


Week 4: *Intro to surveydown*

 EMSE 6035: Marketing Analytics for Design Decisions

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Reminders

Proposals due Sunday, 9/22 by midnight

Next week project workshop:
team meetings & proposal feedback

Week 4: *Intro to surveydown*

1. surveydown basics

2. Connect a database

3. Make it live

BREAK

4. Conjoint survey components

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1. **surveydown basics**

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4. Conjoint survey components

1. Open `demoSurvey.Rproj`
2. Open `demoSurvey.qmd`
3. Click "Run Document"

Four parts to a surveydown survey

1. The YAML header
2. The setup code chunk
3. The survey body
4. The server code chunk

```
1 ---
2 server: shiny
3 filters: [surveydown]
4 ---
5
6 ---{r}
7 #| context: setup
8 #| echo: false
9 #| warning: false
10 #| message: false
11
12 # Load Package
13 library(surveydown)
14 sd_setup()
15
16 # Define Database
17 db <- sd_database(
18   host = "",
19   dbname = "",
20   port = "",
21   user = "",
22   table = "",
23   ignore = TRUE
24 )
25 ---
26
27 ::: {#welcome .sd-page}
28 # Welcome to our survey!
29
30 This is a simple demonstration of a surveydown survey. It has two pages with
31 one question on each page.
32
33 Here is a basic "multiple choice" question, created using `type = 'mc'` inside
34 the `sd_question()` function:
35 ---{r}
36 sd_question(
37   type = 'mc',
38   id = 'penguins',
39   label = "which type of penguin do you like the best?",
40   option = c(
41     'Adélie' = 'adelie',
42     'Chinstrap' = 'chinstrap',
43     'Gentoo' = 'gentoo'
44   )
45 )
46 ---
47 ---{r}
48 sd_next(next_page = 'end')
49 ---
50
51 :::
52
53 ::: {#end .sd-page}
54
55 This is the last page in the survey
56
57 :::
58
59
60 ---{r}
61 #| context: server
62
63 # Config
64 config <- sd_config()
65
66 # Server
67 sd_server(
68   input = input,
69   output = output,
```

YAML header

Setup code chunk

Survey body

Server code chunk

1. YAML Header

The YAML header is at the top of the `.qmd` file.

Must contain at least the following:

```
---  
server: shiny  
filters: [surveydown]  
---
```

Update / install the extension:

```
surveydown::sd_update_extension()
```

Change the survey theme

Pick a different [bootswatch theme](#) with the `theme` key:

```
---  
theme: united  
---
```

Make a custom theme with a `custom.scss` file

```
---  
theme: [united, custom.scss]  
---
```


Progress bar

You can modify the survey progress bar with the `barcolor` and `barposition` keys:

Change to any color with `barcolor`:

```
---  
barcolor: #768692  
---
```

Change position: `top`, `bottom`, or `none`

```
---  
barposition: bottom  
---
```

2. Setup code chunk

First chunk:

- Load libraries
- Connect to database

Ignore this for now:

```
ignore = TRUE
```

```
```${r}  
#| echo: fenced
#| context: setup
#| warning: false
#| message: false

Load the package
library(surveydown)

Load an other packages here

Run initial setup function (essential -
do not delete)
sd_setup()

Setup database connection
db <- sd_database(
 host = "",
 dbname = "",
 port = "",
 user = "",
 table = "",
 ignore = TRUE
)
````
```

3. Survey body

This is where you insert pages, text, images, questions, etc.

Inserting pages

Insert new pages with `:::` symbols, like this

```
::: {#page_name .sd-page}  
Page content here  
:::
```

Insert next buttons with the `sd_next()` function, like this

```
```${r}  
sd_next('next_page_name')
```
```

Inserting questions

Insert questions using the `sd_question()` function, like this:

Code

```
sd_question(  
  type = 'mc',  
  id   = 'fruit',  
  label = "1. Do you like fruit?",  
  option = c(  
    'Yes!' = 'yes',  
    'Kind of' = 'kind_of',  
    'No :( ' = 'no'  
  )  
)
```

Output

1. Do you like fruit?
- Yes!
 - Kind of
 - No :(

surveydown supports lots of question types

Some common types you may want to use:

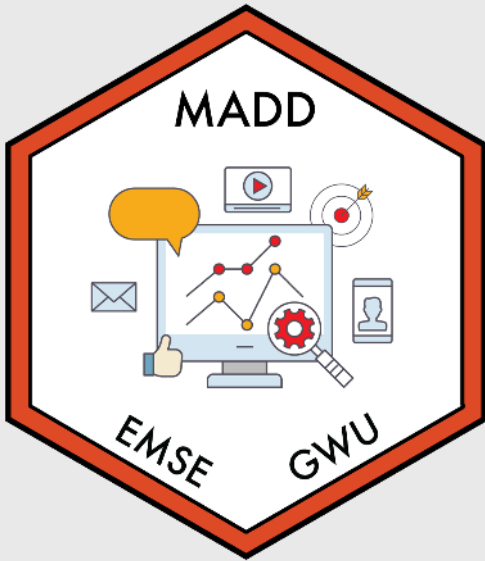
| Type | Description |
|--------------------------|---|
| <code>mc</code> | Multiple choice question (single choice) |
| <code>mc_multiple</code> | Multiple choice question (multiple choices) |
| <code>mc_buttons</code> | Multiple choice question (large buttons) |
| <code>select</code> | Drop down menu (choose one) |
| <code>text</code> | Open text, single row |
| <code>textarea</code> | Open text, block |

Embedding images

I recommend just writing html code, like this

```

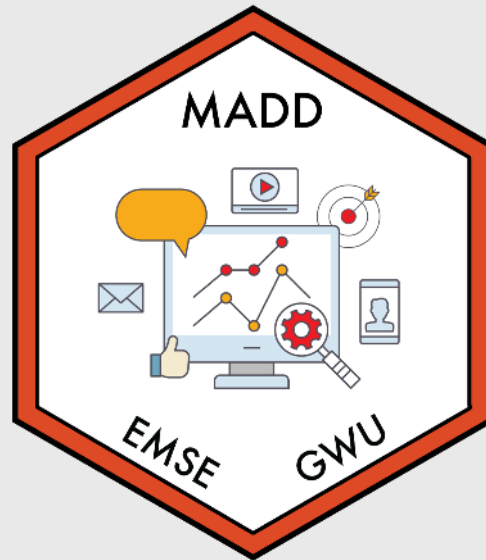
```



Centered image

I recommend just writing html code, like this

```
<center>  
  
</center>
```



The server code chunk

- Set up custom configurations, like skip logic.
- Launch the main server (`sd_server()` function).

Enabling conditional actions

Use the `sd_config()` function to add conditional actions, like conditionally *showing* something or conditionally *skipping* to a page.

This is in the server code chunk of `demoSurvey.qmd`

```
config <- sd_config(  
  skip_if = tibble::tribble(  
    ~question_id, ~question_value, ~target,  
    'pill_color', 'blue',          'end'  
  ),  
  show_if = tibble::tribble(  
    ~question_id, ~question_value, ~target,  
    'fruit',      'yes',           'fav_fruit',  
    'fruit',      'kind_of',      'fav_fruit'  
  ),  
)
```

Conditional skipping

If they choose "Blue", skip to the end page

```
config <- sd_config(  
  skip_if = tibble::tribble(  
    ~question_id, ~question_value, ~target,  
    'pill_color', 'blue',          'end'  
  ),  
  show_if = tibble::tribble(  
    ~question_id, ~question_value, ~target,  
    'fruit',      'yes',           'fav_fruit',  
    'fruit',      'kind_of',       'fav_fruit'  
  ),  
)
```

Conditional showing

The "What's your favorite fruit" question will only be shown if they choose "Yes" or "Kind of" for the "Do you like fruit" question

```
config <- sd_config(  
  skip_if = tibble::tribble(  
    ~question_id, ~question_value, ~target,  
    'pill_color', 'blue',          'end'  
  ),  
  show_if = tibble::tribble(  
    ~question_id, ~question_value, ~target,  
    'fruit',      'yes',           'fav_fruit',  
    'fruit',      'kind_of',       'fav_fruit'  
  ),  
)
```

Your turn

- Open and edit the `practiceSurvey.qmd` file.
- Pick a topic for your survey (a food, an animal, a sports team...whatever).
- Draft a survey about that topic. Include the following:
 - Page 1: A welcome message in large font ("Welcome to a survey about [topic]") and an image about the topic (find an image somewhere).
 - Page 2: Add one simple multiple choice question about the topic and another that will only display depending on a specific choice in the first question
 - Pages 3 & 4: These pages should be two different "end" conditions. Respondents should be sent to either page based on their choices in the multiple choice question on page 2.

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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

Creating a project

Create a new project
Your project will have its own dedicated instance and full Postgres database.
An API will be set up so you can easily interact with your new database.

Organization

Project name

Database Password
This is the password to your postgres database, so it must be strong and hard to guess. [Generate a password](#)

Region
Select the region closest to your users for the best performance.

SECURITY OPTIONS >

You can rename your project later

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

Set a password with `sd_set_password()`

To access your database from R, you need to securely store your Supabase password.

Do this in your R console like this:

```
sd_set_password("my_password")
```

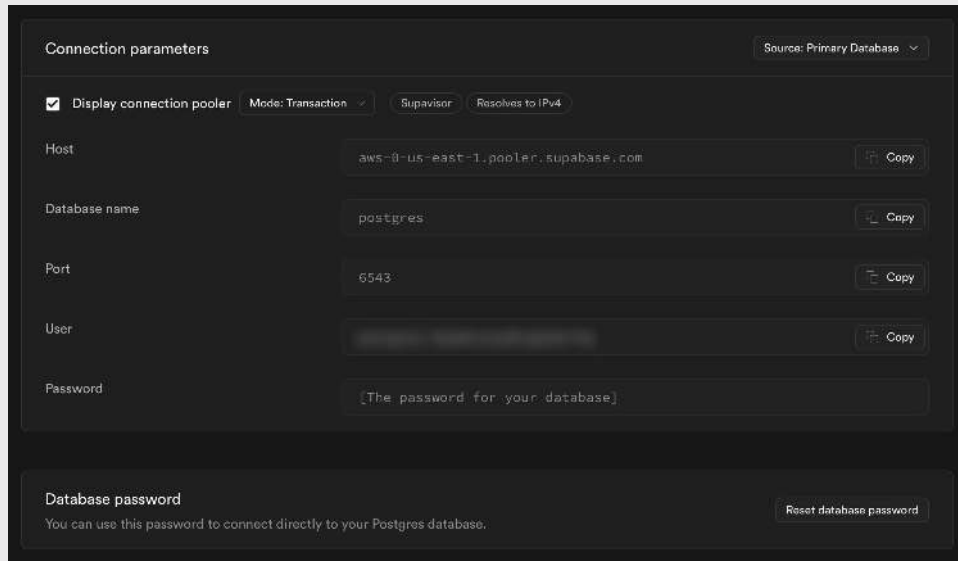
This creates a `.Renvion` file in your project directory where your password lives.
Don't modify this file!

```
SURVEYDOWN_PASSWORD=my_password
```

Copy your credentials

Go to **Project Settings** in bottom-left corner, then click **Database** under **Configuration**

Get your **Connection parameters**:



The screenshot shows the 'Connection parameters' section of the Supabase Project Settings. It includes a 'Source' dropdown set to 'Primary Database'. Below this are several fields with 'Copy' buttons: 'Host' (aws-0-us-east-1.pooler.supabase.com), 'Database name' (postgres), 'Port' (5543), 'User' (a masked name), and 'Password' (a placeholder text '[The password for your database]'). At the bottom, there is a 'Database password' section with a 'Reset database password' button and a note: 'You can use this password to connect directly to your Postgres database.'

- Put them in your server code chunk.
- Choose any table name you want to store your data.

```
db <- sd_database(  
  host = " ",  
  dbname = " ",  
  port = " ",  
  user = " ",  
  table = "any_table_name"  
)
```

10:00

Your turn

- Create a Supabase account and database
- Copy your parameters into your `practiceSurvey.qmd` file.
- Click "Run Document" and check that the database table is updating in your Supabase table.

Break

05:00

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Follow **instructions** on surveydown.org

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3 Parts

- **Part 1:** Intro
- **Part 2:** Conjoint questions
- **Part 3:** Other / demographic questions

3 Parts

- **Part 1:** Intro --> screen for target population
- **Part 2:** Conjoint questions --> screen for random answers
- **Part 3:** Other / demographic questions

Think of your survey as a *conversation*

- Include "transition" pages (e.g. Great job! Now we'll ask you about...)

Part 1: Intro

Start with a welcome page

Welcome!

Thank you for participating in this survey. With your responses, we are looking forward to understanding your perspective as a consumer.

This research is part of an effort from the George Washington University.



Consent form

This survey is being conducted by students at the George Washington University. We will not be collecting any identifying data such as your name or address. The whole survey will take approximately 10 to 15 minutes to complete. Your participation is voluntary and you may stop the survey at any time.

If you would like to participate, please answer the following questions:

I am age 18 or older

 Yes No

I have read and understand the above information

 Yes No

Eligibility questions: who is your target population?

Filter out respondents here

Are you in the market for a car?

No

Yes, and I plan to buy one in the next few months

Yes, and I plan to buy one in within the next year

>>

Part 2: Conjoint questions

Education information

In this survey, we are going to ask you about your preferences for the following vehicle attributes:

- Price
- Fuel Economy
- Acceleration Time
- Powertrain

But before we ask you any question, let's learn a little bit more about each of these attributes.

Education information

Price is the final price you will pay for the vehicle you are buying (including all taxes and fees)



>>

POWERTRAIN

The type of engine in the vehicle

Gasoline



Gasoline engine vehicle.

Electric



Electric motor vehicle.
Must be plugged into an electrical outlet to be refueled. (6 - 10 hours to fully charge).

Can be helpful to provide relative comparisons

Weight:

- 1/2 lbs (similar to 1 cup water)
- 8 lbs (similar to 1 gallon of milk)

Conjoint intro




In the next few pages, we will show you options of different vehicles and we'll ask you to select which you would choose.

Let's try a practice question - on the next page, click the round button under the option you most prefer.



Practice conjoint (also attention check)

May also filter out respondents here

	Choice 1	Choice 2	Choice 3
Price	20	15	25
Fuel Economy	20	30	15
Acceleration Time	7	6	8
Powertrain			
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Transition to actual conjoint questions

Nice work!
Now let's begin the choice tasks.
You will be asked four choice questions in total




>>

Conjoint questions

May also filter out respondents at the end

(e.g. chose all same answers)

(1 of 4) Choose your preferred option from the choices below:

	Choice 1	Choice 2	Choice 3	None
Price	25	25	15	None of these options
Fuel Economy	30	25	25	
Acceleration Time	8	7	7	
Powertrain				
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

>>

Part 3: Other / demographic questions

Transition

Almost done!

We'd like to ask just a few more questions about you.



Critical respondent information

How many vehicles does your household currently own?

>>

Demographic / other questions

What is your age?

What is your total annual household income?

What is your gender?

Which of the following best describes your highest achieved education level?

Finale

We thank you for your time spent taking this survey.
Your response has been recorded.

[Blog post on conjoint in surveydown](#)

[Project survey plan](#)

Sign up for meeting slot next week
(link in #project channel)