

Guía técnica de ejecución del proceso de la Api Res a Cloud en DB Postgres

1. Diseñar el E-R a partir de la base de datos y crear la estructura en base a los archivos adjuntos.

--Tabla empleado auto incremental con llave primaria y llave foránea con catalogo de departamento.

```
CREATE TABLE public.empleado (  
    id_empleado serial NOT NULL,  
    first_name varchar(30) NULL,  
    last_name varchar(30) NULL,  
    company_name varchar(60) NULL,  
    address varchar(30) NULL,  
    city varchar(30) NULL,  
    state varchar(2) NULL,  
    zip varchar(5) NULL,  
    phone1 varchar(12) NULL,  
    phone2 varchar(12) NULL,  
    email varchar(60) NULL,  
    department varchar(30) NOT NULL,  
    CONSTRAINT empleado_pkey PRIMARY KEY (id_empleado)  
);
```

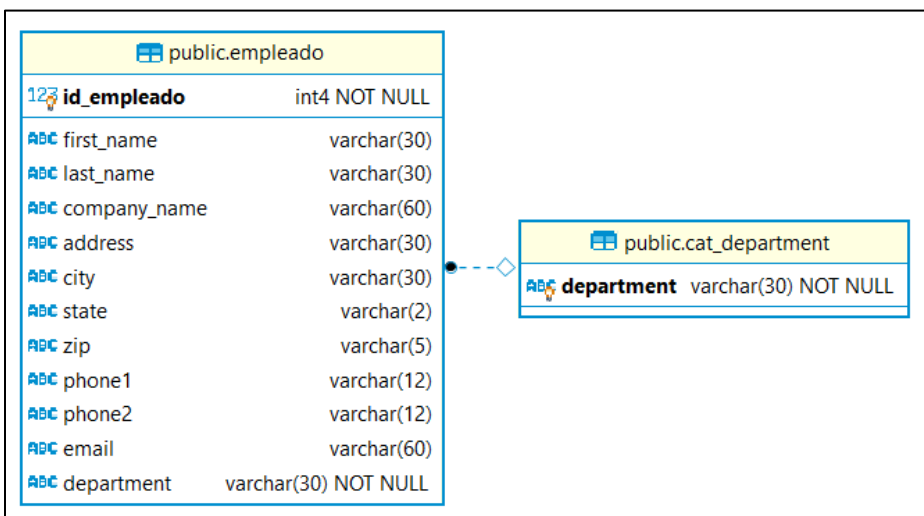
-- public.empleado foreign keys

```
ALTER TABLE public.empleado ADD CONSTRAINT empleado_department_fkey FOREIGN KEY (department)  
REFERENCES cat_department(department);
```

--Tabla cat_departamento con llave primaria

```
CREATE TABLE public.cat_department (  
    department varchar(30) NOT NULL,  
    CONSTRAINT cat_department_pkey PRIMARY KEY (department));
```

--Diagrama Entidad Relación:



2.-Preparación de Data para carga de información de la fuente de datos "Sample.txt":

--Ejecutando el Shell que se encuentra en la ruta `"/proy_xa1/Shell/genera_json.sh"`

#formate las líneas del archivo de entrada en formato JSON para poder ingesta a BD postgres

--Contenido del archive `genera_json.sh`:

```
cat Sample.txt|awk -F"|" '{
printf("{\"first_name\":\"%s\",\"last_name\":\"%s\",\"company_name\":\"%s\",\"address\":\"%s\",\"city\":\"%s\",\"state\":\"%s\",\"zip\":\"%s\",\"phone1\":\"%s\",\"phone2\":\"%s\",\"email\":\"%s\",\"department\":\"%s\"}\n",
$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11);}' >sample.json
```

3.- Cargar el catalogo de departamento:

Tabla departmen:

ABC department
Sales
Marketing
Human Resources
Purchasing
Production
Research and Development
Finances

4.- Ingiera los datos del servidor a la base de datos postgres en la nube, mediante la Api a la tabla empleado:

--Ejecutando el Shell que se encuentra en la ruta `"/proy_xa1/Shell/carga_db.sh >log_carga_db.log"`

--Contenido del archive `carga_db.sh`:

#Realiza la ingesta registro por registro de la data en Base de Datos Postgres

```
archivo="empleados.json"
```

```
cat $archivo|while read REG
```

```
do
```

```
linea="${REG}"
```

```
curl -i -X POST -H 'Accept: application/json' -H 'Content-type: application/json' http://localhost:3000/empleados --data "${linea}"
```

```
done
```

Tabla empleado:

123 id_empleado	ABC first_name	ABC last_name	ABC company_name	ABC address	ABC city	ABC state	ABC zip	ABC phone1	ABC phone2
35	Francine	Vocelka	Cascade Realty Advisors Inc	366 South Dr	Las Cruces	NM	88011	505-977-3911	505-335-3265
38	Alishia	Sergi	Milford Enterprises Inc	2742 Distribution Way	New York	NY	10025	212-860-1579	212-753-2740
50	Fatima	Saylor	Stanton, James D Esq	2 Lighthouse Ave	Hopkins	MN	55343	952-768-2416	952-479-2416
51	Jina	Briddick	Grace Pastries Inc	38938 Park Blvd	Boston	MA	2128	617-399-5124	617-997-5124
52	Kanisha	Waycott	Schroer, Gene E Esq	5 Tomahawk Dr	Los Angeles	CA	90006	323-453-2780	323-315-2780
53	Emerson	Bowley	Knights Inn	762 S Main St	Madison	WI	53711	608-336-7444	608-658-7444
54	Emerson	Bowley	Knights Inn	762 S Main St	Madison	WI	53711	608-336-7444	608-658-7444
55	Blair	Malet	Bollinger Mach Shp & Shi	209 Decker Dr	Philadelphia	PA	19132	215-907-9111	215-794-9111
56	Brock	Bologna	Orinda News	4486 W O St #1	New York	NY	10003	212-402-9216	212-617-9216
57	Lorrie	Nestle	Ballard Spahr Andrews	39 S 7th St	Tulahoma	TN	37388	931-875-6644	931-303-6644
58	Sabra	Uyetake	Lowy Limousine Service	98839 Hawthorne	Columbia	SC	29201	803-925-5213	803-681-5213
59	Marjory	Mastella	Vicon Corporation	71 San Mateo Av	Wayne	PA	19087	610-814-5533	610-379-5533
60	Karl	Klonowski	Rossi, Michael M	76 Brooks St #9	Flemington	NJ	8822	908-877-6135	908-470-6135

--Datos archivo de conexión a cuenta Amazon

Server

raja.db.elephantsql.com (raja-01)

Region

amazon-web-services::us-east-1

Created at

2022-03-24 05:24 UTC+00:00

User & Default database

taxkexry

Reset

Password

af2AnIz865RfQQuF5vVIBc4K1DJyH4sl

URL

postgres://taxkexry:***@raja.db.elephantsql.com/taxk

5. Solicitud de "lectura" con la API a todos los registros y por página:

-- Todos los registros:

```
curl -v -X GET http://localhost:3000/empleados
```

Resultado:

hp:3000

hp:3000/empleados

hp:3000/empleados/cons

hp:3000/empleados?pag

+

No es seguro

hp:3000/empleados

Actualizar

Página principal – p...

Aprenda a...

Using BigQuery wit...

Mi unidad - Google...

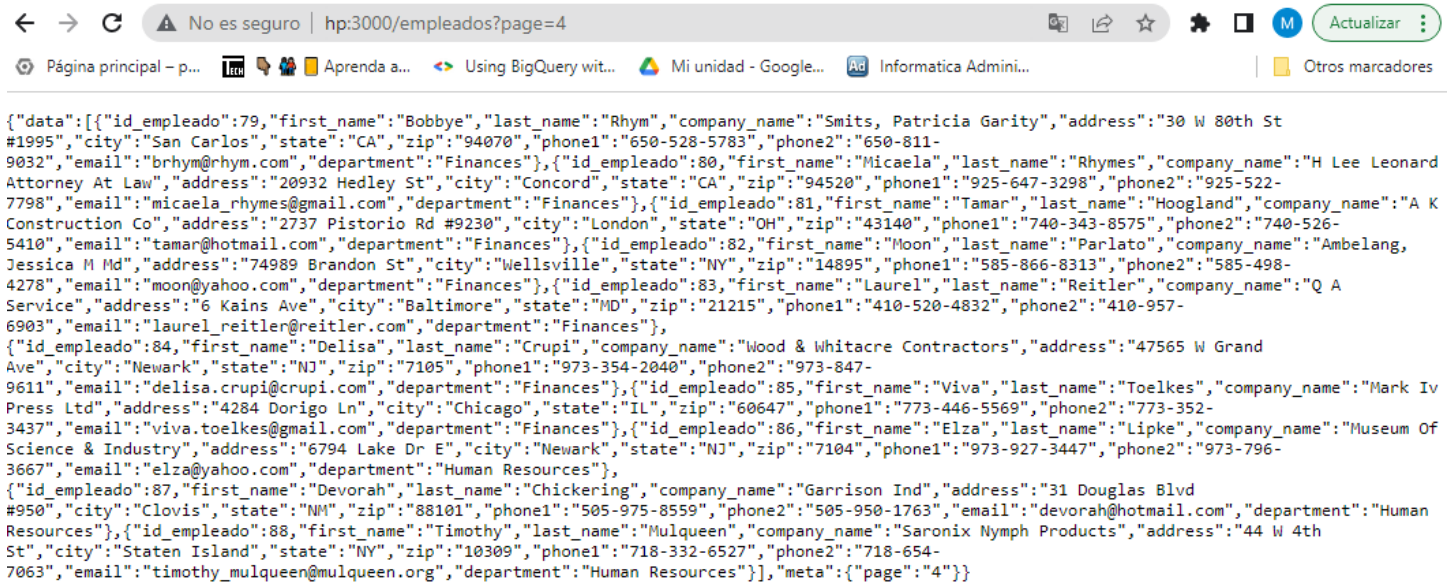
Informatica Admini...

Otros marcadores

```
{
  "data": [
    {
      "id_empleado": 34,
      "first_name": "Ammie",
      "last_name": "Corrio",
      "company_name": "Moskowitz, Barry S",
      "address": "74874 Atlantic Ave",
      "city": "Columbus",
      "state": "OH",
      "zip": "43215",
      "phone1": "614-801-9788",
      "phone2": "614-648-3265",
      "email": "ammie@corrio.com",
      "department": "Marketing"
    },
    {
      "id_empleado": 35,
      "first_name": "Francine",
      "last_name": "Vocelka",
      "company_name": "Cascade Realty Advisors Inc",
      "address": "366 South Dr",
      "city": "Las Cruces",
      "state": "NM",
      "zip": "88011",
      "phone1": "505-977-3911",
      "phone2": "505-335-5293",
      "email": "francine_vocelka@vocelka.com",
      "department": "Human Resources"
    },
    {
      "id_empleado": 38,
      "first_name": "Alishia",
      "last_name": "Sergi",
      "company_name": "Milford Enterprises Inc",
      "address": "2742 Distribution Way",
      "city": "New York",
      "state": "NY",
      "zip": "10025",
      "phone1": "212-860-1579",
      "phone2": "212-753-2740",
      "email": "asergi@gmail.com",
      "department": "Human Resources"
    }
  ]
}
```

--Registros por página en formato JSON, por ejemplo la página 4:

curl -v -X GET http://localhost:3000/empleados?page=4



```
{
  "data": [
    {
      "id_empleado": 79,
      "first_name": "Bobbye",
      "last_name": "Rhym",
      "company_name": "Smits, Patricia Garity",
      "address": "30 W 80th St #1995",
      "city": "San Carlos",
      "state": "CA",
      "zip": "94070",
      "phone1": "650-528-5783",
      "phone2": "650-811-9032",
      "email": "brhym@rhym.com",
      "department": "Finances"
    },
    {
      "id_empleado": 80,
      "first_name": "Micaela",
      "last_name": "Rhymes",
      "company_name": "H Lee Leonard Attorney At Law",
      "address": "20932 Hedley St",
      "city": "Concord",
      "state": "CA",
      "zip": "94520",
      "phone1": "925-647-3298",
      "phone2": "925-522-7798",
      "email": "micaela_rhymes@gmail.com",
      "department": "Finances"
    },
    {
      "id_empleado": 81,
      "first_name": "Tamar",
      "last_name": "Hoogland",
      "company_name": "A K Construction Co",
      "address": "2737 Pistorio Rd #9230",
      "city": "London",
      "state": "OH",
      "zip": "43140",
      "phone1": "740-343-8575",
      "phone2": "740-526-5410",
      "email": "tamar@hotmail.com",
      "department": "Finances"
    },
    {
      "id_empleado": 82,
      "first_name": "Moon",
      "last_name": "Parlato",
      "company_name": "Ambelang, Jessica M Md",
      "address": "74989 Brandon St",
      "city": "Wellsville",
      "state": "NY",
      "zip": "14895",
      "phone1": "585-866-8313",
      "phone2": "585-498-4278",
      "email": "moon@yahoo.com",
      "department": "Finances"
    },
    {
      "id_empleado": 83,
      "first_name": "Laurel",
      "last_name": "Reitler",
      "company_name": "Q A Service",
      "address": "6 Kains Ave",
      "city": "Baltimore",
      "state": "MD",
      "zip": "21215",
      "phone1": "410-520-4832",
      "phone2": "410-957-6903",
      "email": "laurel_reitler@reitler.com",
      "department": "Finances"
    },
    {
      "id_empleado": 84,
      "first_name": "Delisa",
      "last_name": "Crupi",
      "company_name": "Wood & Whitacre Contractors",
      "address": "47565 W Grand Ave",
      "city": "Newark",
      "state": "NJ",
      "zip": "7105",
      "phone1": "973-354-2040",
      "phone2": "973-847-9611",
      "email": "delisa.crupi@crupi.com",
      "department": "Finances"
    },
    {
      "id_empleado": 85,
      "first_name": "Viva",
      "last_name": "Toelkes",
      "company_name": "Mark Iv Press Ltd",
      "address": "4284 Dorigo Ln",
      "city": "Chicago",
      "state": "IL",
      "zip": "60647",
      "phone1": "773-446-5569",
      "phone2": "773-352-3437",
      "email": "viva.toelkes@gmail.com",
      "department": "Finances"
    },
    {
      "id_empleado": 86,
      "first_name": "Elza",
      "last_name": "Lipke",
      "company_name": "Museum Of Science & Industry",
      "address": "6794 Lake Dr E",
      "city": "Newark",
      "state": "NJ",
      "zip": "7104",
      "phone1": "973-927-3447",
      "phone2": "973-796-3667",
      "email": "elza@yahoo.com",
      "department": "Human Resources"
    },
    {
      "id_empleado": 87,
      "first_name": "Devorah",
      "last_name": "Chickering",
      "company_name": "Garrison Ind",
      "address": "31 Douglas Blvd #950",
      "city": "Clovis",
      "state": "NM",
      "zip": "88101",
      "phone1": "505-975-8559",
      "phone2": "505-950-1763",
      "email": "devorah@hotmail.com",
      "department": "Human Resources"
    },
    {
      "id_empleado": 88,
      "first_name": "Timothy",
      "last_name": "Mulqueen",
      "company_name": "Saronix Nymph Products",
      "address": "44 W 4th St",
      "city": "Staten Island",
      "state": "NY",
      "zip": "10309",
      "phone1": "718-332-6527",
      "phone2": "718-654-7063",
      "email": "timothy_mulqueen@mulqueen.org",
      "department": "Human Resources"
    }
  ],
  "meta": {
    "page": "4"
  }
}
```

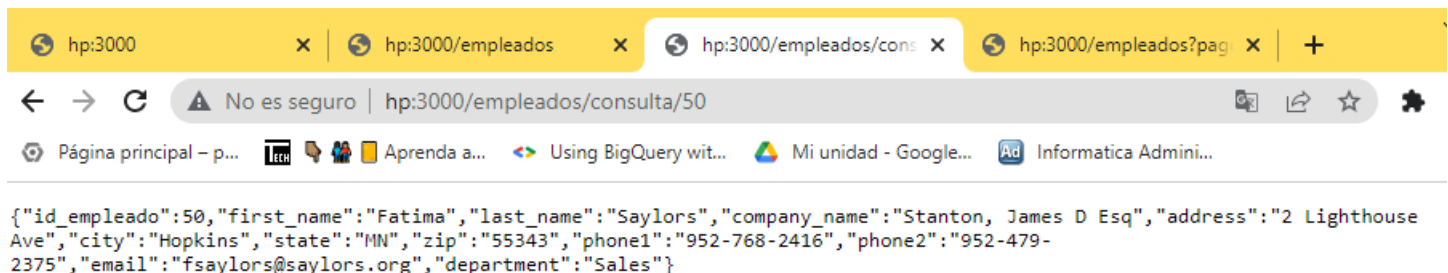
5. Solicitud de "lectura" con la API por ID de empleado, por ejemplo el id del registro 50:

curl -v -X GET http://localhost:3000/empleados/consulta/50

```
{
  "id_empleado": 50,
  "first_name": "Fatima",
  "last_name": "Saylors",
  "company_name": "Stanton, James D Esq",
  "address": "2 Lighthouse Ave",
  "city": "Hopkins",
  "state": "MN",
  "zip": "55343",
  "phone1": "952-768-2416",
  "phone2": "952-479-2375",
  "email": "fsaylors@saylors.org",
  "department": "Sales"
}
```

O ejecutando el comando desde el explorador web:

http://hp:3000/empleados/consulta/50



```
{
  "id_empleado": 50,
  "first_name": "Fatima",
  "last_name": "Saylors",
  "company_name": "Stanton, James D Esq",
  "address": "2 Lighthouse Ave",
  "city": "Hopkins",
  "state": "MN",
  "zip": "55343",
  "phone1": "952-768-2416",
  "phone2": "952-479-2375",
  "email": "fsaylors@saylors.org",
  "department": "Sales"
}
```

4. Solicitud de "eliminacion" con la API por ID de empleado, por ejemplo el id del registro 49:

curl -v -X DELETE http://localhost:3000/empleados/eliminar/51

Resultado:

```
{"message": "Empleado eliminado con exito {}"}
```

Funcionalidades adicionales que se implementaron:

1. Valide que el estado de la columna tenga una longitud de 2 y solo contenga letras mayusculas.
2. Validación al momento de eliminar el registro del empleado por ID se encuentre en la base de datos.
3. En la eliminación validar que el ID es numerico.