HW10

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9.1.3 Q1

```r
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ---------------------- tidyverse 2.0.0 --
## v dplyr     1.1.2     v readr     2.1.4
## v forcats   1.0.0     v stringr   1.5.0
## v ggplot2   3.4.3     v tibble    3.2.1
## v lubridate 1.9.2     v tidyr     1.3.0
## v purrr     1.0.2
## -- Conflicts ---------------------------------------- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```r
library(readr)
fruits <- c('apple', 'banana', 'cherry')
str_c(fruits, collapse = ' & ')
```

```
## [1] "apple & banana & cherry"
```

9.1.3 Q2

```r
colors <- c('red', 'green', 'blue', 'yellow', 'purple')
str_sub(colors, 2, 4)
```

```
## [1] "ed"  "ree" "lue" "ell" "urp"
```

9.1.3 Q3

```r
animals <- c('cat', 'dog', 'elephant', 'giraffe')
str_sub(animals, 2, 4) <- c('at', 'og', 'leph', 'iraf')
animals
```

```
## [1] "cat"       "dog"       "elephhant" "girafffe"
```

9.2.5 Q1

```r
fruits <- c("apple", "banana", "strawberry", "blueberry", "blackberry")
str_view(fruits, 'an')
```

```
## [2] | b<an><an>a
```

9.2.5 Q2

```r
str_view(fruits, '.e')
```

```
## [1] | app<le>
## [3] | straw<be>rry
## [4] | bl<ue><be>rry
## [5] | black<be>rry
```

9.2.5 Q3

```r
str_view(fruits, 'berry$')
```

```
## [3] | straw<berry>
## [4] | blue<berry>
## [5] | black<berry>
```

9.2.5 Q4

```r
codes <- c("A123", "B456", "Bb56", "C789", "D012", "e345")
str_view(codes, '[A-Z]\\d')
```

```
## [1] | <A1>23
## [2] | <B4>56
## [4] | <C7>89
## [5] | <D0>12
```

9.2.5 Q5

```r
phone_numbers <- c("555-123-4567", "(555) 123 4567", "5551234567", "1-555-123-4567", "555.123.4567")
str_view(phone_numbers, '\\d{3}-\\d{3}-\\d{4}')
```

```
## [1] | <555-123-4567>
## [4] | 1-<555-123-4567>
```

```r
str_view(phone_numbers, '^\\(\\d{3}\\)')
```

```
## [2] | <(555)> 123 4567
```

9.2.5 Q6

```r
emails <- c("user.name@domain.com", "user123@domain.com", "user_name@domain.com",
    "username@domaincom", "username@domain.net", "user@name@domain.com", "@icloud.com",
    "user@.com", "user@do_main.com")
str_detect(emails, "^[a-zA-Z0-9._]+@[a-zA-Z0-9]+\\.com$")
```

```
## [1]  TRUE  TRUE  TRUE FALSE FALSE FALSE FALSE FALSE FALSE
```

9.2.6 Q7

```r
dates <- c("2021-01-01", "12-31-2021", "2022-28-02", "2022-02-29", "2022-03-01")
str_view(dates, '\\d{4}-(0\\d|1[0-2])-\\d{2}')
```

```
## [1] | <2021-01-01>
## [4] | <2022-02-29>
## [5] | <2022-03-01>
```