Automated Report

Example

```
library(readr)
library(haven)
library(dplyr)
```

```
Attaching package: 'dplyr'

The following objects are masked from 'package:stats':

    filter, lag

The following objects are masked from 'package:base':

    intersect, setdiff, setequal, union
```

```
library(tidyr)
library(tibble)
```

```
data_directory <- list.dirs(path = "data/device-testing", full.names = TRUE)
data_directory <- data_directory[data_directory != "data/device-testing"]  # remove the "data/device-testing"
timestamps <- basename(data_directory)
latest_timestamp <- max(timestamps)
latest_directory <- file.path("data/device-testing", latest_timestamp)
responses_filepath <- file.path(latest_directory, "Responses.csv")
labels_filepath <- file.path(latest_directory, "Labels.csv")
print(data_directory)
```

```
 [1] "data/device-testing/2023-06-11_17-52-33"
 [2] "data/device-testing/2023-06-11_18-19-15"
 [3] "data/device-testing/2023-06-11_19-15-15"
 [4] "data/device-testing/2023-06-11_20-01-36"
 [5] "data/device-testing/2023-06-11_20-21-43"
 [6] "data/device-testing/2023-06-11_20-49-56"
 [7] "data/device-testing/2023-06-11_21-17-46"
 [8] "data/device-testing/2023-06-11_22-25-23"
 [9] "data/device-testing/2023-06-11_23-21-34"
[10] "data/device-testing/2023-06-12_00-13-47"
[11] "data/device-testing/2023-06-12_01-37-27"
[12] "data/device-testing/2023-06-12_01-48-52"
[13] "data/device-testing/2023-06-12_01-59-05"
[14] "data/device-testing/2023-06-12_02-03-19"
[15] "data/device-testing/2023-06-12_02-06-28"
[16] "data/device-testing/2023-06-12_02-09-28"
[17] "data/device-testing/2023-06-12_02-13-52"
[18] "data/device-testing/2023-06-12_02-24-25"
[19] "data/device-testing/2023-06-12_02-31-10"
[20] "data/device-testing/2023-06-12_02-35-00"
[21] "data/device-testing/2023-06-12_02-46-11"
```

```
print(latest_directory)
```

```
[1] "data/device-testing/2023-06-12_02-46-11"
```

```
responses_filepath
```

```
[1] "data/device-testing/2023-06-12_02-46-11/Responses.csv"
```

```
# load the responses and labels data
responses <- read_csv(responses_filepath)
```

```
Rows: 2 Columns: 11
-- Column specification --------------------------------------------------------
Delimiter: ","
chr (11): Timestamp, To what extent do you disagree or agree with the follow...

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
labels <- read_csv(labels_filepath)
```

```
Rows: 11 Columns: 3
-- Column specification --------------------------------------------------------
Delimiter: ","
chr (3): variable_name, variable_label, value_label

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
responses <- read_csv(responses_filepath)
```

```
Rows: 2 Columns: 11
-- Column specification --------------------------------------------------------
Delimiter: ","
chr (11): Timestamp, To what extent do you disagree or agree with the follow...

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
labels <- read_csv(labels_filepath)
```

```
Rows: 11 Columns: 3
-- Column specification --------------------------------------------------------
Delimiter: ","
chr (3): variable_name, variable_label, value_label

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
# Create a data frame for mapping the variable_name and variable_label
colname_mapping <- left_join(
  tibble(old_names = names(responses)),
  labels,
  by = c("old_names" = "variable_label")
)
```

```r
# Handle columns not found in labels
colname_mapping$variable_name <- ifelse(
  is.na(colname_mapping$variable_name),
  colname_mapping$old_names,
  colname_mapping$variable_name
)

# Set the new names to responses data frame
names(responses) <- colname_mapping$variable_name


labelled::var_label(responses) <- labels |> pull(variable_label)


responses
```

```
# A tibble: 2 x 11
  Timestamp       q1    q2    q3    q4    q5    q6    q7    q8    q9    q10
  <chr>           <chr> <chr> <chr> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 6/11/2023 10:48:47 Stro~ Some~ Neit~ Some~ Neit~ Some~ Neit~ Some~ Some~ Neit~
2 6/11/2023 18:11:40 Stro~ Stro~ Stro~ Stro~ Stro~ Stro~ Stro~ Stro~ Stro~ Stro~
```

```r
responses <- responses %>% mutate(across(q1:q10,
                                  ~ case_when(
                                    . == "Strongly disagree" ~ 1,
                                    . == "Somewhat disagree" ~ 2,
                                    . == "Neither disagree nor agree" ~ 3,
                                    . == "Somewhat agree" ~ 4,
                                    . == "Strongly agree" ~ 5,
                                    TRUE ~ NA_real_
                                  ), .names = "{.col}"))
```

```r
head(responses)
```

```
# A tibble: 2 x 11
  Timestamp         q1    q2    q3    q4    q5    q6    q7    q8    q9   q10
  <chr>           <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
1 6/11/2023 10:48:47     1     2     3     2     3     4     3     4     2     3
2 6/11/2023 18:11:40     5     5     5     5     5     5     5     5     5     5
```