Universidad Nacional Autónoma de México

Facultad de Ingeniería

Ingeniería en computación

Bases de datos

Tarea 11
“Tipos de datos en postgres”

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Grupo 1

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TIPOS DE DATOS EN POSTGRES

- **Tipos numéricos**

Name	Storage Size	Description	Range
smallint	2 bytes	small-range integer	-32768 to +32767
integer	4 bytes	typical choice for integer	-2147483648 to +2147483647
bigint	8 bytes	large-range integer	-9223372036854775808 to +9223372036854775807
decimal	variable	user-specified precision, exact	up to 131072 digits before the decimal point; up to 16383 digits after the decimal point
numeric	variable	user-specified precision, exact	up to 131072 digits before the decimal point; up to 16383 digits after the decimal point
real	4 bytes	variable-precision, inexact	6 decimal digits precision
double precision	8 bytes	variable-precision, inexact	15 decimal digits precision
smallserial	2 bytes	small autoincrementing integer	1 to 32767
serial	4 bytes	autoincrementing integer	1 to 2147483647
bigserial	8 bytes	large autoincrementing integer	1 to 9223372036854775807

- **Tipo monetario**

Name	Storage Size	Description	Range
money	8 bytes	currency amount	-92233720368547758.08 to +92233720368547758.07

- **Tipos de caracteres**

Name	Description
character varying(*n*), varchar(*n*)	variable-length with limit
character(*n*), char(*n*)	fixed-length, blank padded
text	variable unlimited length

- **Tipos fecha/hora**

Name	Storage Size	Description	Low Value	High Value	Resolution
timestamp [(*p*)] [without time zone]	8 bytes	both date and time (no time zone)	4713 BC	294276 AD	1 microsecond
timestamp [(*p*)] with time zone	8 bytes	both date and time, with time zone	4713 BC	294276 AD	1 microsecond
date	4 bytes	date (no time of day)	4713 BC	5874897 AD	1 day
time [(*p*)] [without time zone]	8 bytes	time of day (no date)	00:00:00	24:00:00	1 microsecond
time [(*p*)] with time zone	12 bytes	time of day (no date), with time zone	00:00:00+1559	24:00:00-1559	1 microsecond
interval [*fields*] [(*p*)]	16 bytes	time interval	-178000000 years	178000000 years	1 microsecond

- **Tipos de datos binarios**

Name	Storage Size	Description
`bytea`	1 or 4 bytes plus the actual binary string	variable-length binary string

- **Tipo booleano**

Name	Storage Size	Description
`boolean`	1 byte	state of true or false

- **Tipos geométricos**

Name	Storage Size	Description	Representation
`point`	16 bytes	Point on a plane	(x,y)
`line`	32 bytes	Infinite line	{A,B,C}
`lseg`	32 bytes	Finite line segment	((x1,y1),(x2,y2))
`box`	32 bytes	Rectangular box	((x1,y1),(x2,y2))
`path`	16+16n bytes	Closed path (similar to polygon)	((x1,y1),...)
`path`	16+16n bytes	Open path	[(x1,y1),...]
`polygon`	40+16n bytes	Polygon (similar to closed path)	((x1,y1),...)
`circle`	24 bytes	Circle	<(x,y),r> (center point and radius)

- **Tipos de direcciones de red**

Name	Storage Size	Description
`cidr`	7 or 19 bytes	IPv4 and IPv6 networks
`inet`	7 or 19 bytes	IPv4 and IPv6 hosts and networks
`macaddr`	6 bytes	MAC addresses
`macaddr8`	8 bytes	MAC addresses (EUI-64 format)

- **Tipos de datos integrados de propósito general**

Name	Aliases	Description
bigint	int8	signed eight-byte integer
bigserial	serial8	autoincrementing eight-byte integer
bit [(*n*)]		fixed-length bit string
bit varying [(*n*)]	varbit [(*n*)]	variable-length bit string
boolean	bool	logical Boolean (true/false)
box		rectangular box on a plane
bytea		binary data ("byte array")
character [(*n*)]	char [(*n*)]	fixed-length character string
character varying [(*n*)]	varchar [(*n*)]	variable-length character string
cidr		IPv4 or IPv6 network address
circle		circle on a plane
date		calendar date (year, month, day)
double precision	float8	double precision floating-point number (8 bytes)
inet		IPv4 or IPv6 host address
integer	int, int4	signed four-byte integer
interval [*fields*] [(*p*)]		time span
json		textual JSON data
jsonb		binary JSON data, decomposed
line		infinite line on a plane
lseg		line segment on a plane
macaddr		MAC (Media Access Control) address
macaddr8		MAC (Media Access Control) address (EUI-64 format)
money		currency amount
numeric [(*p*, *s*)]	decimal [(*p*, *s*)]	exact numeric of selectable precision
path		geometric path on a plane
pg_lsn		PostgreSQL Log Sequence Number
pg_snapshot		user-level transaction ID snapshot
point		geometric point on a plane
polygon		closed geometric path on a plane
real	float4	single precision floating-point number (4 bytes)
smallint	int2	signed two-byte integer
smallserial	serial2	autoincrementing two-byte integer
serial	serial4	autoincrementing four-byte integer
text		variable-length character string
time [(*p*)] [without time zone]		time of day (no time zone)
time [(*p*)] with time zone	timetz	time of day, including time zone
timestamp [(*p*)] [without time zone]		date and time (no time zone)
timestamp [(*p*)] with time zone	timestamptz	date and time, including time zone

tsquery		text search query
tsvector		text search document
txid_snapshot		user-level transaction ID snapshot (deprecated; see pg_snapshot)
uuid		universally unique identifier
xml		XML data

Bibliografía

[1] Postgres. (2022). PostgreSQL 14.2 Tipos de datos. Recuperado de: https://www.postgresql.org/docs/14/datatype-numeric.html