



# LEV & MISSILES

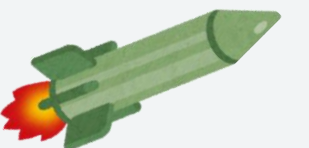
[WWW.LEV&MISSILES.COM](http://WWW.LEV&MISSILES.COM)

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LEV & MISSILES

# ABOUT US



Dr. Levin, a former military strategist, recognized the need for advanced missile technology to safeguard national security in an ever-evolving global landscape. With a small team of dedicated engineers, he laid the foundation for LEV & MISSILES in a humble workshop, driven by a passion for innovation and a commitment to excellence.



- To provide state-of-the-art missile technology, meticulously crafted to ensure the highest standards of national security.
- Empower defense forces worldwide with cutting-edge weaponry, tailored to meet the challenges of modern warfare.



- To transcend boundaries and emerge as the preeminent missile manufacturer on a global scale.
- Lead the industry through a relentless pursuit of innovation, excellence, and ethical leadership.



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# GOALS AND OBJECTIVES

## Objective n° 1

- Streamline Production Processes: Implement lean manufacturing principles to identify and eliminate inefficiencies in the production line. Utilize automation and optimization techniques to reduce cycle times and improve throughput.



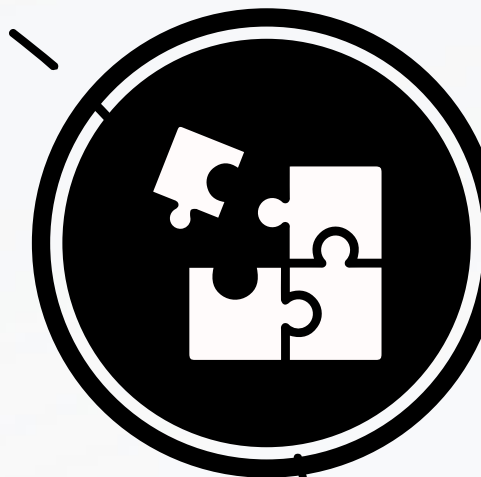
## Objective n° 2

Minimize Errors: Implement data validation rules and error-checking mechanisms to minimize inaccuracies in data entry and processing. Utilize machine learning algorithms to detect anomalies and flag potential errors before they escalate.



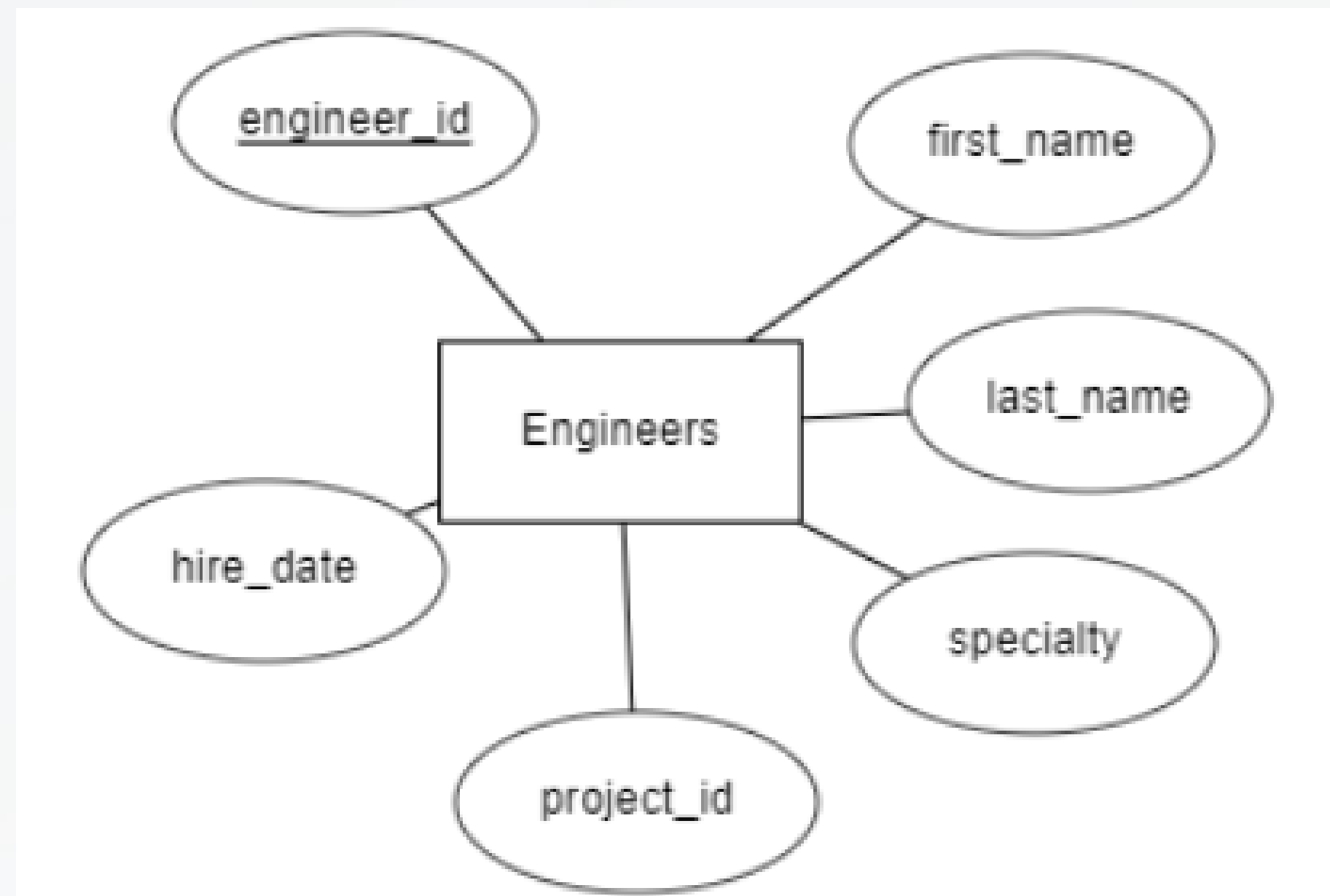
## Objective n° 3

Flexibility: Adopt a flexible data model that can easily accommodate new modules, features, and business processes as the company evolves. Utilize cloud-based technologies and microservices architecture to facilitate seamless integration of new functionalities.



# ERD - ENGINEERS

ENGINEERS: ENGINEERS DESIGN, DEVELOP, AND MAINTAIN SYSTEMS OR STRUCTURES, OFTEN SPECIALIZING IN FIELDS LIKE SOFTWARE, ELECTRICAL, OR MECHANICAL ENGINEERING.



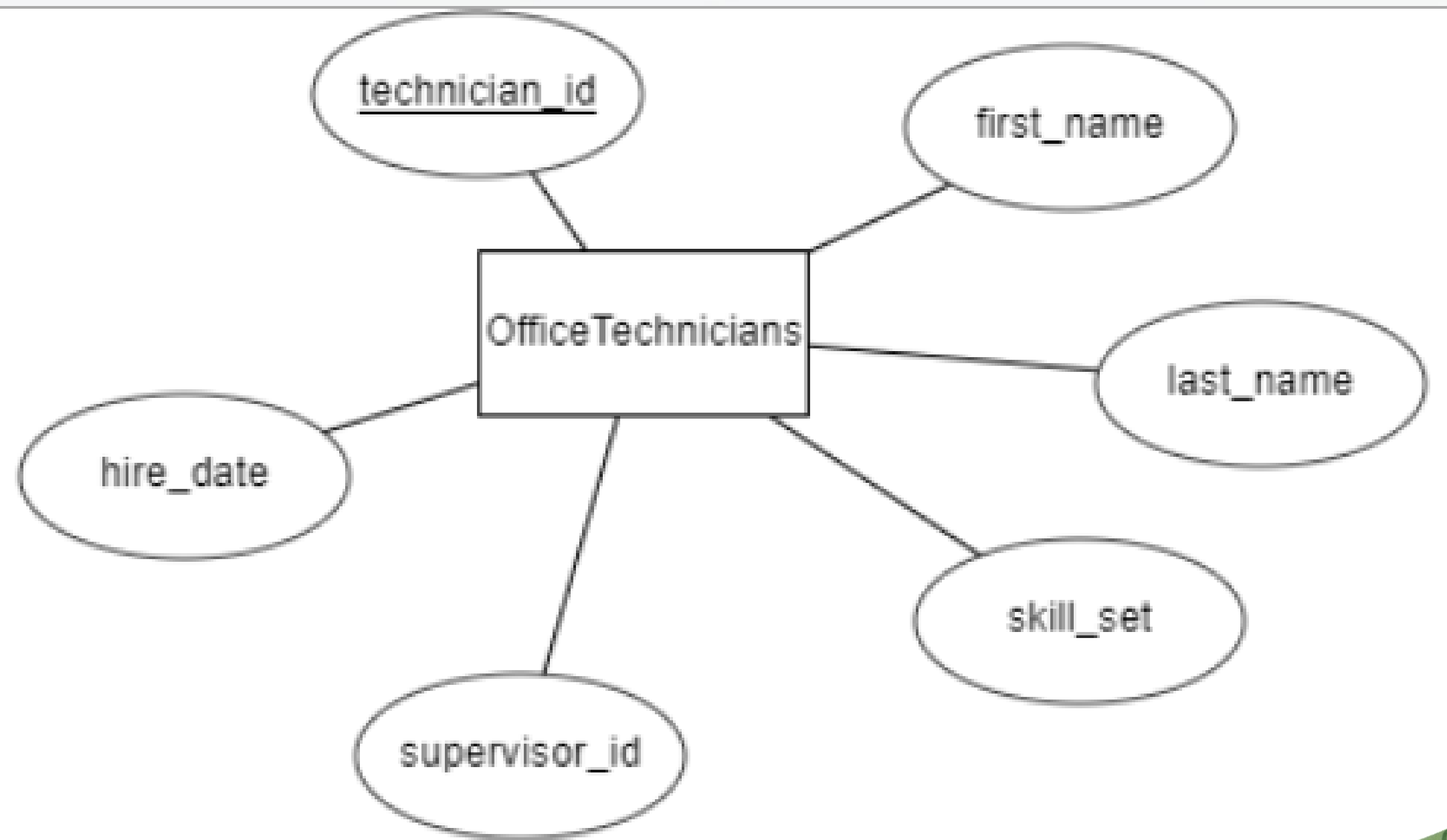
# ERD - SAFETY OFFICER

SAFETY OFFICERS: SAFETY OFFICERS ENSURE THAT WORKPLACES COMPLY WITH HEALTH AND SAFETY REGULATIONS, AIMING TO MINIMIZE ACCIDENTS AND HAZARDS.



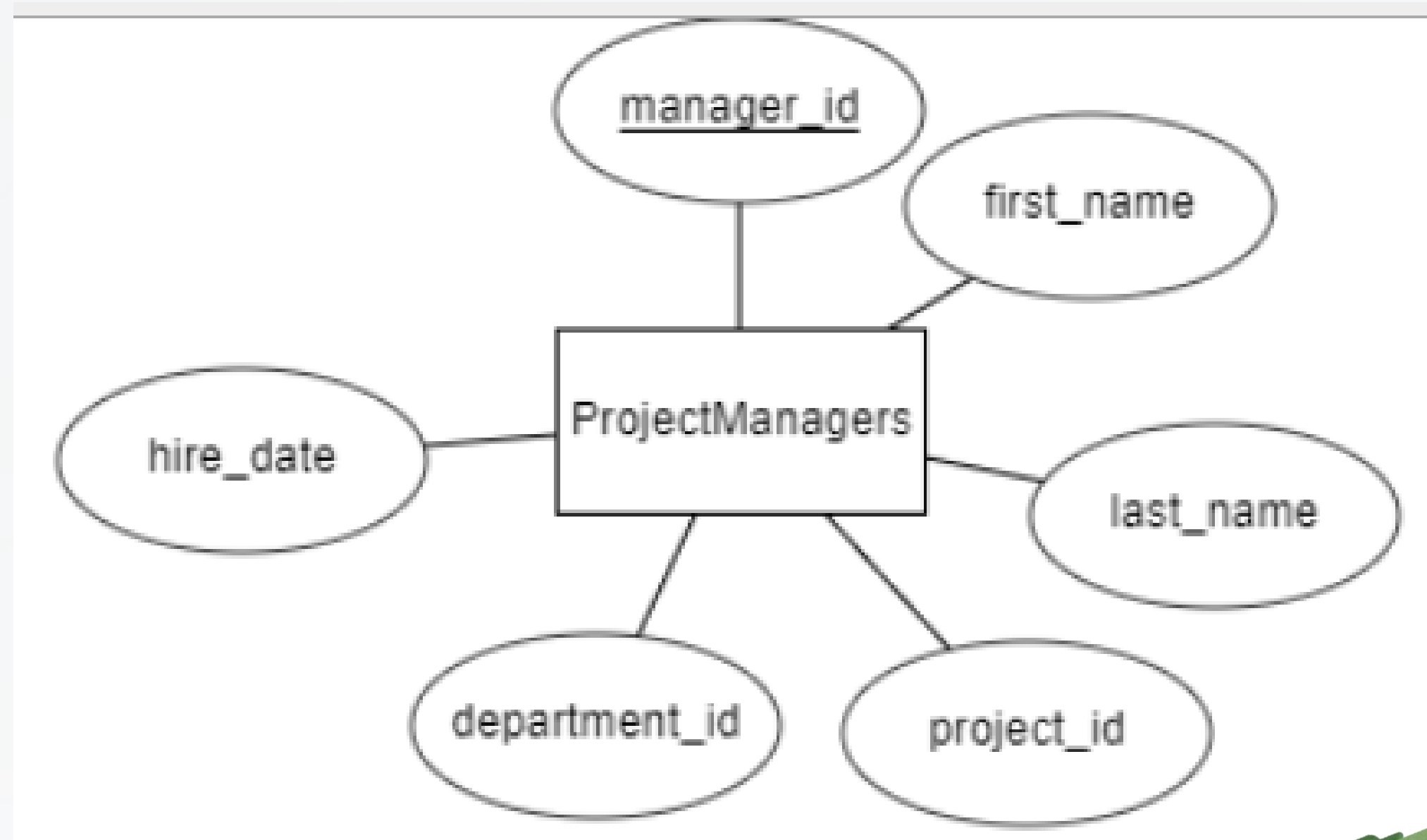
# ERD - OFFICE TECHNICIANS

OFFICE TECHNICIANS: OFFICE TECHNICIANS PROVIDE TECHNICAL SUPPORT AND MAINTENANCE FOR OFFICE EQUIPMENT AND IT SYSTEMS, ENSURING SMOOTH DAILY OPERATIONS.



# ERD - PROJECT MANAGER

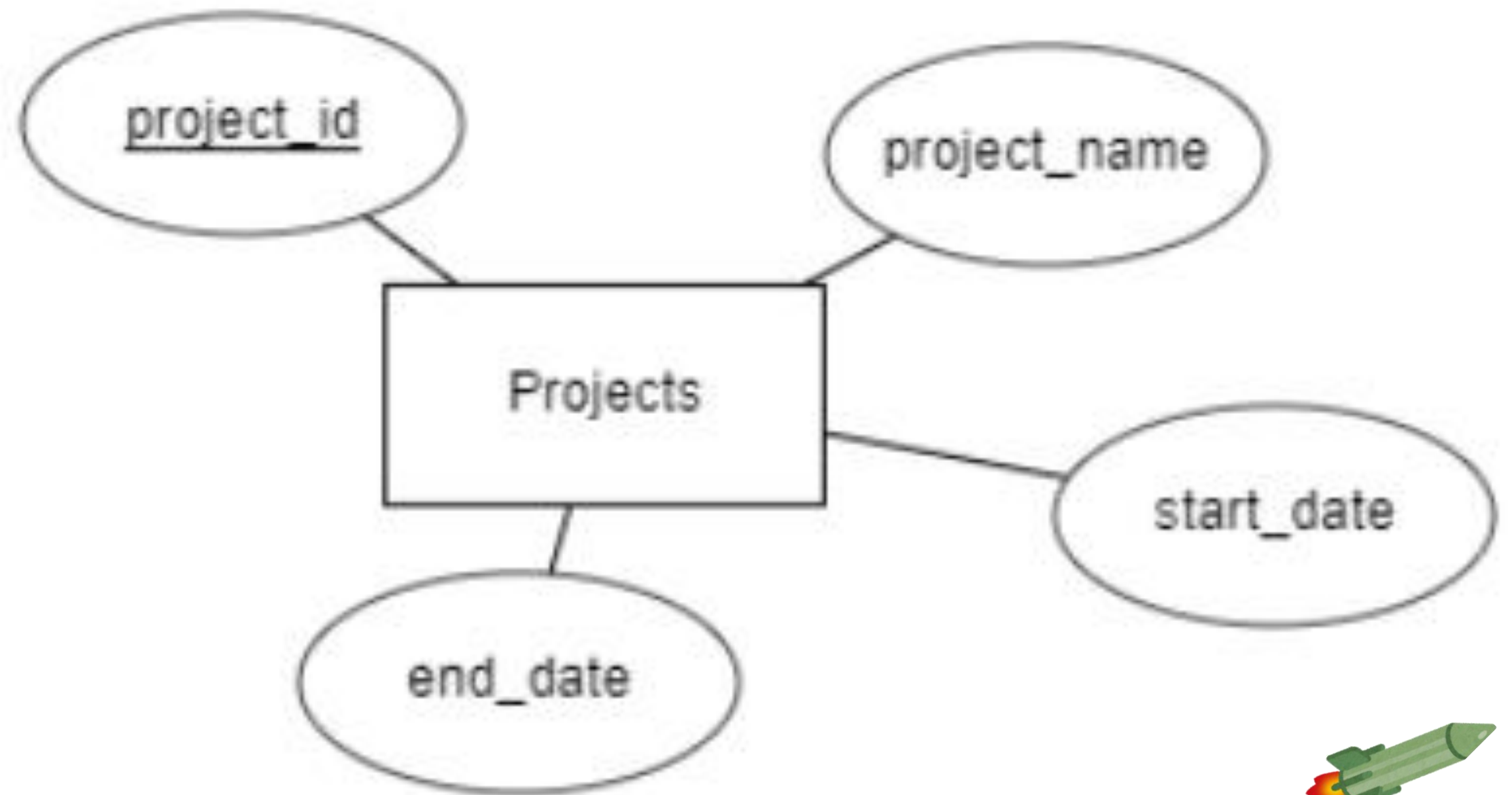
PROJECT MANAGERS: PROJECT MANAGERS OVERSEE PROJECTS FROM INITIATION TO COMPLETION, ENSURING THEY MEET GOALS, STAY ON BUDGET, AND ADHERE TO TIMELINES.





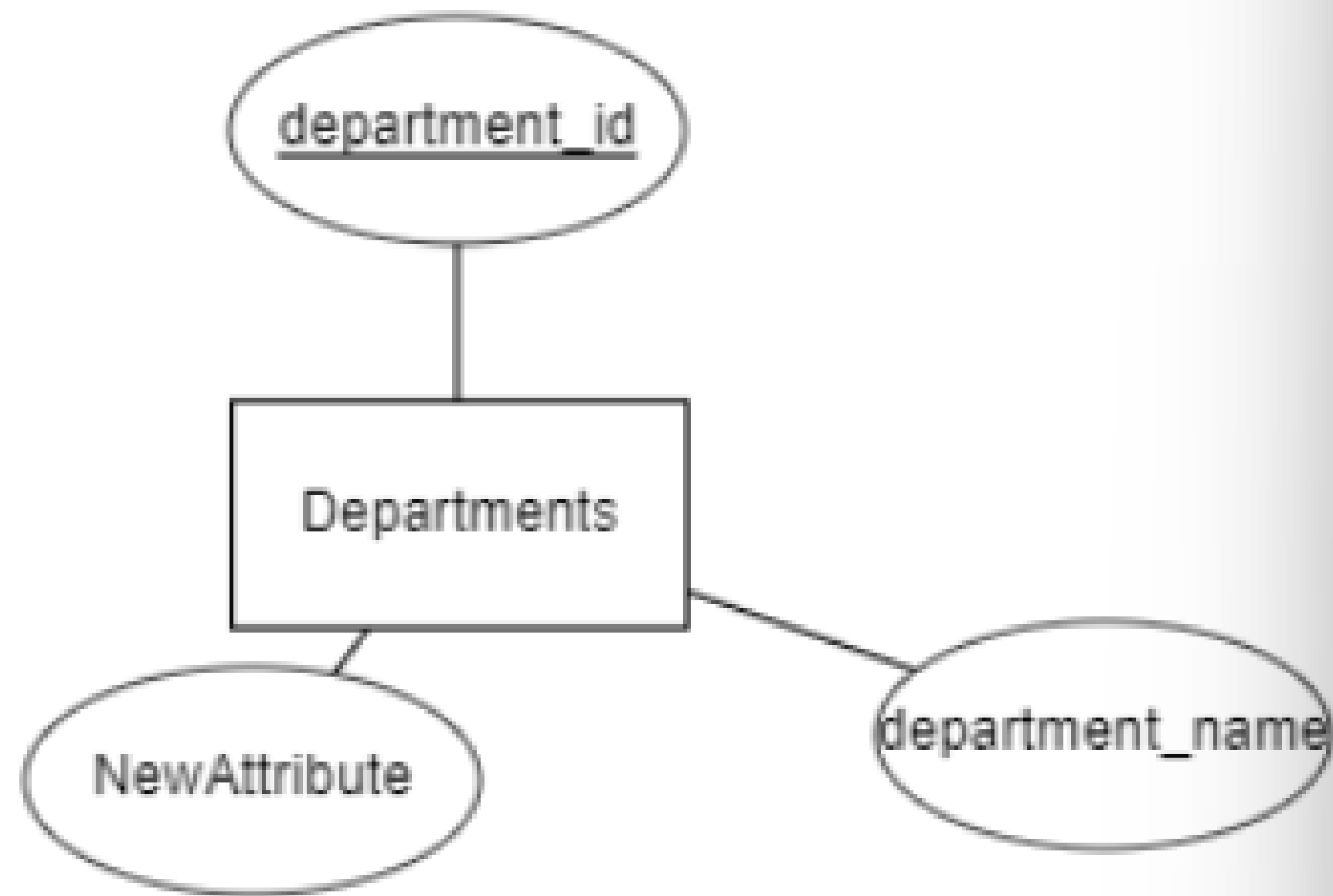
# ERD - PROJECTS

PROJECTS: PROJECTS ARE ORGANIZED EFFORTS WITH DEFINED GOALS, TIMELINES, AND RESOURCES, UNDERTAKEN TO ACHIEVE SPECIFIC OBJECTIVES.

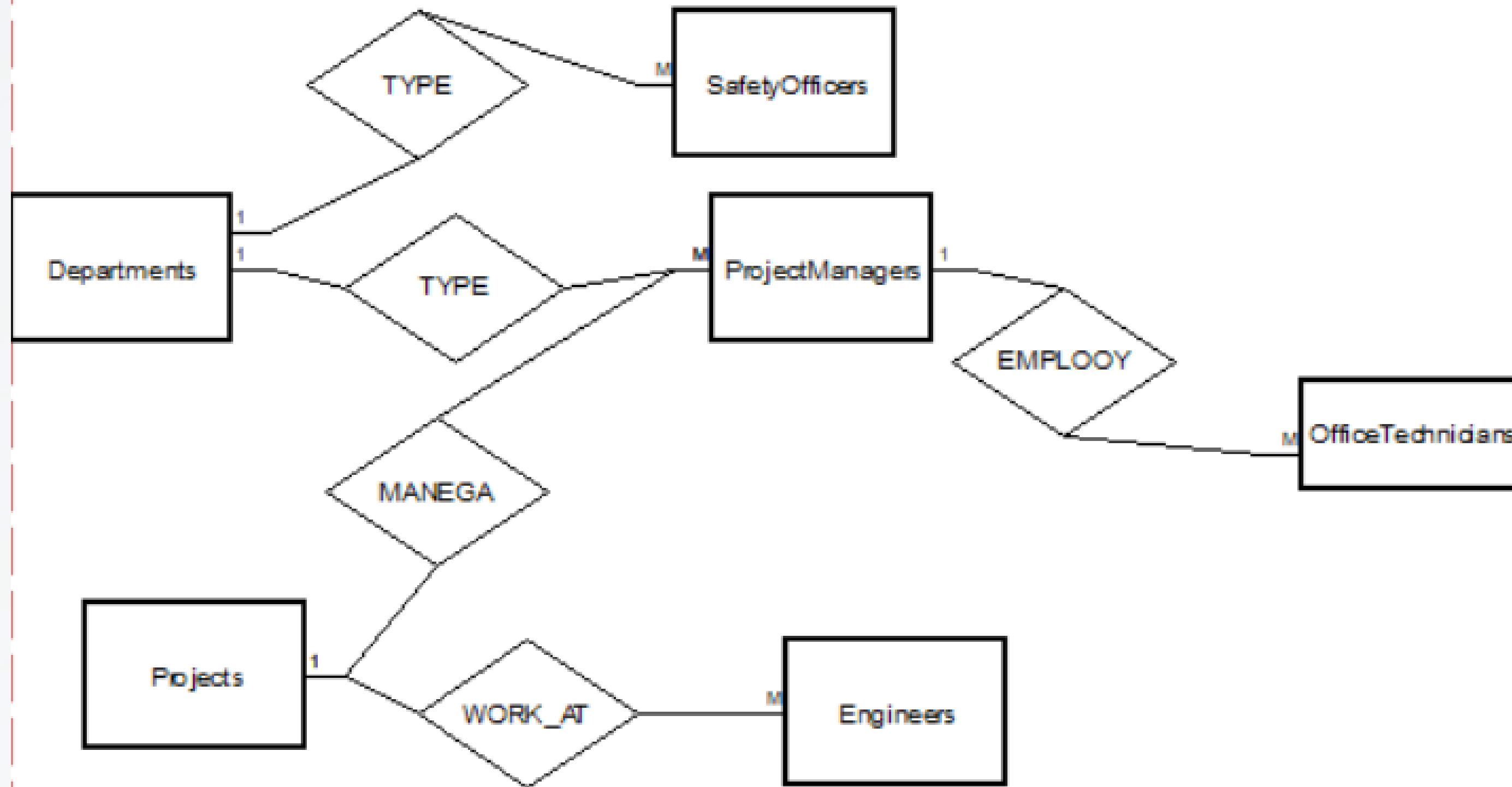


# ERD - DEPARTMENTS

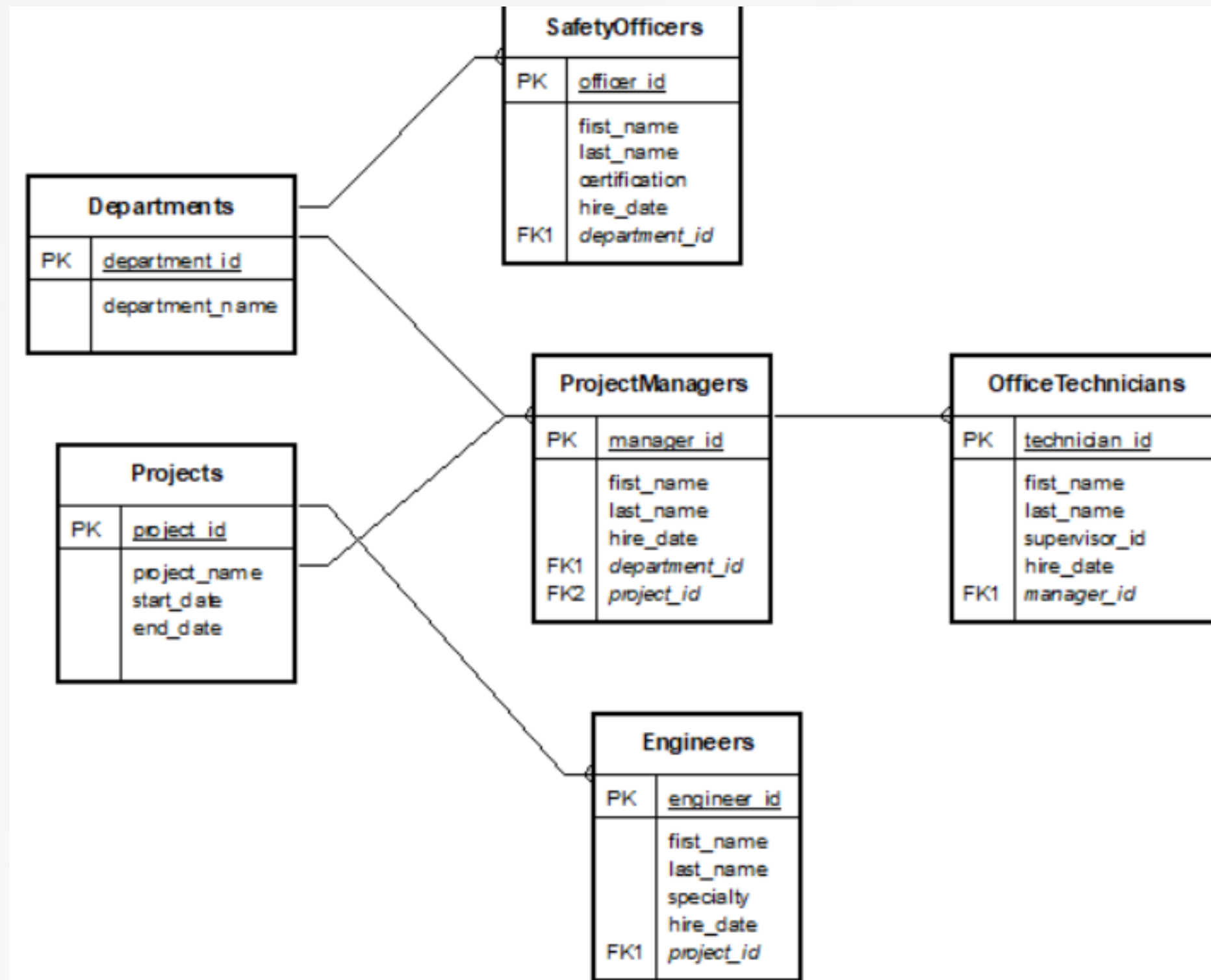
DEPARTMENTS: DEPARTMENTS ARE DISTINCT ORGANIZATIONAL UNITS WITHIN A COMPANY, EACH RESPONSIBLE FOR SPECIFIC FUNCTIONS OR AREAS OF EXPERTISE.



# טבלת הקשרים - ERD



# DSD





# CREATE TABLES

```
--
-- Create Table      : 'Engineers'
-- engineer_id       :
-- first_name        :
-- last_name         :
-- specialty         :
-- project_id        :
-- hire_date         :
-- project_id1       : (references Projects.project_id)
--
CREATE TABLE Engineers (
  engineer_id  NUMBER(38) NOT NULL,
  first_name   VARCHAR2 NOT NULL,
  last_name    VARCHAR2 NOT NULL,
  specialty    VARCHAR2 NOT NULL,
  project_id   NUMBER(38) NOT NULL,
  hire_date    DATE NOT NULL,
  project_id1  NUMBER(38),
  CONSTRAINT pk_Engineers PRIMARY KEY (engineer_id),
  CONSTRAINT fk_Engineers FOREIGN KEY (project_id1)
    REFERENCES Projects (project_id))
/
```

```
--
-- Create Table      : 'SafetyOfficers'
-- officer_id        :
-- first_name        :
-- last_name         :
-- certification     :
-- department_id     :
-- hire_date         :
-- department_id1    : (references Departments.department_id)
--
CREATE TABLE SafetyOfficers (
  officer_id   NUMBER(38) NOT NULL,
  first_name   VARCHAR2(1) NOT NULL,
  last_name    VARCHAR2(1) NOT NULL,
  certification VARCHAR2(1) NOT NULL,
  department_id NUMBER(38) NOT NULL,
  hire_date    DATE NOT NULL,
  department_id1 NUMBER(38),
  CONSTRAINT pk_SafetyOfficers PRIMARY KEY (officer_id),
  CONSTRAINT fk_SafetyOfficers FOREIGN KEY (department_id1)
    REFERENCES Departments (department_id))
/
```

```
--
-- Create Table      : 'Departments'
-- department_id     :
-- department_name    :
--
CREATE TABLE Departments (
  department_id  NUMBER(38) NOT NULL,
  department_name VARCHAR2 NOT NULL,
  CONSTRAINT pk_Departments PRIMARY KEY (department_id))
/
```

```
--
-- Create Table      : 'ProjectManagers'
-- manager_id        :
-- first_name        :
-- last_name         :
-- project_id        :
-- department_id     :
-- hire_date         :
-- department_id1    : (references Departments.department_id)
-- project_id1       : (references Projects.project_id)
--
CREATE TABLE ProjectManagers (
  manager_id   NUMBER(38) NOT NULL,
  first_name   VARCHAR2 NOT NULL,
  last_name    VARCHAR2 NOT NULL,
  project_id   NUMBER(38) NOT NULL,
  department_id NUMBER(38) NOT NULL,
  hire_date    DATE NOT NULL,
  department_id1 NUMBER(38),
  project_id1  NUMBER(38),
  CONSTRAINT pk_ProjectManagers PRIMARY KEY (manager_id),
  CONSTRAINT fk_ProjectManagers FOREIGN KEY (department_id1)
    REFERENCES Departments (department_id),
  CONSTRAINT fk_ProjectManagers2 FOREIGN KEY (project_id1)
    REFERENCES Projects (project_id))
/
```

```
--
-- Create Table      : 'OfficeTechnicians'
-- technician_id     :
-- first_name        :
-- last_name         :
-- supervisor_id     :
-- hire_date         :
-- manager_id        : (references ProjectManagers.manager_id)
--
CREATE TABLE OfficeTechnicians (
  technician_id NUMBER(38) NOT NULL,
  first_name   VARCHAR2(1) NOT NULL,
  last_name    VARCHAR2(1) NOT NULL,
  supervisor_id NUMBER(38) NOT NULL,
  hire_date    DATE NOT NULL,
  manager_id   NUMBER(38),
  CONSTRAINT pk_OfficeTechnicians PRIMARY KEY (technician_id),
  CONSTRAINT fk_OfficeTechnicians FOREIGN KEY (manager_id)
    REFERENCES ProjectManagers (manager_id))
/
```

```
--
-- Target: Oracle
-- Syntax: sqlplus user@tnsnames_entry/password @filename.sql
--
-- .....
-- Date   : May 20 2024 20:31
-- Script Generated by Database Design Studio 2.21.3
--
--
-- Create Table      : 'Projects'
-- project_id        :
-- project_name      :
-- start_date       :
-- end_date         :
--
CREATE TABLE Projects (
  project_id   NUMBER(38) NOT NULL,
  project_name  VARCHAR2 NOT NULL,
  start_date    DATE NOT NULL,
  end_date      DATE NOT NULL,
  CONSTRAINT pk_Projects PRIMARY KEY (project_id))
/
```



# GEM TABLES - DEPARTMENTS

DEPARTMENTS

Owner	Table	Number of records
C##BOSS	DEPARTMENTS	10..20

Name	Type	Size	Data
DEPARTMENT_ID	NUMBER	38	Random(10000, 99999)
DEPARTMENT_NAME	VARCHAR2	100	Country + City

	DEPARTMENT_ID	DEPARTMENT_NAME	ROWID
77	29650	GermanyFuchstal-asch	AAATGkAABAAAp5hABM
78	58754	CanadaSt-laurent	AAATGkAABAAAp5hABN
79	79885	USAAltamonte Springs	AAATGkAABAAAp5hABO
80	35980	AustraliaCanberra	AAATGkAABAAAp5hABP
81	93961	SwitzerlandRheinfelden	AAATGkAABAAAp5hABQ
82	70559	SpainPalma de Mallorca	AAATGkAABAAAp5hABR
83	45625	ItalyBiella	AAATGkAABAAAp5hABS
84	64149	ItalyMantova	AAATGkAABAAAp5hABT
85	50598	USAHercules	AAATGkAABAAAp5hABU
86	78213	South AfricaCape town	AAATGkAABAAAp5hABV
87	87335	USALos Angeles	AAATGkAABAAAp5hABW
88	15110	BrazilPorto alegre	AAATGkAABAAAp5hABX
89	81471	USAMobile	AAATGkAABAAAp5hABY
90	96316	USANew Castle	AAATGkAABAAAp5hABZ
91	36381	JapanKumamoto	AAATGkAABAAAp5hABa
92	53290	USADuluth	AAATGkAABAAAp5hABb
93	65731	AustraliaEdwardstown	AAATGkAABAAAp5hABc
94	74550	USACaguas	AAATGkAABAAAp5hABd



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# GEM TABLES - ENGINEERS

ENGINEERS

<	Owner	Table	Number of records
>	C##BOSS	ENGINEERS	100..150
...			
Name	Type	Size	Data
ENGINEER_ID	NUMBER	38	Random(10000, 99999)
FIRST_NAME	VARCHAR2	100	FirstName
LAST_NAME	VARCHAR2	100	LastName
SPECIALTY	VARCHAR2	100	List('Propulsion', 'Aerodynamics', 'Structures', 'Avionics')
PROJECT_ID	NUMBER	38	SQL(SELECT * FROM (SELECT PROJECT_ID FROM PROJECTS))
HIRE_DATE	DATE		Random(01/05/2015, 01/05/2020)
*			

select t.\*, t.rowid from E ...

Edit data C##BOSS.OFFICETECHNICIANS@XE

select t.\*, t.rowid from P ...


Edit data

SQL

Output

Statistics

select t.\*, t.rowid from ENGINEERS t



	ENGINEER_ID	FIRST_NAME	LAST_NAME	SPECIALTY	PROJECT_ID	HIRE_DATE	ROWID
1	18907	Vendetta	Gooding	GNC	6222	19/05/2018	AAATGmAABAAAp6RAAA
2	38250	Jeroen	Davies	Materials	1860	15/12/2015	AAATGmAABAAAp6RAAB
3	54536	Night	England	Avionics	7118	13/09/2018	AAATGmAABAAAp6RAAC
4	22750	Brooke	Nakai	Integration	6741	27/02/2017	AAATGmAABAAAp6RAAD
5	48723	Robbie	Crewson	Aerodynamics	1069	05/09/2016	AAATGmAABAAAp6RAAE
6	91090	Joaquim	Wagner	Mission Planning	2010	11/12/2019	AAATGmAABAAAp6RAAF
7	15151	Terence	Tillis	GNC	7463	29/12/2017	AAATGmAABAAAp6RAAG
8	53761	Raul	Chesnutt	Mission Planning	5667	14/01/2020	AAATGmAABAAAp6RAAH
9	89683	Lily	Houston	Structures	2623	03/01/2019	AAATGmAABAAAp6RAAI
10	74414	Hex	Weiland	Orbital Mechanics	2907	01/06/2015	AAATGmAABAAAp6RAAJ
11	28752	Chet	Barry	Avionics	8225	25/01/2018	AAATGmAABAAAp6RAAK
12	20876	Franco	Sewell	Operations	2959	16/12/2016	AAATGmAABAAAp6RAAL
13	15050	Darius	Spiner	Systems	6741	14/04/2016	AAATGmAABAAAp6RAAM
14	80951	Jessica	Turturro	Materials	7344	01/12/2015	AAATGmAABAAAp6RAAN
15	60769	Chris	Horton	Mission Planning	6024	27/12/2019	AAATGmAABAAAp6RAAO
16	56510	Mitchell	Ponty	Safety	5584	10/12/2015	AAATGmAABAAAp6RAAP
17	14115	Jann	Heatherly	Structures	1045	29/07/2017	AAATGmAABAAAp6RAAQ



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# GEM TABLES - OFFICE TECHNICIANS

SAFETYOFFICERS

< Owner Table Number of records  
> C##BOSS SAFETYOFFICERS 100..150  
...

Name	Type	Size	Data
OFFICER_ID	NUMBER	38	Random(10000, 999999)
FIRST_NAME	VARCHAR2	100	FirstName
LAST_NAME	VARCHAR2	100	LastName
CERTIFICATION	VARCHAR2	100	List('Structural', 'Propulsion', 'Avionics', 'Thermal')
DEPARTMENT_ID	NUMBER	38	SQL(SELECT * FROM (SELECT DEPARTMENT_ID
HIRE_DATE	DATE		Random(01/05/2017, 01/05/2019)
*			

SQL

Output Statistics

```
select t.*, t.rowid from OFFICETECHNICIANS t
```

	TECHNICIAN_ID	FIRST_NAME	LAST_NAME	SUPERVISOR_ID	HIRE_DATE	MANAGER_ID	ROWID
1	43999	Bill	Spears	520606	03/10/2019	132117	AAATGsA
2	27890	Jet	Jovovich	926584	03/12/2019	103006	AAATGsA
3	25626	Gran	O'Sullivan	670489	19/03/2019	814256	AAATGsA
4	26764	Victoria	Senior	665297	18/10/2019	463788	AAATGsA
5	44309	Mickey	Cross	142132	08/02/2020	35646	AAATGsA
6	34828	Nanci	Bruce	559672	28/11/2018	138277	AAATGsA
7	20425	Brad	Rhys-Davies	941899	10/02/2019	548095	AAATGsA
8	71811	Malcolm	Lee	233302	21/01/2020	55262	AAATGsA
9	73244	Darius	Mitra	977049	02/04/2019	281407	AAATGsA
10	17990	Edie	Mathis	620769	20/08/2019	68615	AAATGsA
11	66879	Hector	Nicholas	207244	17/06/2019	993040	AAATGsA
12	20025	Connie	Burton	652795	23/02/2020	398747	AAATGsA
13	77747	Leon	Potter	574023	25/10/2018	478619	AAATGsA
14	44831	Courtney	Thorton	154099	07/08/2018	789745	AAATGsA
15	22123	Renee	Grier	460261	09/11/2018	128122	AAATGsA
16	88205	Andrew	Hawthorne	302466	12/03/2020	584392	AAATGsA
17	88825	Edwin	Farina	350000	31/12/2019	966524	AAATGsA
18	22862	Toni	Cole	117982	23/07/2018	481007	AAATGsA



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# GEM TABLES - PROJECT MANAGERS

PROJECTMANAGERS

<

>

...

Owner

C##BOSS

Table

PROJECTMANAGERS

Number of records

100..150

Name	Type	Size	Data
MANAGER_ID	NUMBER	38	Random(10000, 999999)
FIRST_NAME	VARCHAR2	100	FirstName
LAST_NAME	VARCHAR2	100	LastName
PROJECT_ID	NUMBER	38	SQL(SELECT * FROM (SELECT PROJECT_ID FROM PROJEC
DEPARTMENT_ID	NUMBER	38	SQL(SELECT * FROM (SELECT DEPARTMENT_ID FROM DE
HIRE_DATE	DATE		Random(01/05/2018, 01/05/2020)
*			

SQL

Output

Statistics

```
select t.*, t.rowid from PROJECTMANAGERS t
```



# GEM TABLES - PROJECTS

PROJECTS

<

Owner

Table

Number of records

>

C##BOSS

PROJECTS

100..150

...

	Name	Type	Size		Data
▶	PROJECT_ID	NUMBER	38	↕	Random(1000, 9999)
	PROJECT_NAME	VARCHAR2	100	↕	Company
	START_DATE	DATE		↕	Random(01/05/2020, 01/05/2022)
	END_DATE	DATE		↕	Random(01/05/2023, 01/05/2024)
*				↕	

SQL						
Output						
Statistics						
select t.*, t.rowid from PROJECTS t						
	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE	ROWID	
►	1	2907 Analytical Management Services	03/08/2020	09/09/2023	AAATGiAABAAAp5xA	
	2	7952 ScriptSave	21/03/2021	05/07/2023	AAATGiAABAAAp5xA	
	3	1217 Reckitt Benckiser	12/11/2020	18/09/2023	AAATGiAABAAAp5xA	
	4	1348 Black Mountain Management	12/01/2022	03/11/2023	AAATGiAABAAAp5xA	
	5	6003 Deutsche Telekom	21/05/2020	07/07/2023	AAATGiAABAAAp5xA	
	6	8678 EPIQ Systems	25/12/2021	06/10/2023	AAATGiAABAAAp5xA	
	7	2151 Miracle Software Systems	01/03/2022	16/05/2023	AAATGiAABAAAp5xA	
	8	3833 Mathis, Earnest & Vandeventer	19/02/2022	03/08/2023	AAATGiAABAAAp5xA	
	9	5584 Solipsys	01/12/2021	19/08/2023	AAATGiAABAAAp5xA	
	10	4777 ACS International Resources	31/08/2020	20/09/2023	AAATGiAABAAAp5xA	
	11	5667 News Corp.	16/01/2022	28/08/2023	AAATGiAABAAAp5xA	
	12	8356 Employer Services	29/08/2020	21/02/2024	AAATGiAABAAAp5xA	
	13	4909 Medical Action Industries	27/03/2022	06/05/2023	AAATGiAABAAAp5xA	
	14	4407 Campbell Soup Co.	13/07/2020	17/06/2023	AAATGiAABAAAp5xA	
	15	2990 Harrison & Shriftman	10/09/2020	14/03/2024	AAATGiAABAAAp5xA	
	16	6189 Nature's Cure	19/01/2021	08/07/2023	AAATGiAABAAAp5xA	
	17	6090 Tarragon Realty	30/12/2021	23/12/2023	AAATGiAABAAAp5xA	
	18	7123 Timberlane Woodcrafters	14/01/2021	23/07/2023	AAATGiAABAAAp5xA	



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# GEM TABLES - SAFETY OFFICERS

SAFETYOFFICERS

<	Owner	Table	Number of records
>	C##BOSS	SAFETYOFFICERS	100..150
...			

Name	Type	Size	Data
OFFICER_ID	NUMBER	38	Random(10000, 999999)
FIRST_NAME	VARCHAR2	100	FirstName
LAST_NAME	VARCHAR2	100	LastName
CERTIFICATION	VARCHAR2	100	List('Structural', 'Propulsion', 'Avionics')
DEPARTMENT_ID	NUMBER	38	SQL(SELECT * FROM (SELECT DEPARTMENT_ID FROM DEPARTMENT))
HIRE_DATE	DATE		Random(01/05/2017, 01/05/2019)
*			

SQL Output Statistics

```
select t.*, t.rowid from SAFETYOFFICERS t
```

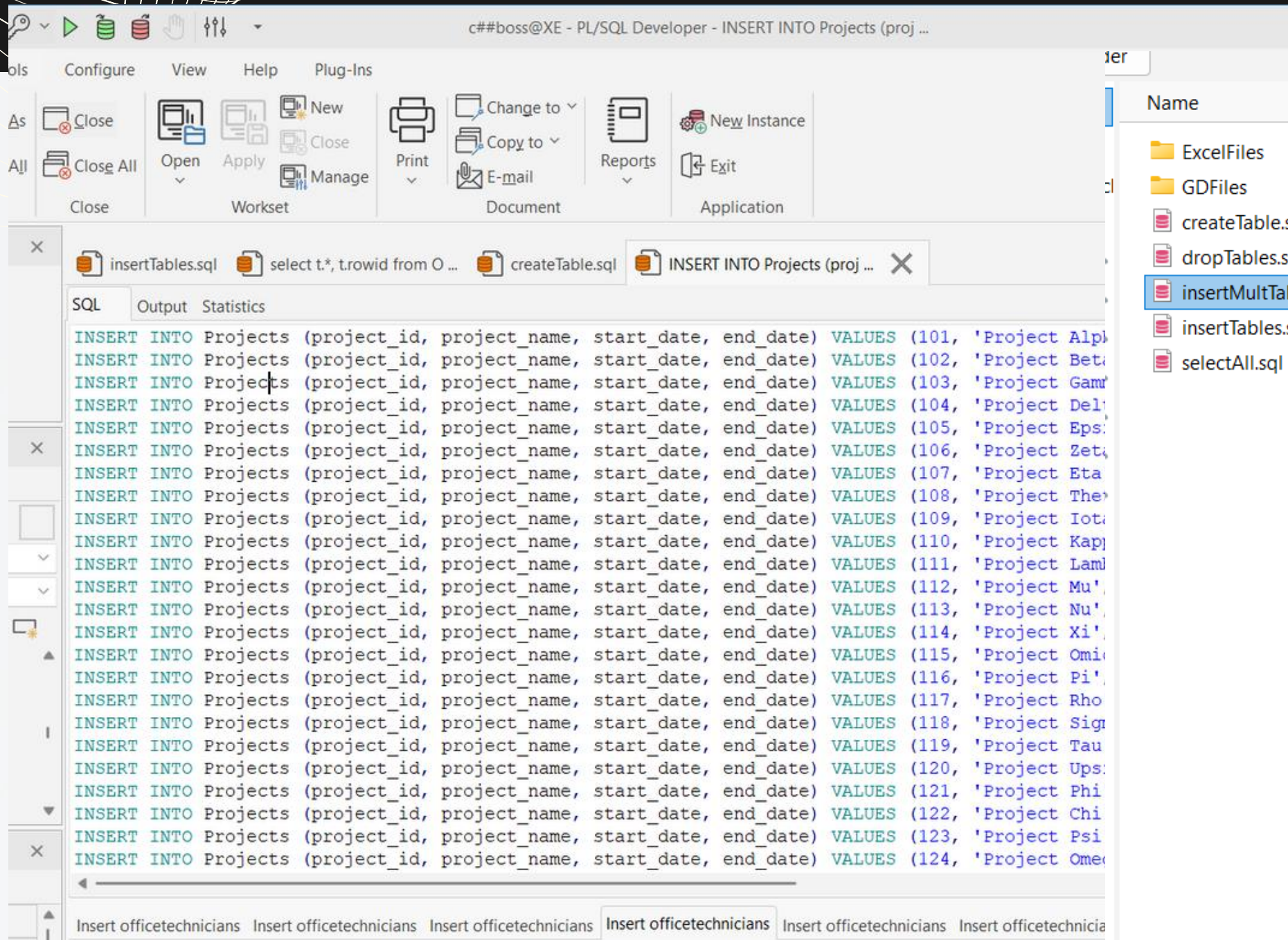
	OFFICER_ID	FIRST_NAME	LAST_NAME	CERTIFICATION	DEPARTMENT_ID	HIRE_DATE	ROWID
1	870105	Teri	Tripplehorn	Human Factors	96316	11/08/2017	AAA
2	781424	Eddie	Iglesias	Compliance	96427	25/11/2018	AAA
3	473533	Miko	Piven	Materials	35980	22/01/2018	AAA
4	825451	Elle	Thomas	Quality Assurance	55049	13/04/2018	AAA
5	994466	Lisa	Roberts	Testing	67549	05/05/2018	AAA
6	773680	Lea	Bacon	Avionics	21270	14/03/2019	AAA
7	345070	Eugene	MacLachlan	Materials	23985	14/12/2017	AAA
8	484945	Tanya	Hudson	Risk Assessment	44988	30/08/2018	AAA
9	230407	Ramsey	Evanswood	Testing	64149	12/10/2017	AAA
10	55108	Jay	Paul	GNC	64577	20/04/2019	AAA
11	19528	Guy	Loggia	Risk Assessment	62661	11/07/2017	AAA
12	919315	Shelby	Ford	Software	70163	01/11/2017	AAA
13	606959	Tara	Bush	Software	50359	27/03/2018	AAA
14	832091	Cary	Rapaport	Failure Analysis	89950	07/09/2017	AAA
15	475665	Johnette	Martinez	GNC	66705	06/11/2018	AAA
16	606540	Moe	Spiner	Software	20053	11/01/2018	AAA



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# INSERT FILE



```
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (101, 'Project Alpha', TO_DATE('2024-01-01', 'YYYY-MM-DD'), TO_DATE('2024-01-31', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (102, 'Project Beta', TO_DATE('2024-02-01', 'YYYY-MM-DD'), TO_DATE('2024-02-29', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (103, 'Project Gamma', TO_DATE('2024-03-01', 'YYYY-MM-DD'), TO_DATE('2024-03-31', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (104, 'Project Delta', TO_DATE('2024-04-01', 'YYYY-MM-DD'), TO_DATE('2024-04-30', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (105, 'Project Epsilon', TO_DATE('2024-05-01', 'YYYY-MM-DD'), TO_DATE('2024-05-31', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (106, 'Project Zeta', TO_DATE('2024-06-01', 'YYYY-MM-DD'), TO_DATE('2024-06-30', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (107, 'Project Eta', TO_DATE('2024-07-01', 'YYYY-MM-DD'), TO_DATE('2024-07-31', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (108, 'Project Theta', TO_DATE('2024-08-01', 'YYYY-MM-DD'), TO_DATE('2024-08-31', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (109, 'Project Iota', TO_DATE('2024-09-01', 'YYYY-MM-DD'), TO_DATE('2024-09-30', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (110, 'Project Kappa', TO_DATE('2024-10-01', 'YYYY-MM-DD'), TO_DATE('2024-10-31', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (111, 'Project Lambda', TO_DATE('2024-11-01', 'YYYY-MM-DD'), TO_DATE('2024-11-30', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (112, 'Project Mu', TO_DATE('2024-12-01', 'YYYY-MM-DD'), TO_DATE('2024-12-31', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (113, 'Project Nu', TO_DATE('2025-01-01', 'YYYY-MM-DD'), TO_DATE('2025-01-31', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (114, 'Project Xi', TO_DATE('2025-02-01', 'YYYY-MM-DD'), TO_DATE('2025-02-28', 'YYYY-MM-DD'))
INSERT INTO Projects (project_id, project_name, start_date, end_date) VALUES (115, 'Project Omicron', TO_DATE('2025-03-01', 'YYYY-MM-DD'), TO_DATE('2025-03-31', 'YYYY-MM-DD'))
```





# MOCKAROO

Field Name	Type	Options
project_id	Row Number	blank: 0 %
project_name	Airport GPS Code	blank: 0 %
start_date	Datetime	05/21/2023 to 05/21/2024 format: dd.mm.yyyy blank: 0 %
end_date	Datetime	05/21/2023 to 05/21/2024 format: dd.mm.yyyy blank: 0 %

+ ADD ANOTHER FIELD GENERATE FIELDS USING AI...

# Rows: 500 Format: Excel

ODBC Importer

Data from ODBC Data to Oracle

Connection

User / System DSN Excel Files

User Name

Password

בחירת חוברת עבודה

שם מסד נתונים

ספריות: ...:\c:

אישור ביטול עזרה לקריאה בלבד

רשת...

פרט קבצים מסוג: Excel Files (\*.xls)

View Data

demp.xlsx emp.xlsx officeTec.xlsx officSafe.xlsx proj.xlsx projM.xlsx

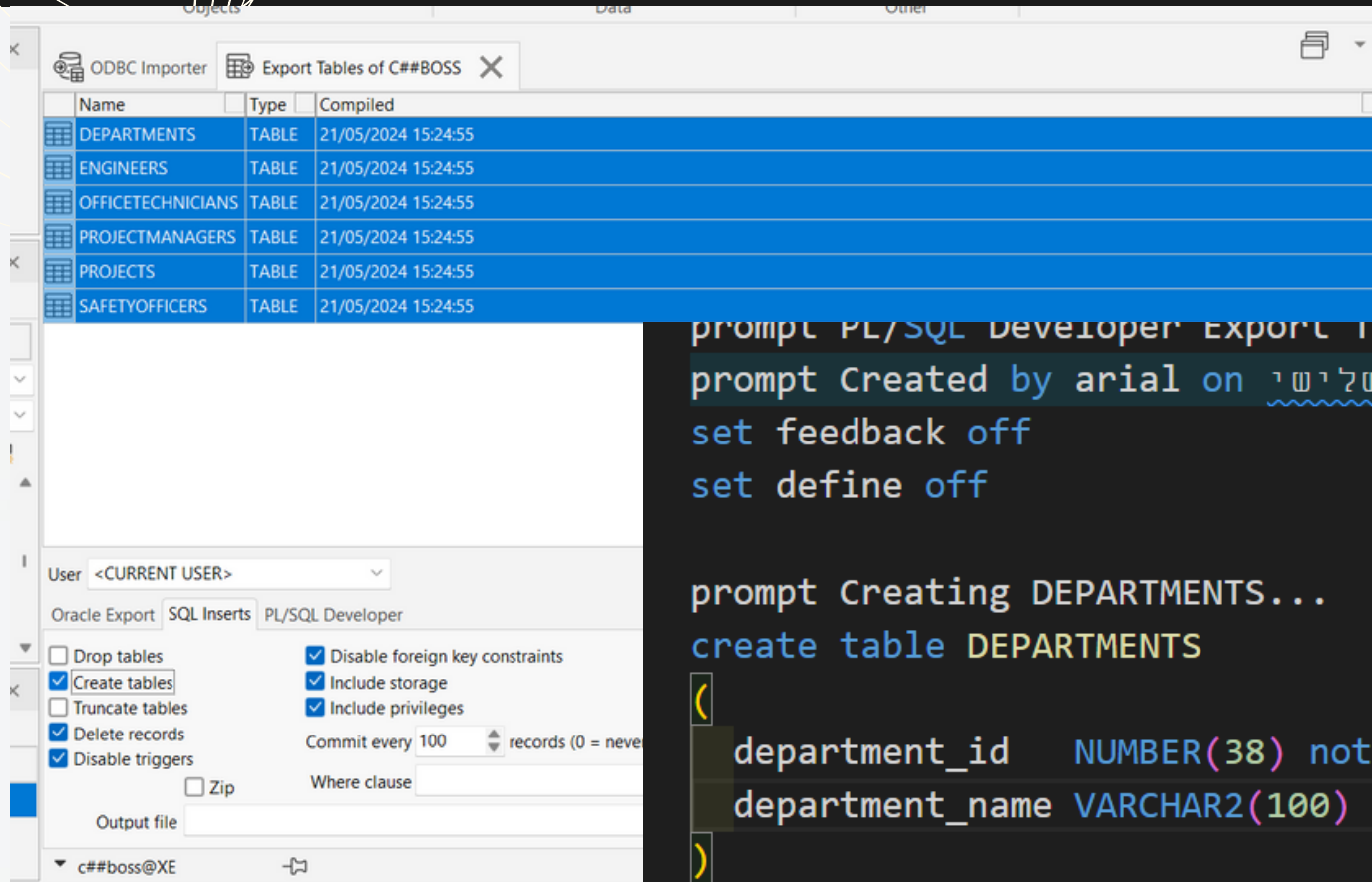
c##boss@XF

ExcelFilesFromMockaroo < מיני פרוייקט בסנת < שולחן העבודה <			
... תצוגה מיון			
גודל	סוג	תאריך שינוי	
12 KB	Mic... גליון עבודה של	21/05/2024 17:51	
42 KB	Mic... גליון עבודה של	21/05/2024 17:59	
24 KB	Mic... גליון עבודה של	21/05/2024 18:02	
23 KB	Mic... גליון עבודה של	21/05/2024 18:00	
17 KB	Mic... גליון עבודה של	21/05/2024 17:47	
24 KB	Mic... גליון עבודה של	21/05/2024 18:01	



LEV & MISSILES

# יצירת גיבוי



```
prompt PL/SQL Developer Export Tables for user C##BOSS@XE
prompt Created by arial on יום 21 מאי 2024 "שלישי": Unknown word
set feedback off
set define off

prompt Creating DEPARTMENTS...
create table DEPARTMENTS
(
  department_id NUMBER(38) not null,
  department_name VARCHAR2(100) not null
);

alter table DEPARTMENTS
  add constraint PK_DEPARTMENTS primary key (DEPARTMENT_ID)
  using index
;

grant select, insert, update, delete, references, alter, index, debug, rea

prompt Creating PROJECTS...
create table PROJECTS
(
  project_id NUMBER(38) not null,
  project_name VARCHAR2(100) not null,
  start_date DATE not null,
  end_date DATE not null
)
```

תיקית קבצים	21/05/2024 15:55	GDFiles
654 KB	SQL Source File	21/05/2024 18:26
4 KB	SQL Source File	21/05/2024 15:22
1 KB	קיצור דרך	20/05/2024 20:33
1 KB	SQL Source File	18:26 21/05/2024
	SQL Source File	20/05/2024 20:37
	SQL Source File	21/05/2024 17:30
	SQL Source File	20/05/2024 20:39
	קובץ BMP	20/05/2024 21:11
	SQL Source File	20/05/2024 20:40

סוג: SQL Source File  
גודל: 653 KB  
תאריך שינוי: 21/05/2024 18:26

BackUpFile.sql
createTable.sql
demo.dds
dropTables.sql
insertMultTables.sql
insertTables.sql
picERD.bmp
selectAll.sql

כולל מחיקת הפרטים  
הלא נחוצים



LEV & MISSILES

# שלב ב



LEV & MISSILES

# שלב ב – שאילתת select

אחזר את פרטי הפרויקט יחד עם מספר המהנדסים שעובדים על כל

## פרויקט

```
-- Query 1: Retrieve project details along with the number of engineers working on each project
SELECT p.project_id, p.project_name, p.start_date, p.end_date, COUNT(e.engineer_id) AS num_engineers
FROM Projects p
LEFT JOIN Engineers e ON p.project_id = e.project_id
GROUP BY p.project_id, p.project_name, p.start_date, p.end_date;
```

		PROJECT_ID	PROJECT_NAME		START_DATE		END_DATE		NUM_ENGINEERS	
▶	1	2907	Analytical Management Services	...	03/08/2020	...	09/09/2023	...	2	
	2	7952	ScriptSave	...	21/03/2021	...	05/07/2023	...	2	
	3	1217	Reckitt Benckiser	...	12/11/2020	...	18/09/2023	...	2	
	4	1348	Black Mountain Management	...	12/01/2022	...	03/11/2023	...	0	
	5	6003	Deutsche Telekom	...	21/05/2020	...	07/07/2023	...	1	
	6	8678	EPIQ Systems	...	25/12/2021	...	06/10/2023	...	1	
	7	2151	Miracle Software Systems	...	01/03/2022	...	16/05/2023	...	1	
	8	3833	Mathis, Earnest & Vandeventer	...	19/02/2022	...	03/08/2023	...	1	
	9	5504	Callisto	...	01/12/2021	...	10/09/2023	...	1	





# שלב ב – שאילתת select

אחזר את פרטי קצין הבטיחות יחד עם שם המחלקה שלהם

```
-- Query 2: Retrieve safety officer details along with their department name
SELECT so.officer_id, so.first_name, so.last_name, so.certification, d.department_name, so.hire_date
FROM SafetyOfficers so
JOIN Departments d ON so.department_id = d.department_id;
```

	OFFICER_ID	FIRST_NAME	LAST_NAME	CERTIFICATION	DEPARTMENT_NAME	HIRE_DATE
▶ 1	870105	Teri	Tripplehorn	Human Factors	USANew Castle	11/08/2017
2	781424	Eddie	Iglesias	Compliance	USACromwell	25/11/2018
3	473533	Miko	Piven	Materials	AustraliaCanberra	22/01/2018
4	825451	Elle	Thomas	Quality Assurance	CanadaRichmond	13/04/2018
5	994466	Lisa	Roberts	Testing	GermanyMünster	05/05/2018
6	773680	Lea	Bacon	Avionics	FinlandTurku	14/03/2019
7	345070	Eugene	MacLachlan	Materials	USABelmont	14/12/2017
8	484945	Tanya	Hudson	Risk Assessment	CyprusNicosia	30/08/2018



# שלב ב – שאילתת select

אחזר את פרטי מנהל הפרויקט יחד עם שמות הפרויקט והמחלקות שלהם

```
-- Query 3: Retrieve project manager details along with their project and department names
SELECT pm.manager_id, pm.first_name, pm.last_name, p.project_name, d.department_name, pm.hire_date
FROM ProjectManagers pm
JOIN Projects p ON pm.project_id = p.project_id
JOIN Departments d ON pm.department_id = d.department_id;
```

		MANAGER_ID	FIRST_NAME		LAST_NAME		PROJECT_NAME		DEPARTMENT_NAME		HIRE_DATE	
▶	1	436292	Etta	...	Mraz	...	Campbell Soup Co.	...	USAUniversity	...	27/09/2019	...
	2	468303	Willie	...	Gosdin	...	Street Glow	...	GermanyMarburg	...	26/08/2018	...
	3	345605	Malcolm	...	Vai	...	Active Services	...	USACromwell	...	29/03/2020	...
	4	644288	Owen	...	Hobson	...	Employer Services	...	FinlandTurku	...	08/02/2020	...
	5	311995	Jonathan	...	Firth	...	IVCi	...	GermanyLahr	...	17/09/2019	...
	6	172019	Marianne	...	Guinness	...	Reckitt Benckiser	...	BrazilCampinas	...	17/11/2018	...
	7	875083	Nelly	...	Flatts	...	Formatech	...	USAHarrisburg	...	10/03/2020	...
	8	604591	Shannyn	...	Connery	...	V-Span	...	CanadaCambridge	...	14/02/2019	...
	9	68615	Kazem	...	Sherman	...	Yum Brands	...	GreeceAthens	...	15/04/2020	...



# שלב ב – שאילתת select

אחזר את פרטי טכנאי המשרד יחד עם שם המנהל שלו

```
-- Query 4: Retrieve office technician details along with their manager's name
SELECT ot.technician_id, ot.first_name, ot.last_name, pm.first_name AS manager_first_name, pm.last_name AS manager_last_name, ot.hire_date
FROM OfficeTechnicians ot
LEFT JOIN ProjectManagers pm ON ot.manager_id = pm.manager_id;
```

		TECHNICIAN_ID	FIRST_NAME	LAST_NAME	MANAGER_FIRST_NAME	MANAGER_LAST_NAME	HIRE_DATE
▶	1	43999	Bill	Spears	Mos	Wariner	03/10/2019
	2	27890	Jet	Jovovich	Jeroen	Deejay	03/12/2019
	3	25626	Gran	O'Sullivan	Marisa	Mahoney	19/03/2019
	4	26764	Victoria	Senior	Charlie	Diaz	18/10/2019
	5	44309	Mickey	Cross	Meryl	McGowan	08/02/2020
	6	34828	Nanci	Bruce	Dan	Sepulveda	28/11/2018
	7	20425	Brad	Rhys-Davies	Rhett	DiFranco	10/02/2019
	8	71811	Malcolm	Lee	Mia	Frampton	21/01/2020
	9	73244	Darius	Mitra	Ryan	Paquin	02/04/2019





# שלב ב – שאילתת delete

## הסר מהנדסים שהתקבלו לעבודה לפני תאריך מסוים

```
-- Delete query 1: Remove engineers who have been hired before a certain date
DELETE FROM Engineers|
WHERE hire date < TO DATE('2020-01-01', 'YYYY-MM-DD');
```

לפני

אחרי

	ENGINEER_ID	FIRST_NAME	LAST_NAME	SPECIALTY	PROJECT_ID	HIRE_DATE	ROWID
1	18907	Vendetta	Gooding	GNC	6222	19/05/2018	AAATGmAABAAAp6RAAA
2	38250	Jeroen	Davies	Materials	1860	15/12/2015	AAATGmAABAAAp6RAAB
3	54536	Night	England	Avionics	7118	13/09/2018	AAATGmAABAAAp6RAAC
4	22750	Brooke	Nakai	Integration	6741	27/02/2017	AAATGmAABAAAp6RAAD
5	48723	Robbie	Crewson	Aerodynamics	1069	05/09/2016	AAATGmAABAAAp6RAAE
6	91090	Joaquim	Wagner	Mission Planning	2010	11/12/2019	AAATGmAABAAAp6RAAF
7	15151	Terence	Tillis	GNC	7463	29/12/2017	AAATGmAABAAAp6RAAG
8	53761	Raul	Chesnutt	Mission Planning	5667	14/01/2020	AAATGmAABAAAp6RAAH
9	89683	Lily	Houston	Structures	2623	03/01/2019	AAATGmAABAAAp6RAAI
10	74414	Hex	Weiland	Orbital Mechanics	2907	01/06/2015	AAATGmAABAAAp6RAAJ
11	28752	Chet	Barry	Avionics	8225	25/01/2018	AAATGmAABAAAp6RAAK
12	20876	Franco	Sewell	Operations	2959	16/12/2016	AAATGmAABAAAp6RAAL
13	15050	Darius	Spiner	Systems	6741	14/04/2016	AAATGmAABAAAp6RAAM
14	80951	Jessica	Turturro	Materials	7344	01/12/2015	AAATGmAABAAAp6RAAN
15	60769	Chris	Horton	Mission Planning	6024	27/12/2019	AAATGmAABAAAp6RAAO
16	56510	Mitchell	Ponty	Safety	5584	10/12/2015	AAATGmAABAAAp6RAAP
17	14115	Jann	Heatherly	Structures	1045	29/07/2017	AAATGmAABAAAp6RAAQ
18	99433	Albert	Detmer	Thermal	1931	14/09/2018	AAATGmAABAAAp6RAAR
19	28239	Emilio	Anderson	Thermal	9361	02/07/2019	AAATGmAABAAAp6RAAS

	ENGINEER_ID	FIRST_NAME	LAST_NAME	SPECIALTY	PROJECT_ID	HIRE_DATE	ROWID
1	18907	Vendetta	Gooding	GNC	6222	19/05/2018	AAATGmAABAAAp6RAAA
2	38250	Jeroen	Davies	Materials	1860	15/12/2015	AAATGmAABAAAp6RAAB
3	54536	Night	England	Avionics	7118	13/09/2018	AAATGmAABAAAp6RAAC
4	22750	Brooke	Nakai	Integration	6741	27/02/2017	AAATGmAABAAAp6RAAD
5	48723	Robbie	Crewson	Aerodynamics	1069	05/09/2016	AAATGmAABAAAp6RAAE
6	91090	Joaquim	Wagner	Mission Planning	2010	11/12/2019	AAATGmAABAAAp6RAAF
7	15151	Terence	Tillis	GNC	7463	29/12/2017	AAATGmAABAAAp6RAAG
8	53761	Raul	Chesnutt	Mission Planning	5667	14/01/2020	AAATGmAABAAAp6RAAH
9	89683	Lily	Houston	Structures	2623	03/01/2019	AAATGmAABAAAp6RAAI
10	74414	Hex	Weiland	Orbital Mechanics	2907	01/06/2015	AAATGmAABAAAp6RAAJ
11	28752	Chet	Barry	Avionics	8225	25/01/2018	AAATGmAABAAAp6RAAK
12	20876	Franco	Sewell	Operations	2959	16/12/2016	AAATGmAABAAAp6RAAL
13	15050	Darius	Spiner	Systems	6741	14/04/2016	AAATGmAABAAAp6RAAM
14	80951	Jessica	Turturro	Materials	7344	01/12/2015	AAATGmAABAAAp6RAAN
15	60769	Chris	Horton	Mission Planning	6024	27/12/2019	AAATGmAABAAAp6RAAO
16	56510	Mitchell	Ponty	Safety	5584	10/12/2015	AAATGmAABAAAp6RAAP
17	14115	Jann	Heatherly	Structures	1045	29/07/2017	AAATGmAABAAAp6RAAQ





# שלב ב – שאילתת delete

## הסר פרויקטים שלא הוקצו להם מהנדסים

-- Delete query 2: Remove projects that have no engineers assigned

```
DELETE FROM Projects
```

```
WHERE project_id NOT IN (SELECT project_id FROM Engineers);
```

↕

לפני

2	7952	ScriptSave	...	21/03/2021	...	05/07/2023	...	AAATGiAABAAAp5xAAB	...
3	1217	Reckitt Benckiser	...	12/11/2020	...	18/09/2023	...	AAATGiAABAAAp5xAAC	...
4	1348	Black Mountain Management	...	12/01/2022	...	03/11/2023	...	AAATGiAABAAAp5xAAD	...
5	6003	Deutsche Telekom	...	21/05/2020	...	07/07/2023	...	AAATGiAABAAAp5xAAE	...
6	8678	EPIQ Systems	...	25/12/2021	...	06/10/2023	...	AAATGiAABAAAp5xAAF	...
7	2151	Miracle Software Systems	...	01/03/2022	...	16/05/2023	...	AAATGiAABAAAp5xAAG	...
8	3833	Mathis, Earnest & Vandeventer	...	19/02/2022	...	03/08/2023	...	AAATGiAABAAAp5xAAH	...
9	5584	Solipsys	...	01/12/2021	...	19/08/2023	...	AAATGiAABAAAp5xAAI	...
10	4777	ACS International Resources	...	31/08/2020	...	20/09/2023	...	AAATGiAABAAAp5xAAJ	...
11	5667	News Corp.	...	16/01/2022	...	28/08/2023	...	AAATGiAABAAAp5xAAK	...
12	8356	Employer Services	...	29/08/2020	...	21/02/2024	...	AAATGiAABAAAp5xAAL	...
13	4909	Medical Action Industries	...	27/03/2022	...	06/05/2023	...	AAATGiAABAAAp5xAAM	...
14	4407	Campbell Soup Co.	...	13/07/2020	...	17/06/2023	...	AAATGiAABAAAp5xAAN	...
15	2990	Harrison & Shriftman	...	10/09/2020	...	14/03/2024	...	AAATGiAABAAAp5xAAO	...
16	6189	Nature's Cure	...	19/01/2021	...	08/07/2023	...	AAATGiAABAAAp5xAAP	...
17	6090	Tarragon Realty	...	30/12/2021	...	23/12/2023	...	AAATGiAABAAAp5xAAQ	...
18	7123	Timberlane Woodcrafters	...	14/01/2021	...	23/07/2023	...	AAATGiAABAAAp5xAAR	...
19	7537	Travizon	...	01/08/2021	...	13/11/2023	...	AAATGiAABAAAp5xAAS	...
20	7842	U.S. Government	...	18/08/2021	...	16/12/2023	...	AAATGiAABAAAp5xAAT	...

אחרי

	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE	ROWID
1	2907	Analytical Management Services	03/08/2020	09/09/2023	AAATGiAABAAAp5xAAA
2	7952	ScriptSave	21/03/2021	05/07/2023	AAATGiAABAAAp5xAAB
3	1217	Reckitt Benckiser	12/11/2020	18/09/2023	AAATGiAABAAAp5xAAC
4	1348	Black Mountain Management	12/01/2022	03/11/2023	AAATGiAABAAAp5xAAD
5	6003	Deutsche Telekom	21/05/2020	07/07/2023	AAATGiAABAAAp5xAAE
6	8678	EPIQ Systems	25/12/2021	06/10/2023	AAATGiAABAAAp5xAAF
7	2151	Miracle Software Systems	01/03/2022	16/05/2023	AAATGiAABAAAp5xAAG
8	3833	Mathis, Earnest & Vandeventer	19/02/2022	03/08/2023	AAATGiAABAAAp5xAAH
9	5584	Solipsys	01/12/2021	19/08/2023	AAATGiAABAAAp5xAAI
10	4777	ACS International Resources	31/08/2020	20/09/2023	AAATGiAABAAAp5xAAJ
11	5667	News Corp.	16/01/2022	28/08/2023	AAATGiAABAAAp5xAAK
12	8356	Employer Services	29/08/2020	21/02/2024	AAATGiAABAAAp5xAAL
13	4909	Medical Action Industries	27/03/2022	06/05/2023	AAATGiAABAAAp5xAAM
14	4407	Campbell Soup Co.	13/07/2020	17/06/2023	AAATGiAABAAAp5xAAN
15	2990	Harrison & Shriftman	10/09/2020	14/03/2024	AAATGiAABAAAp5xAAO
16	6189	Nature's Cure	19/01/2021	08/07/2023	AAATGiAABAAAp5xAAP



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# שלב ב – שאילתת update

עדכן את המומחיות של מהנדסים העובדים על פרויקט ספציפי

```
-- Update query 1: Update the specialty of engineers working on a specific project
UPDATE Engineers
SET specialty = 'Civil'
WHERE project_id = (SELECT project_id FROM Projects WHERE project_name = 'Namfix');
```

אחרי

לפני

	ENGINEER_ID	FIRST_NAME	LAST_NAME	SPECIALTY	PROJECT_ID	HIRE_DATE	ROWID
1	303	Michael	Johnson	Civil	103	01/03/2024	AAATGmAABAAAp6SAAE
2	307	James	Brown	Civil	107	01/07/2024	AAATGmAABAAAp6SAAI
3	311	Daniel	Gonzalez	Civil	111	01/11/2024	AAATGmAABAAAp6SAAM
4	315	Jacob	Thomas	Civil	115	01/03/2025	AAATGmAABAAAp6SAAQ
5	319	Liam	Perez	Civil	119	01/07/2025	AAATGmAABAAAp6SAAU
6	323	Mason	Adams	Civil	123	01/11/2025	AAATGmAABAAAp6SAAV
7	327	Elijah	Harris	Civil	127	01/03/2026	AAATGmAABAAAp6SAAc

select t.\*, t.rowid from PROJECTS t

	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE	ROWID
417	302	Biodex	14/09/2023	11/12/2023	AAATGiAABAAAp5zAAL
418	303	Konklab	20/09/2023	10/06/2023	AAATGiAABAAAp5zAAM
419	304	Quo Lux	14/05/2024	22/10/2023	AAATGiAABAAAp5zAAN
420	305	Span	04/03/2024	27/04/2024	AAATGiAABAAAp5zAAO
421	306	Fix San	31/03/2024	06/09/2023	AAATGiAABAAAp5zAAP
422	307	Vagram	27/05/2023	07/03/2024	AAATGiAABAAAp5zAAQ
423	308	Prodder	04/12/2023	09/12/2023	AAATGiAABAAAp5zAAR
424	309	Stim	27/07/2023	10/02/2024	AAATGiAABAAAp5zAAS
425	310	Alphazap	17/09/2023	25/04/2024	AAATGiAABAAAp5zAAT
426	311	Subin	09/02/2024	18/07/2023	AAATGiAABAAAp5zAAU
427	312	Duobam	22/10/2023	08/04/2024	AAATGiAABAAAp5zAAV
428	313	Solarbreeze	30/04/2024	22/09/2023	AAATGiAABAAAp5zAAW
429	314	Sonair	28/02/2024	08/01/2024	AAATGiAABAAAp5zAAX
430	315	Voyatouch	20/11/2023	14/04/2024	AAATGiAABAAAp5zAAZ
431	316	Y-find	17/05/2024	06/05/2024	AAATGiAABAAAp5zAAb
432	317	Job	21/09/2023	24/11/2023	AAATGiAABAAAp5zAAa
433	318	Job	20/11/2023	15/10/2023	AAATGiAABAAAp5zAAb
434	319	Overhold	13/01/2024	30/07/2023	AAATGiAABAAAp5zAAc

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# שלב ב – שאילתת update

## עדכן את תאריך העסקה של קציני בטיחות במחלקה ספציפית

-- Update query 2: Update the hire date of safety officers in a specific department

```
UPDATE SafetyOfficers
```

```
SET hire_date = ADD_MONTHS(hire_date, 6)
```

```
WHERE department_id = (SELECT department_id FROM Departments WHERE department_name = 'Safety Department');
```

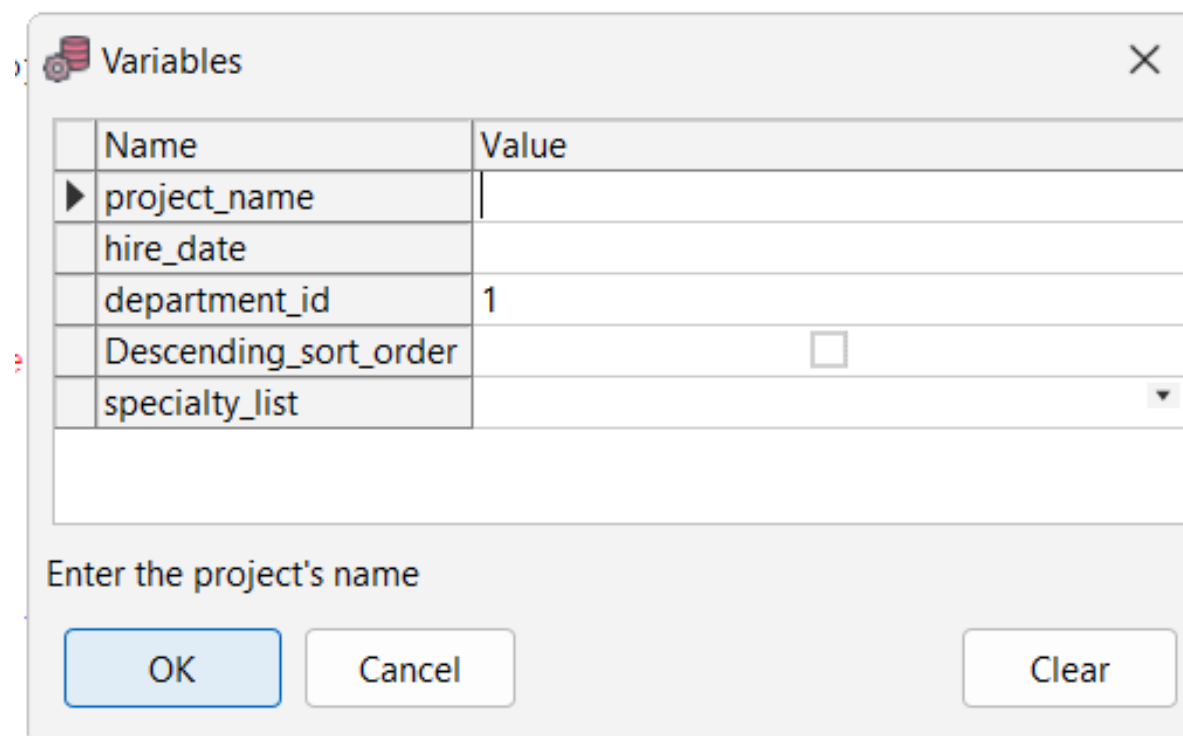
		DEPARTMENT_ID	DEPARTMENT_NAME		ROWID
▶	1	89950	GermanyMönchengladbach	...	AAATGkAABAAAp!
	2	96623	BrazilCampinas	...	AAATGkAABAAAp!
	3	55552	BelgiumWavre	...	AAATGkAABAAAp!
	4	22541	USABatavia	...	AAATGkAABAAAp!
	5	44988	CyprusNicosia	...	AAATGkAABAAAp!
	6	29175	GermanyRegensburg	...	AAATGkAABAAAp!
	7	60166	USAFort Lewis	...	AAATGkAABAAAp!
	8	82417	USABillerica	...	AAATGkAABAAAp!
	9	62661	USAHunt Valley	...	AAATGkAABAAAp!
	10	99709	USAOklahoma city	...	AAATGkAABAAAp!
	11	41969	CanadaGrand-mere	...	AAATGkAABAAAp!
	12	70163	GermanyRothenburg	...	AAATGkAABAAAp!
	13	88035	SpainBergara	...	AAATGkAABAAAp!
	14	69970	USAWestport	...	AAATGkAABAAAp!
	15	31359	BelgiumAntwerpen	...	AAATGkAABAAAp!
	16	75755	ItalyBiella	...	AAATGkAABAAAp!

# שלב ב – שאילתת Query with parameter

חפש פרויקטים לפי שם שאילתה זו מאפשרת למשתמש לחפש

פרויקטים על סמך התאמת שמות חלקית.

```
SELECT *  
FROM Projects  
WHERE project_name LIKE '%' || <name="project_name" hint="Enter the project's name" type="string" required="true"> || '%'  
/
```



Name	Value
project_name	
hire_date	
department_id	1
Descending_sort_order	<input type="checkbox"/>
specialty_list	

Enter the project's name

OK Cancel Clear



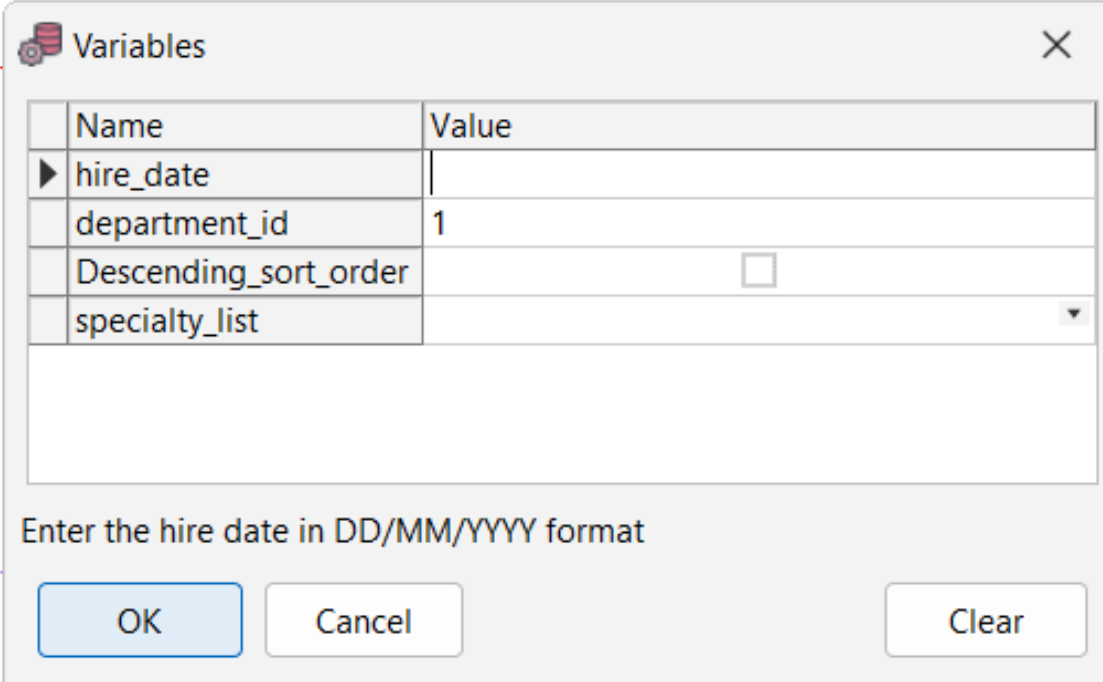


# שלב ב – שאילתת Query with parameter

מהנדסים נשכרים לאחר תאריך מסוים שאילתה זו מאחזרת מהנדסים

שנשכרו לאחר תאריך מוגדר.

```
SELECT e.*  
FROM Engineers e  
WHERE hire_date > TO_DATE('&<name="hire_date" hint="Enter the hire date in DD/MM/YYYY format">' , 'DD/MM/YYYY')  
/
```



Name	Value
hire_date	
department_id	1
Descending_sort_order	<input type="checkbox"/>
specialty_list	

Enter the hire date in DD/MM/YYYY format

OK Cancel Clear

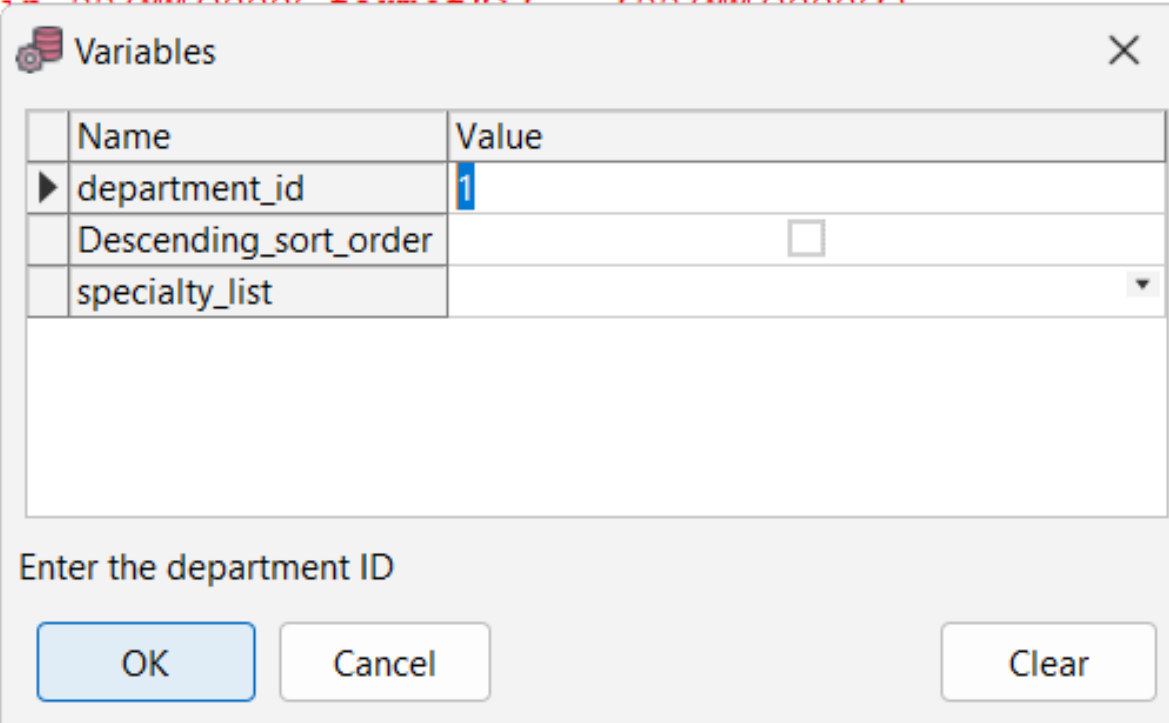


# שלב ב – שאילתת Query with parameter

שאיילתה 3: סינון מנהלי פרויקטים לפי מחלקה עם ערך ברירת מחדל שאילתה זו

מאחזרת מנהלי פרויקטים על סמך המחלקה שלהם, עם ערך ברירת המחדל של '1'.

```
SELECT pm.*  
FROM ProjectManagers pm  
WHERE pm.department_id = &<name="department_id" hint="Enter the department ID" default="1">  
ORDER BY hire_date;  
/
```



Name	Value
▶ department_id	1
Descending_sort_order	<input type="checkbox"/>
specialty_list	

Enter the department ID

OK Cancel Clear



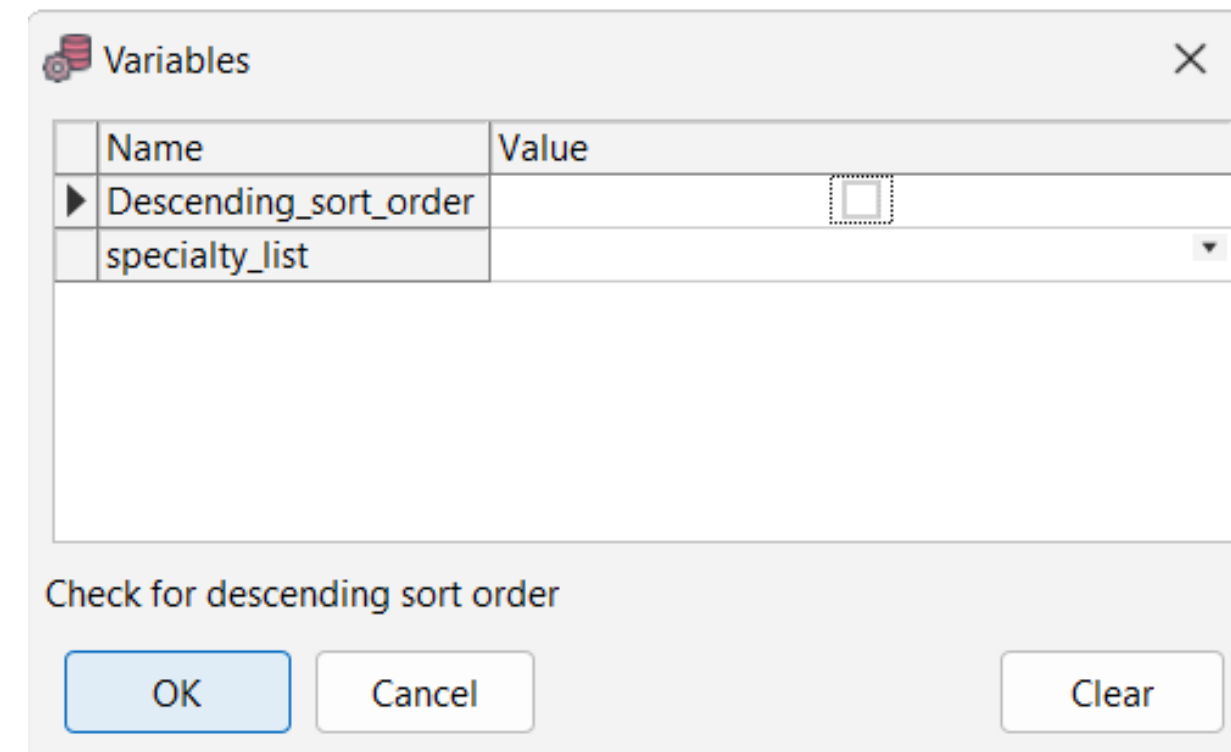
# שלב ב – שאילתת Query with parameter

שאלתה 4: מיון מחלקות לפי שם עם תיבת סימון עבור סדר יורד

-- שאילתה זו מאחזרת מחלקות ממוינות לפי שמן, עם אפשרות למיין

```
SELECT *  
FROM Departments d  
ORDER BY d.department_name &<name="Descending_sort_order" checkbox="DESC, ASC" hint="Check for descending sort order">  
/
```

בסדר יורד.



Name	Value
Descending_sort_order	<input type="checkbox"/>
specialty_list	▼

Check for descending sort order

OK Cancel Clear

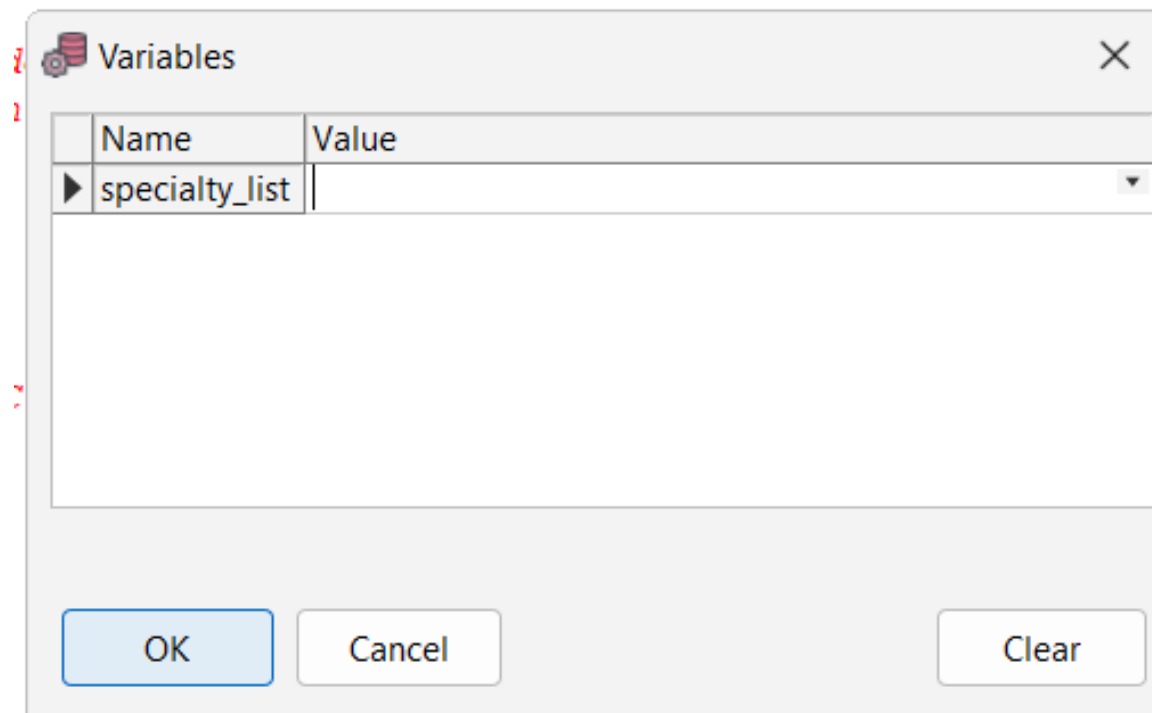




# שלב ב – שאילתת Query with parameter

שאילתה 5: סינון מהנדסים לפי התמחויות מרובות שאילתה זו  
מאפשרת לסנן מהנדסים על סמך התמחויות מרובות.

```
SELECT *  
FROM Engineers  
WHERE specialty IN (&<name="specialty_list" list="SELECT DISTINCT specialty FROM Engineers ORDER BY specialty">)  
/
```



Name	Value
specialty_list	



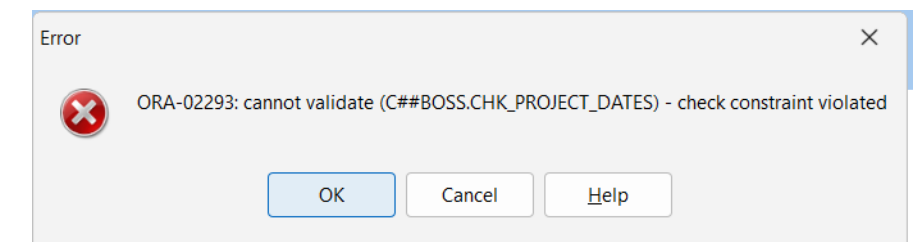
# שלב ב - אילוצים

`chk_project_dates` בטבלת `Projects` מבטיח שתאריך הסיום של פרויקט מאוחר מתאריך ההתחלה.

```
-- Constraint: chk_project_dates on Projects table
-- Ensures that the end_date of a project is later than the start_date.
ALTER TABLE Projects
ADD CONSTRAINT chk_project_dates CHECK (end_date > start_date);
```

```
select* from all constraints
where TABLE_NAME='
```

	OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SE
1	SYSTEM	LOGMNR_MDDL\$_PK	P	LOGMNR_MDDL\$	<L
2	SYSTEM	LOGMNR_AGE_SPILL\$_PK	P	LOGMNR_AGE_SPILL\$	<L
3	SYSTEM	LOGMNR_DID\$_PK	P	LOGMNR_DID\$	<L
4	SYSTEM	MVIEW\$_ADV_ROLLUP_PK	P	MVIEW\$_ADV_ROLLUP	<L
5	SYSTEM	MVIEW\$_ADV_WORKLOAD_PK	P	MVIEW\$_ADV_WORKLOAD	<L
6	SYSTEM	PK_DEPARTMENTS	P	DEPARTMENTS	<L
7	SYSTEM	PK_ENGINEERS	P	ENGINEERS	<L
8	SYSTEM	PK_OFFICETECHNICIANS	P	OFFICETECHNICIANS	<L
9	SYSTEM	PK_PROJECTMANAGERS	P	PROJECTMANAGERS	<L
10	SYSTEM	PK_PROJECTS	P	PROJECTS	<L
11	SYSTEM	PK_SAFETYOFFICERS	P	SAFETYOFFICERS	<L
12	SYSTEM	REPL_SUPPORT_MATRIX_PK	P	REPL_SUPPORT_MATRIX	<L
13	SYSTEM	SYS_C002815	D	AG\$ INTERNET_AGENTS	<L



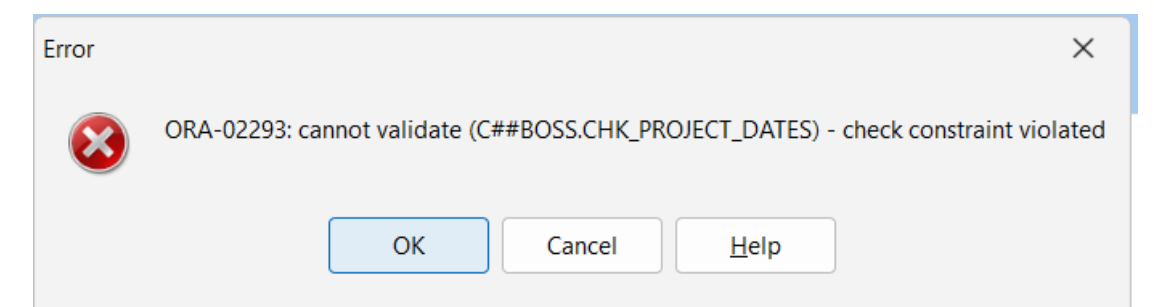
# שלב ב - אילוצים

מוודא שאורכו של שם המחלקה הוא לפחות 3 תווים.

```
-- Constraint: chk_department_name_length on Departments table
-- Ensures that the length of the department_name is at least 3 characters.
ALTER TABLE Departments
ADD CONSTRAINT chk_department_name_length CHECK (LENGTH(department_name) >= 3);
```

```
select* from all_constraints
where TABLE_NAME='
```

	OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SE
1	SYSTEM	LOGMNRT_MDDL\$_PK	P	LOGMNRT_MDDL\$	<L
2	SYSTEM	LOGMNR_AGE_SPILL\$_PK	P	LOGMNR_AGE_SPILL\$	<L
3	SYSTEM	LOGMNR_DID\$_PK	P	LOGMNR_DID\$	<L
4	SYSTEM	MVIEW\$_ADV_ROLLUP_PK	P	MVIEW\$_ADV_ROLLUP	<L
5	SYSTEM	MVIEW\$_ADV_WORKLOAD_PK	P	MVIEW\$_ADV_WORKLOAD	<L
6	SYSTEM	PK_DEPARTMENTS	P	DEPARTMENTS	<L
7	SYSTEM	PK_ENGINEERS	P	ENGINEERS	<L
8	SYSTEM	PK_OFFICETECHNICIANS	P	OFFICETECHNICIANS	<L
9	SYSTEM	PK_PROJECTMANAGERS	P	PROJECTMANAGERS	<L
10	SYSTEM	PK_PROJECTS	P	PROJECTS	<L
11	SYSTEM	PK_SAFETYOFFICERS	P	SAFETYOFFICERS	<L
12	SYSTEM	REPL_SUPPORT_MATRIX_PK	P	REPL_SUPPORT_MATRIX	<L
13	SYSTEM	CYC_0000015	D	AGE INTERNET AGENTS	<L



LEV & MISSILES



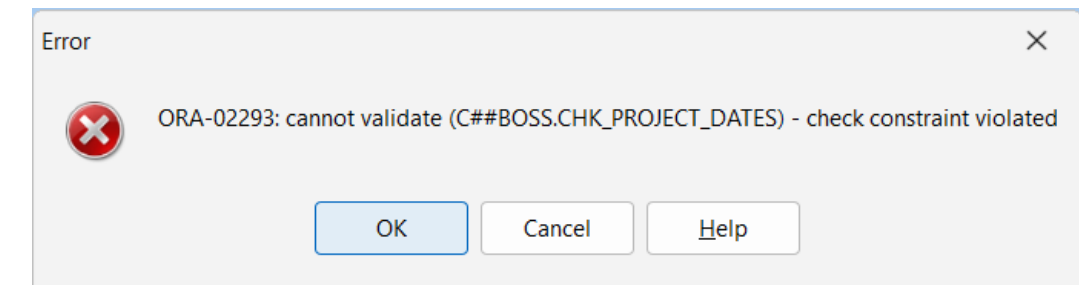
# שלב ב - אילוצים

## מבטיח שהמומחיות של מהנדס אינה מחרוזת ריקה

```
-- Constraint: chk_engineer_specialty on Engineers table
-- Ensures that the specialty of an engineer is not an empty string.
ALTER TABLE Engineers
ADD CONSTRAINT chk_engineer_specialty CHECK (specialty IS NOT NULL AND specialty <> '');
```

```
select* from all_constraints
where TABLE_NAME='ENGINEERS'
```

	OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	STATUS
1	SYSTEM	LOGMNRT_MDDL\$_PK	P	LOGMNRT_MDDL\$	VALID
2	SYSTEM	LOGMNR_AGE_SPILL\$_PK	P	LOGMNR_AGE_SPILL\$	VALID
3	SYSTEM	LOGMNR_DID\$_PK	P	LOGMNR_DID\$	VALID
4	SYSTEM	MVIEW\$_ADV_ROLLUP_PK	P	MVIEW\$_ADV_ROLLUP	VALID
5	SYSTEM	MVIEW\$_ADV_WORKLOAD_PK	P	MVIEW\$_ADV_WORKLOAD	VALID
6	SYSTEM	PK_DEPARTMENTS	P	DEPARTMENTS	VALID
7	SYSTEM	PK_ENGINEERS	P	ENGINEERS	VALID
8	SYSTEM	PK_OFFICETECHNICIANS	P	OFFICETECHNICIANS	VALID
9	SYSTEM	PK_PROJECTMANAGERS	P	PROJECTMANAGERS	VALID
10	SYSTEM	PK_PROJECTS	P	PROJECTS	VALID
11	SYSTEM	PK_SAFETYOFFICERS	P	SAFETYOFFICERS	VALID
12	SYSTEM	REPL_SUPPORT_MATRIX_PK	P	REPL_SUPPORT_MATRIX	VALID
13	SYSTEM	SYSC_C002015	D	AGS_INTERNET_AGENITS	VALID



LEV & MISSILES

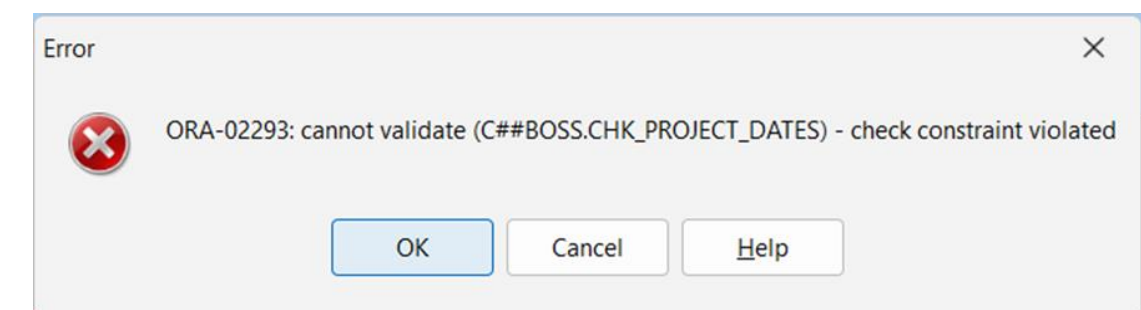
# שלב ב - אילוצים

מגדיר ערך ברירת מחדל של 'בסיסי' עבור עמודת ההסמכה.

```
-- Constraint: default_certification on SafetyOfficers table  
-- Sets a default value of 'Basic' for the certification column.  
ALTER TABLE SafetyOfficers  
MODIFY (certification DEFAULT 'Basic');
```

```
select* from all_constraints  
where TABLE_NAME='
```

	OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SE
1	SYSTEM	LOGMNRT_MDDL\$_PK	P	LOGMNRT_MDDL\$	<L
2	SYSTEM	LOGMNR_AGE_SPILL\$_PK	P	LOGMNR_AGE_SPILL\$	<L
3	SYSTEM	LOGMNR_DID\$_PK	P	LOGMNR_DID\$	<L
4	SYSTEM	MVIEW\$_ADV_ROLLUP_PK	P	MVIEW\$_ADV_ROLLUP	<L
5	SYSTEM	MVIEW\$_ADV_WORKLOAD_PK	P	MVIEW\$_ADV_WORKLOAD	<L
6	SYSTEM	PK_DEPARTMENTS	P	DEPARTMENTS	<L
7	SYSTEM	PK_ENGINEERS	P	ENGINEERS	<L
8	SYSTEM	PK_OFFICETECHNICIANS	P	OFFICETECHNICIANS	<L
9	SYSTEM	PK_PROJECTMANAGERS	P	PROJECTMANAGERS	<L
10	SYSTEM	PK_PROJECTS	P	PROJECTS	<L
11	SYSTEM	PK_SAFETYOFFICERS	P	SAFETYOFFICERS	<L
12	SYSTEM	REPL_SUPPORT_MATRIX_PK	P	REPL_SUPPORT_MATRIX	<L
13	SYSTEM	CYC_C003815	P	AGS_INTERNET_AGENTS	<L



# גיבוי 2

Name	Type	Compiled
DEPARTMENTS	TABLE	10/06/2024 15:16:47
ENGINEERS	TABLE	10/06/2024 15:16:47
OFFICETECHNICIANS	TABLE	21/05/2024 15:24:55
PROJECTMANAGERS	TABLE	21/05/2024 15:24:55
PROJECTS	TABLE	21/05/2024 15:24:55
SAFETYOFFICERS	TABLE	10/06/2024 15:48:27

User <CURRENT USER>

Oracle Export

SQL Inserts

PL/SQL Developer

Log

☐ Drop tables

☒ Create tables

☐ Truncate tables

☒ Delete records

☒ Disable triggers

☒ Disable foreign key constraints

☒ Include storage

☒ Include privileges

Commit every 100 records (0 = never)

☐ Zip

Where clause

Output file C:\Users\arial\Desktop\מיוני פרוייקט בסנת\BackUpFile2.sql

c##boss@XE

Exporting... Done

628 KB	SQL Source File	10/06/2024 15:53	BackUpFile2.sql
1 KB	SQL Source File	10/06/2024 15:51	Constraints.sql
3 KB	SQL Source File	10/06/2024 15:12	ParamsQueries.sql
3 KB	SQL Source File	07/06/2024 12:41	Queries.sql

BackUpFile2.sql

C: > Users > arial > Desktop > מיוני פרוייקט בסנת > שלב ב > BackUpFile2.sql

```
1 prompt PL/SQL Developer Export Tables for user C##BOSS@XE
2 prompt Created by arial on יוני 10 יום 2024 "יוני": Unknown word.
3 set feedback off
4 set define off
5
6 prompt Creating DEPARTMENTS...
7 create table DEPARTMENTS
8 (
9     department_id NUMBER(38) not null,
10    department_name VARCHAR2(100) not null
11 )
12 tablespace SYSTEM
13 pctfree 10
14 pctused 40 "pctused": Unknown word.
15 initrans 1 "initrans": Unknown word.
16 maxtrans 255 "maxtrans": Unknown word.
17 storage
18 (
19     initial 64K
20     next 1M
21     minextents 1 "minextents": Unknown word.
22     maxextents unlimited
23 );
24 alter table DEPARTMENTS
```

