURS_WORKED	Hours worked for the placement	INT	999999		Y		
PREREQUISITE	COURSE_ID	Course ID	INT	999999		Y	PK, FK	COURSE
	QUALIFICATION_ID	Qualification ID	INT	999999		Y	PK, FK	QUALIFICATIONS
SESSION	SESSION_ID	Session ID	INT	999999		Y	PK, FK	
	COURSE_ID	Course ID	INT	999999		Y	FK	COURSE
QUALIFICATION_STATUS	CANDIDATE_ID	The candidate's ID	INT	999999		Y	PK, FK	CANDIDATE
	QUALIFICATION_ID	Qualification ID	INT	999999		Y	PK, FK	QUALIFICATIONS
JOB_HISTORY	OPENING_ID	Opening ID	INT	999999		Y	PK, FK	OPENING
	CANDIDATE_ID	The candidate's ID	INT	999999		Y	PK, FK	CANDIDATE
	START_DATE	The day the job begins	DATE	mm/dd/yyyy		Y		
	END_DATE	The day the job ends	DATE	mm/dd/yyyy		Y		
FK = Foreign Key	INT = Numeric data as integers							

PK = Primary Key	FLOAT = Numeric data including decimal places							
VARCHAR = Variable Length Character Data								
DATE = Date in month, day, year format								

Entity Relationship Diagram:



Relational Diagram: