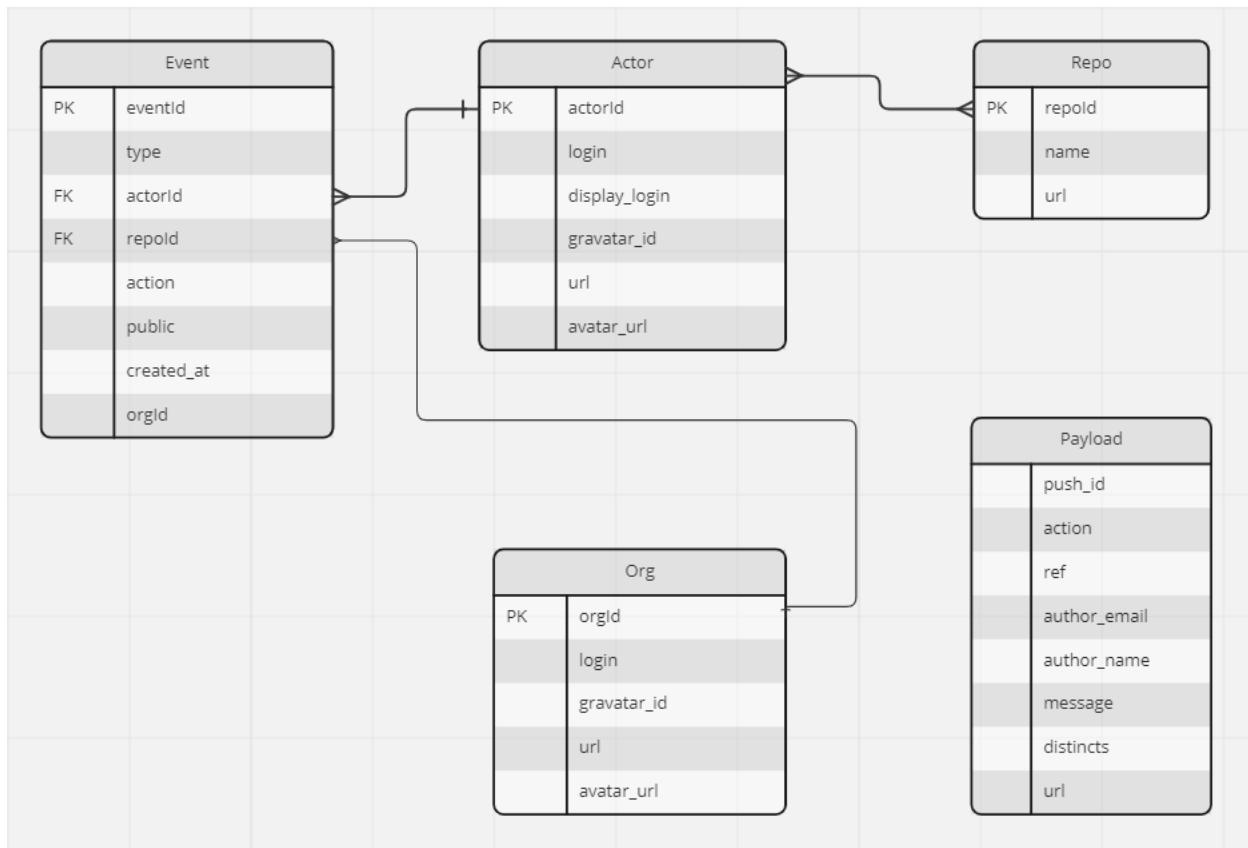


## 01-data-modeling-i



The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left displays the file structure of the '01-DATA-MODELING-I' project, including 'create\_tables.py'. The main editor window shows the Python script 'create\_tables.py' with the following content:

```
1 from typing import NewType
2
3 import psycopg2
4
5
6 PostgresCursor = NewType("PostgresCursor", psycopg2.extensions.cursor)
7 PostgresConn = NewType("PostgresConn", psycopg2.extensions.connection)
8
9 table_drop_events = "DROP TABLE IF EXISTS Event"
10 table_drop_actors = "DROP TABLE IF EXISTS Actor"
11 table_drop_repos = "DROP TABLE IF EXISTS Repo"
12 table_drop_payloads = "DROP TABLE IF EXISTS Payload"
13 table_drop_orgs = "DROP TABLE IF EXISTS Org"
14
15 # Event
16 table_create_events = """
17 CREATE TABLE IF NOT EXISTS Event (
18     eventId TEXT NOT NULL,
19     type VARCHAR(255),
20     actorId INT NOT NULL,
```

The TERMINAL panel at the bottom shows the command prompt output:

```
PS D:\swu-ds525\kruewan\swu-ds525\01-data-modeling-i> & d:/swu-ds525/kruewan/swu-ds525/01-data-modeling-i/ENV/Scripts/Activate.ps1
(ENV) PS D:\swu-ds525\kruewan\swu-ds525\01-data-modeling-i> & d:/swu-ds525/kruewan/swu-ds525/01-data-modeling-i/ENV/Scripts/python.exe d:/swu-ds525/kruewan/swu-ds525/01-data-modeling-i/create_tables.py
Table created
(ENV) PS D:\swu-ds525\kruewan\swu-ds525\01-data-modeling-i>
```

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, with the 'actor' table selected under the 'Tables (5)' category. The main window shows the SQL query to create the 'actor' table:

```
1 -- Table: public.actor
2
3 -- DROP TABLE IF EXISTS public.actor;
4
5 CREATE TABLE IF NOT EXISTS public.actor
6 (
7     actorid integer NOT NULL,
8     login character varying(255) COLLATE pg_catalog."default",
9     display_login character varying(255) COLLATE pg_catalog."default",
10    gravatar_id character varying(255) COLLATE pg_catalog."default",
11    url character varying(255) COLLATE pg_catalog."default",
12    avatar_url character varying(255) COLLATE pg_catalog."default",
13    CONSTRAINT actor_pkey PRIMARY KEY (actorid)
14 )
15
16 TABLESPACE pg_default;
17
18 ALTER TABLE IF EXISTS public.actor
19     OWNER to postgres;
```

etl.py - 01-data-modeling-i - Visual Studio Code

```
29
30
31 for datafile in all_files:
32     with open(datafile, "rb") as f:
33         data = json.loads(f.read())
34         for each in data:
35
36             # Insert data into tables here
37
38             insert_statement_actor = f"""
39                 INSERT INTO Actor (actorId,login,display_login,gravatar_id,url,avatar_url)
40                 VALUES ('{each["actor"]["id"]}
41                     , '{each["actor"]["login"]}
42                     , '{each["actor"]["display_login"]}
43                     , '{each["actor"]["gravatar_id"]}
44                     , '{each["actor"]["url"]}
45                     , '{each["actor"]["avatar_url"]}
46                 ON CONFLICT (actorId) DO NOTHING
47             """
48             cur.execute(insert_statement_actor)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER

```
(ENV) PS D:\swu-ds525\kruewan\swu-ds525\01-data-modeling-i> & d:/swu-ds525/kruewan/swu-ds525/01-data-modeling-i/ENV/Scripts
/python.exe d:/swu-ds525/kruewan/swu-ds525/01-data-modeling-i/create_tables.py
Table created
(ENV) PS D:\swu-ds525\kruewan\swu-ds525\01-data-modeling-i> & d:/swu-ds525/kruewan/swu-ds525/01-data-modeling-i/ENV/Scripts
/python.exe d:/swu-ds525/kruewan/swu-ds525/01-data-modeling-i/etl.py
5 files found in ../data
Data inserted total 150 records
(ENV) PS D:\swu-ds525\kruewan\swu-ds525\01-data-modeling-i>
```

pgAdmin 4

postgres/postgres@PostgreSQL 14

Query

```
1 SELECT actorid, login, display_login, gravatar_id, url, avatar_url
2 FROM public.actor;
```

Data output Messages Notifications

	actorid [PK] integer	login character varying (255)	display_login character varying (255)	gravatar_id character varying (255)	url character varying (255)
1	1696078	sukhada	sukhada		https://api.github.com/users/sukhada
2	66924041	yousabu	yousabu		https://api.github.com/users/yousabu
3	74971347	MathisGD	MathisGD		https://api.github.com/users/MathisGD
4	91143053	BR-Junior	BR-Junior		https://api.github.com/users/BR-Junior
5	60825784	predictcrypto	predictcrypto		https://api.github.com/users/predictcrypto
6	102357035	kazukimikami	kazukimikami		https://api.github.com/users/kazukimikami
7	46447321	alcontributors[bot]	alcontributors		https://api.github.com/users/alcontributors[bot]
8	41898282	github-actions[bot]	github-actions		https://api.github.com/users/github-actions[bot]
9	21972349	sozysozbot	sozysozbot		https://api.github.com/users/sozysozbot

Total rows: 127 of 127 Query complete 00:00:00.205 Ln 1, Col 1

pgAdmin 4

File Object Tools Help

Browser

- Collations
- Domains
- FTS Configurations
- FTS Dictionaries
- FTS Parsers
- FTS Templates
- Foreign Tables
- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (5)
  - actor
  - event
  - org
  - payload
  - repo
- Trigger Functions
- Types
- Views
- Subscriptions
- Login/Group Roles
- Tablespaces

Dashboard Properties SQL Statistics Dependencies Dependents postgres/postgres@PostgreSQL 14\*

postgres/postgres@PostgreSQL 14

Query Query History

```
1 SELECT eventid, type, actorid, repoid, action, public, created_at, orgid
2 FROM public.event;
```

Data output Messages Notifications

	eventid [PK] text	type character varying (255)	actorid integer	repoid integer	action character varying (255)	public boolean	created_at timestamp without time zone	orgid integer
1	2348792...	IssueCommentEvent	1696078	75340147	[null]	true	2022-08-17 15:51:05	24305026
2	2348792...	PushEvent	74971347	512700417	[null]	true	2022-08-17 15:51:05	106303238
3	2348792...	PushEvent	46447321	274724694	[null]	true	2022-08-17 15:51:05	66193563
4	2348792...	PushEvent	90624848	472789273	[null]	true	2022-08-17 15:51:04	93807059
5	2348792...	IssueCommentEvent	32714304	432870871	[null]	true	2022-08-17 15:51:05	25355022
6	2348792...	DeleteEvent	34882892	280075452	[null]	true	2022-08-17 15:51:05	56742327
7	2348792...	PushEvent	102809970	507821009	[null]	true	2022-08-17 15:51:05	108262640
8	2348792...	IssueCommentEvent	28898909	239809522	[null]	true	2022-08-17 15:51:05	60207193
9	2348796...	WatchEvent	44167236	6296790	[null]	true	2022-08-17 15:52:40	317776

Total rows: 49 of 49 Query complete 00:00:00.753 Ln 1, Col 1

pgAdmin 4

File Object Tools Help

Browser

- Collations
- Domains
- FTS Configurations
- FTS Dictionaries
- FTS Parsers
- FTS Templates
- Foreign Tables
- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (5)
  - actor
  - event
  - org
  - payload
  - repo
- Trigger Functions
- Types
- Views
- Subscriptions
- Login/Group Roles
- Tablespaces

Dashboard Properties SQL Statistics Dependencies Dependents postgres/postgres@PostgreSQL 14 postgres/postgres@PostgreSQL 14 postgres/postgres@PostgreSQL 14 postgres/postgres@PostgreSQL 14

postgres/postgres@PostgreSQL 14

Query Query History

```
1 SELECT orgid, login, gravatar_id, url, avatar_url
2 FROM public.org;
```

Data output Messages Notifications

	orgid [PK] integer	login character varying (255)	gravatar_id character varying (255)	url character varying (255)	avatar_url character varying (255)
1	24305026	350org		https://api.github.com/orgs/350org	https://avatars.githubusercontent.com
2	106303238	morpho-dao		https://api.github.com/orgs/morpho-dao	https://avatars.githubusercontent.com
3	66193563	dendronhq		https://api.github.com/orgs/dendronhq	https://avatars.githubusercontent.com
4	93807059	Sooktoring		https://api.github.com/orgs/Sooktoring	https://avatars.githubusercontent.com
5	25355022	livepeer		https://api.github.com/orgs/livepeer	https://avatars.githubusercontent.com
6	56742327	product-os		https://api.github.com/orgs/product-os	https://avatars.githubusercontent.com
7	108262640	web-application-app		https://api.github.com/orgs/web-application-app	https://avatars.githubusercontent.com
8	60207193	stolostron		https://api.github.com/orgs/stolostron	https://avatars.githubusercontent.com
9	317776	spring-projects		https://api.github.com/orgs/spring-projects	https://avatars.githubusercontent.com

Total rows: 41 of 41 Query complete 00:00:00.194 Ln 1, Col 1

pgAdmin 4

pgAdmin File Object Tools Help

Browser

- Collations
- Domains
- FTS Configurations
- FTS Dictionaries
- FTS Parsers
- FTS Templates
- Foreign Tables
- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (5)
  - actor
  - event
  - org
  - payload
  - repo
- Trigger Functions
- Types
- Views
- Subscriptions
- Login/Group Roles
- Tablespaces

postgres/postgres@PostgreSQL 14

Query Query History

```
1 SELECT repoid, name, url
2 FROM public.repo;
```

Data output Messages Notifications

	repoid [PK] integer	name character varying (255)	url character varying (255)
1	75340147	350org/ak_intl_v3	https://api.github.com/repos/350org/ak_intl_v3
2	525526680	yousabu/ansible_rhce	https://api.github.com/repos/yousabu/ansible_rhce
3	512700417	morpho-dao/morpho-utils	https://api.github.com/repos/morpho-dao/morpho-utils
4	525851446	BR-Junior/crud-com-vue-e-quasar	https://api.github.com/repos/BR-Junior/crud-com-vue-e-quasar
5	505029866	predictcrypto/pins	https://api.github.com/repos/predictcrypto/pins
6	525845306	kazukimikami/reservation	https://api.github.com/repos/kazukimikami/reservation
7	274724694	dendronhq/dendron	https://api.github.com/repos/dendronhq/dendron
8	523780252	tiller1010/silverstripe-spam-module	https://api.github.com/repos/tiller1010/silverstripe-spam-module
9	524701461	sozysozbot/mikanos	https://api.github.com/repos/sozysozbot/mikanos

Total rows: 135 of 135 Query complete 00:00:00.157 Ln 1, Col 1