Data Handling

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1. Storing data
2. Fetching data

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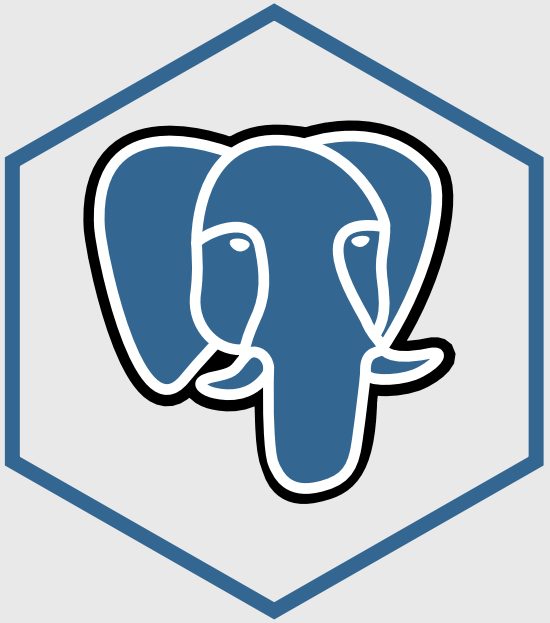
Data is stored in any PostgreSQL database



PostgreSQL

We use Supabase as a free, open-source option

Supabase

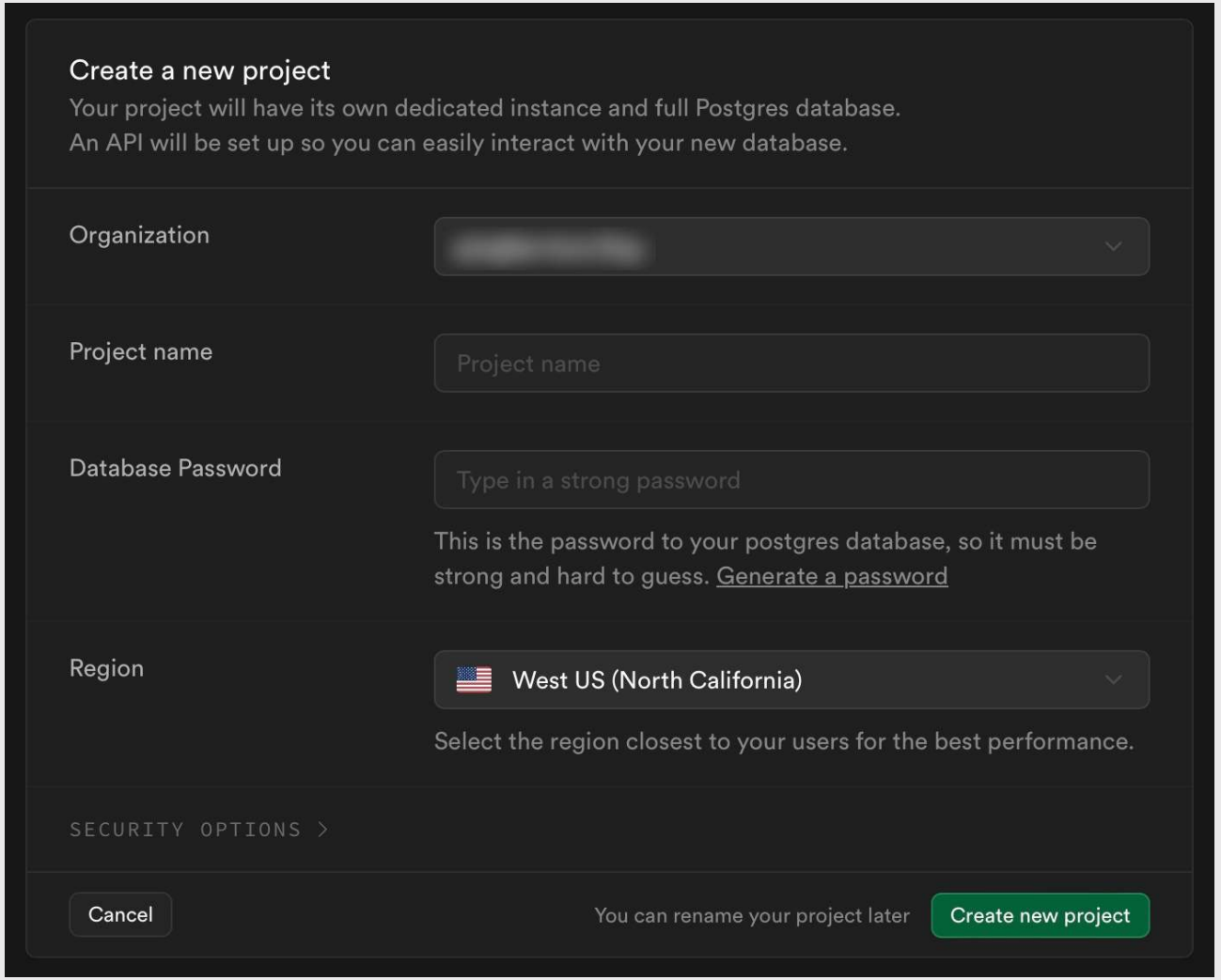
Store data in Supabase

Steps to connect a database via Supabase:

1. Create a Supabase account
2. Create a Supabase project
3. Copy your credentials

Full details on the Storing Data docs page

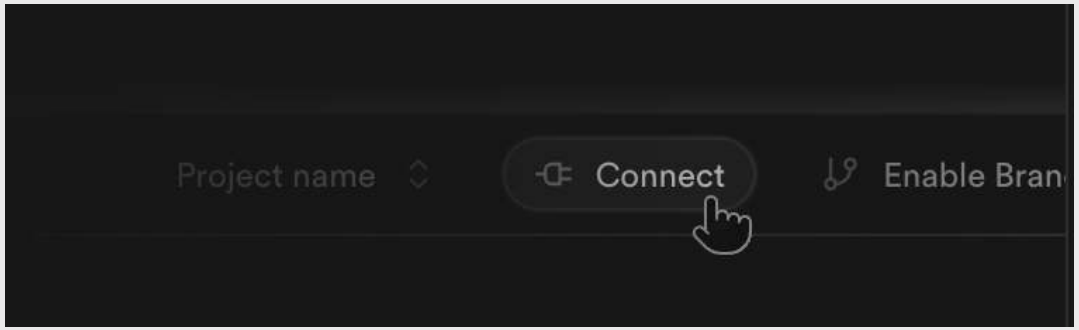
Creating a project



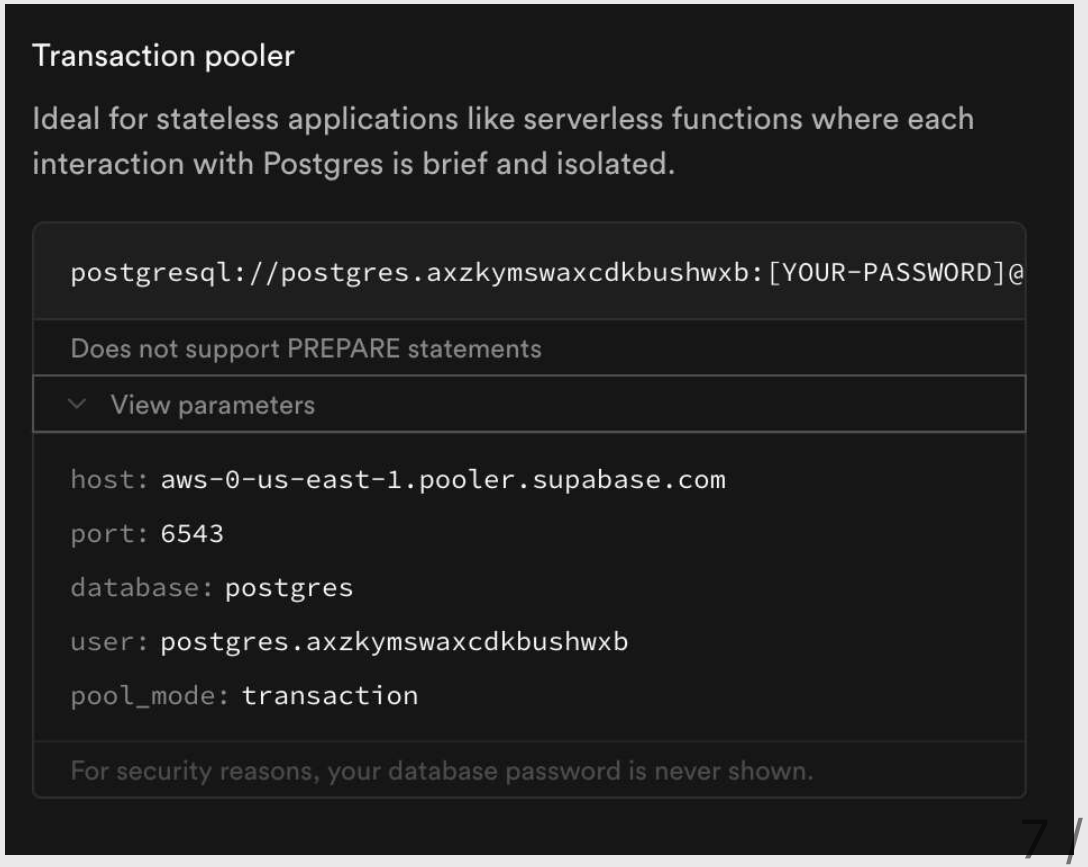
- Choose a project name (this is your "database")
- Each database can have multiple tables
- Choose a strong password

Getting your Supabase credentials

Click the "connect" button in your project



Find the “Transaction pooler” section



Store your database credentials

In your R console, run:

```
surveydown::sd_db_config()
```

Credentials are stored in a `.env` file in your root project folder.

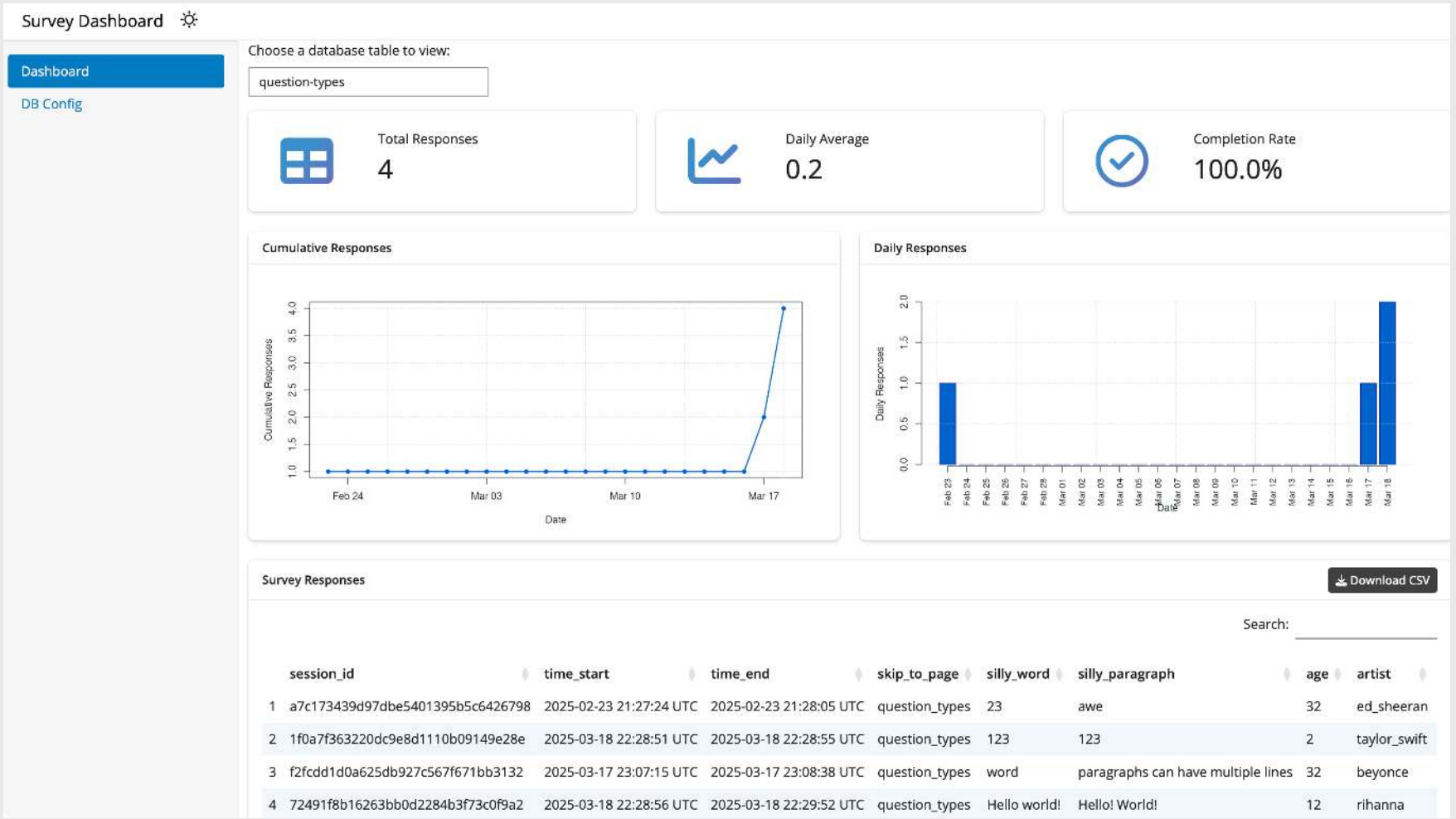
```
> sd_db_config()

── Database Configuration Setup ──────────────────────
Press Enter to keep current value shown in brackets
Host [aws-0-us-east-1.pooler.supabase.com]:
Port [6543]:
Database name [postgres]:
User [postgres.axzkymswaxcdkbushwxb]:
Password [****]:
Table name [mytable1]:
GSS encryption mode [disable]:
✔ Database configuration updated

── Current database configuration: ──

SD_HOST=aws-0-us-east-1.pooler.supabase.com
SD_PORT=6543
SD_DBNAME=postgres
SD_USER=postgres.axzkymswaxcdkbushwxb
SD_TABLE=mytable1
SD_PASSWORD=****
SD_GSSENCMODE=disable
```

app.R

```r
library(surveydown)

# Connects to database
db <- sd_db_connect()

# Main UI
ui <- sd_ui()

server <- function(input, output, session) {
  # Main server
  sd_server(db)
}

shiny::shinyApp(
  ui = ui,
  server = server
)
```

The `sd_db_connect()` function uses the `.env` file to make the database connection.

Use `sdApps::sd_dashboard()` to locally view data



Your turn

10:00

- Create a Supabase account and database.
- Run `surveydown::sd_db_config()` in your console to store your Supabase credentials.
- Run your survey locally, answer questions to generate data.
- View your response data with `sdApps::sd_dashboard()`

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Static Data Fetching

Once your database is properly set up, you can fetch the data using:

```
db <- sd_db_connect()
data <- sd_get_data(db)
```

Or simply:

```
data <- sd_get_data(sd_db_connect())
```

Reactive Data Fetching

You can also reactively fetch the data live inside the survey

In `app.R`:

```
db <- sd_db_connect()

server <- function(input, output, session) {

  data <- sd_get_data(db, refresh_interval = 5)

  sd_server()

}
```

Reactive Data Fetching

Use the reactive data to create some output

In `app.R`:

```
server <- function(input, output, session) {

  data <- sd_get_data(db, refresh_interval = 5)

  output$my_plot <- renderPlot({
    my_data <- data()

    # insert code here to make a plot

  })

  sd_server()

}
```

In `survey.qmd`:

````
```{r}
plotOutput("my_plot")
```
````

Your turn

10:00

- Use `sd_get_data(db)` to read in a copy of your survey response data.
- Edit your `app.R` file to reactively access your survey data.
- Use your data to make a plot about your data.
- Display your plot in your `survey.qmd` file with `plotOutput("my_plot")`