Assigntment 2 version 2

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library (readr)  
library(tidyverse)

## ── Attaching packages ─────────────────────────────────────── tidyverse 1.3.1 ──

## ✔ ggplot2 3.3.6 ✔ dplyr 1.0.9  
## ✔ tibble 3.1.7 ✔ stringr 1.4.0  
## ✔ tidyr 1.2.0 ✔ forcats 0.5.1  
## ✔ purrr 0.3.4

## ── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
## ✖ dplyr::filter() masks stats::filter()  
## ✖ dplyr::lag() masks stats::lag()

library(knitr)  
library(bslib)

##   
## Attaching package: 'bslib'

## The following object is masked from 'package:utils':  
##   
## page

Section 2: Data Reading

#Adjacencies Dataset  
url <-"https://raw.githubusercontent.com/fivethirtyeight/data/master/love-actually/love\_actually\_adjacencies.csv"  
rawadjacencies <- read\_csv(url)

## Rows: 14 Columns: 15  
## ── Column specification ────────────────────────────────────────────────────────  
## Delimiter: ","  
## chr (1): actors  
## dbl (14): bill\_nighy, keira\_knightley, andrew\_lincoln, hugh\_grant, colin\_fir...  
##   
## 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.

#To be able to read both csv files I had to use the packages readr with the function readcsv\_(url previously added here).

Section 3: Clean the Data

#For Adjacencies database  
as.integer(rawadjacencies$bill\_nighy)

## [1] 9 2 2 2 1 1 0 1 1 3 1 1 1 1

adjacencies <- gather(rawadjacencies, key="Other Actor", value="Relationship Index", 2:15)  
as.data.frame(adjacencies)

## actors Other Actor Relationship Index  
## 1 bill\_nighy bill\_nighy 9  
## 2 keira\_knightley bill\_nighy 2  
## 3 andrew\_lincoln bill\_nighy 2  
## 4 hugh\_grant bill\_nighy 2  
## 5 colin\_firth bill\_nighy 1  
## 6 alan\_rickman bill\_nighy 1  
## 7 heike\_makatsch bill\_nighy 0  
## 8 laura\_linney bill\_nighy 1  
## 9 emma\_thompson bill\_nighy 1  
## 10 liam\_neeson bill\_nighy 3  
## 11 kris\_marshall bill\_nighy 1  
## 12 abdul\_salis bill\_nighy 1  
## 13 martin\_freeman bill\_nighy 1  
## 14 rowan\_atkinson bill\_nighy 1  
## 15 bill\_nighy keira\_knightley NA  
## 16 keira\_knightley keira\_knightley 7  
## 17 andrew\_lincoln keira\_knightley 7  
## 18 hugh\_grant keira\_knightley 1  
## 19 colin\_firth keira\_knightley 2  
## 20 alan\_rickman keira\_knightley 1  
## 21 heike\_makatsch keira\_knightley 0  
## 22 laura\_linney keira\_knightley 3  
## 23 emma\_thompson keira\_knightley 1  
## 24 liam\_neeson keira\_knightley 1  
## 25 kris\_marshall keira\_knightley 2  
## 26 abdul\_salis keira\_knightley 2  
## 27 martin\_freeman keira\_knightley 1  
## 28 rowan\_atkinson keira\_knightley 0  
## 29 bill\_nighy andrew\_lincoln NA  
## 30 keira\_knightley andrew\_lincoln NA  
## 31 andrew\_lincoln andrew\_lincoln 8  
## 32 hugh\_grant andrew\_lincoln 1  
## 33 colin\_firth andrew\_lincoln 2  
## 34 alan\_rickman andrew\_lincoln 2  
## 35 heike\_makatsch andrew\_lincoln 1  
## 36 laura\_linney andrew\_lincoln 4  
## 37 emma\_thompson andrew\_lincoln 2  
## 38 liam\_neeson andrew\_lincoln 1  
## 39 kris\_marshall andrew\_lincoln 2  
## 40 abdul\_salis andrew\_lincoln 2  
## 41 martin\_freeman andrew\_lincoln 1  
## 42 rowan\_atkinson andrew\_lincoln 0  
## 43 bill\_nighy hugh\_grant NA  
## 44 keira\_knightley hugh\_grant NA  
## 45 andrew\_lincoln hugh\_grant NA  
## 46 hugh\_grant hugh\_grant 13  
## 47 colin\_firth hugh\_grant 1  
## 48 alan\_rickman hugh\_grant 3  
## 49 heike\_makatsch hugh\_grant 1  
## 50 laura\_linney hugh\_grant 1  
## 51 emma\_thompson hugh\_grant 3  
## 52 liam\_neeson hugh\_grant 2  
## 53 kris\_marshall hugh\_grant 1  
## 54 abdul\_salis hugh\_grant 1  
## 55 martin\_freeman hugh\_grant 2  
## 56 rowan\_atkinson hugh\_grant 0  
## 57 bill\_nighy colin\_firth NA  
## 58 keira\_knightley colin\_firth NA  
## 59 andrew\_lincoln colin\_firth NA  
## 60 hugh\_grant colin\_firth NA  
## 61 colin\_firth colin\_firth 13  
## 62 alan\_rickman colin\_firth 1  
## 63 heike\_makatsch colin\_firth 0  
## 64 laura\_linney colin\_firth 2  
## 65 emma\_thompson colin\_firth 1  
## 66 liam\_neeson colin\_firth 1  
## 67 kris\_marshall colin\_firth 1  
## 68 abdul\_salis colin\_firth 1  
## 69 martin\_freeman colin\_firth 1  
## 70 rowan\_atkinson colin\_firth 0  
## 71 bill\_nighy alan\_rickman NA  
## 72 keira\_knightley alan\_rickman NA  
## 73 andrew\_lincoln alan\_rickman NA  
## 74 hugh\_grant alan\_rickman NA  
## 75 colin\_firth alan\_rickman NA  
## 76 alan\_rickman alan\_rickman 13  
## 77 heike\_makatsch alan\_rickman 7  
## 78 laura\_linney alan\_rickman 4  
## 79 emma\_thompson alan\_rickman 9  
## 80 liam\_neeson alan\_rickman 2  
## 81 kris\_marshall alan\_rickman 1  
## 82 abdul\_salis alan\_rickman 1  
## 83 martin\_freeman alan\_rickman 2  
## 84 rowan\_atkinson alan\_rickman 1  
## 85 bill\_nighy heike\_makatsch NA  
## 86 keira\_knightley heike\_makatsch NA  
## 87 andrew\_lincoln heike\_makatsch NA  
## 88 hugh\_grant heike\_makatsch NA  
## 89 colin\_firth heike\_makatsch NA  
## 90 alan\_rickman heike\_makatsch NA  
## 91 heike\_makatsch heike\_makatsch 9  
## 92 laura\_linney heike\_makatsch 3  
## 93 emma\_thompson heike\_makatsch 3  
## 94 liam\_neeson heike\_makatsch 0  
## 95 kris\_marshall heike\_makatsch 1  
## 96 abdul\_salis heike\_makatsch 0  
## 97 martin\_freeman heike\_makatsch 0  
## 98 rowan\_atkinson heike\_makatsch 0  
## 99 bill\_nighy laura\_linney NA  
## 100 keira\_knightley laura\_linney NA  
## 101 andrew\_lincoln laura\_linney NA  
## 102 hugh\_grant laura\_linney NA  
## 103 colin\_firth laura\_linney NA  
## 104 alan\_rickman laura\_linney NA  
## 105 heike\_makatsch laura\_linney NA  
## 106 laura\_linney laura\_linney 11  
## 107 emma\_thompson laura\_linney 2  
## 108 liam\_neeson laura\_linney 1  
## 109 kris\_marshall laura\_linney 1  
## 110 abdul\_salis laura\_linney 1  
## 111 martin\_freeman laura\_linney 1  
## 112 rowan\_atkinson laura\_linney 0  
## 113 bill\_nighy emma\_thompson NA  
## 114 keira\_knightley emma\_thompson NA  
## 115 andrew\_lincoln emma\_thompson NA  
## 116 hugh\_grant emma\_thompson NA  
## 117 colin\_firth emma\_thompson NA  
## 118 alan\_rickman emma\_thompson NA  
## 119 heike\_makatsch emma\_thompson NA  
## 120 laura\_linney emma\_thompson NA  
## 121 emma\_thompson emma\_thompson 12  
## 122 liam\_neeson emma\_thompson 5  
## 123 kris\_marshall emma\_thompson 1  
## 124 abdul\_salis emma\_thompson 1  
## 125 martin\_freeman emma\_thompson 2  
## 126 rowan\_atkinson emma\_thompson 1  
## 127 bill\_nighy liam\_neeson NA  
## 128 keira\_knightley liam\_neeson NA  
## 129 andrew\_lincoln liam\_neeson NA  
## 130 hugh\_grant liam\_neeson NA  
## 131 colin\_firth liam\_neeson NA  
## 132 alan\_rickman liam\_neeson NA  
## 133 heike\_makatsch liam\_neeson NA  
## 134 laura\_linney liam\_neeson NA  
## 135 emma\_thompson liam\_neeson NA  
## 136 liam\_neeson liam\_neeson 13  
## 137 kris\_marshall liam\_neeson 1  
## 138 abdul\_salis liam\_neeson 1  
## 139 martin\_freeman liam\_neeson 2  
## 140 rowan\_atkinson liam\_neeson 1  
## 141 bill\_nighy kris\_marshall NA  
## 142 keira\_knightley kris\_marshall NA  
## 143 andrew\_lincoln kris\_marshall NA  
## 144 hugh\_grant kris\_marshall NA  
## 145 colin\_firth kris\_marshall NA  
## 146 alan\_rickman kris\_marshall NA  
## 147 heike\_makatsch kris\_marshall NA  
## 148 laura\_linney kris\_marshall NA  
## 149 emma\_thompson kris\_marshall NA  
## 150 liam\_neeson kris\_marshall NA  
## 151 kris\_marshall kris\_marshall 7  
## 152 abdul\_salis kris\_marshall 5  
## 153 martin\_freeman kris\_marshall 1  
## 154 rowan\_atkinson kris\_marshall 0  
## 155 bill\_nighy abdul\_salis NA  
## 156 keira\_knightley abdul\_salis NA  
## 157 andrew\_lincoln abdul\_salis NA  
## 158 hugh\_grant abdul\_salis NA  
## 159 colin\_firth abdul\_salis NA  
## 160 alan\_rickman abdul\_salis NA  
## 161 heike\_makatsch abdul\_salis NA  
## 162 laura\_linney abdul\_salis NA  
## 163 emma\_thompson abdul\_salis NA  
## 164 liam\_neeson abdul\_salis NA  
## 165 kris\_marshall abdul\_salis NA  
## 166 abdul\_salis abdul\_salis 7  
## 167 martin\_freeman abdul\_salis 3  
## 168 rowan\_atkinson abdul\_salis 0  
## 169 bill\_nighy martin\_freeman NA  
## 170 keira\_knightley martin\_freeman NA  
## 171 andrew\_lincoln martin\_freeman NA  
## 172 hugh\_grant martin\_freeman NA  
## 173 colin\_firth martin\_freeman NA  
## 174 alan\_rickman martin\_freeman NA  
## 175 heike\_makatsch martin\_freeman NA  
## 176 laura\_linney martin\_freeman NA  
## 177 emma\_thompson martin\_freeman NA  
## 178 liam\_neeson martin\_freeman NA  
## 179 kris\_marshall martin\_freeman NA  
## 180 abdul\_salis martin\_freeman NA  
## 181 martin\_freeman martin\_freeman 7  
## 182 rowan\_atkinson martin\_freeman 0  
## 183 bill\_nighy rowan\_atkinson NA  
## 184 keira\_knightley rowan\_atkinson NA  
## 185 andrew\_lincoln rowan\_atkinson NA  
## 186 hugh\_grant rowan\_atkinson NA  
## 187 colin\_firth rowan\_atkinson NA  
## 188 alan\_rickman rowan\_atkinson NA  
## 189 heike\_makatsch rowan\_atkinson NA  
## 190 laura\_linney rowan\_atkinson NA  
## 191 emma\_thompson rowan\_atkinson NA  
## 192 liam\_neeson rowan\_atkinson NA  
## 193 kris\_marshall rowan\_atkinson NA  
## 194 abdul\_salis rowan\_atkinson NA  
## 195 martin\_freeman rowan\_atkinson NA  
## 196 rowan\_atkinson rowan\_atkinson 2

#Action 2 for cleaning  
unite(adjacencies, "actors", "Other Actor", col="actors", sep = " & ")

## # A tibble: 196 × 2  
## actors `Relationship Index`  
## <chr> <dbl>  
## 1 bill\_nighy & bill\_nighy 9  
## 2 keira\_knightley & bill\_nighy 2  
## 3 andrew\_lincoln & bill\_nighy 2  
## 4 hugh\_grant & bill\_nighy 2  
## 5 colin\_firth & bill\_nighy 1  
## 6 alan\_rickman & bill\_nighy 1  
## 7 heike\_makatsch & bill\_nighy 0  
## 8 laura\_linney & bill\_nighy 1  
## 9 emma\_thompson & bill\_nighy 1  
## 10 liam\_neeson & bill\_nighy 3  
## # … with 186 more rows

#Section 4 #Adjacencies Database #This dataframe has 196 and 3columns. The names of the columns and a brief description of each are in the table below:`

column\_names <- c(ls(adjacencies))  
column\_description <- c("Actor 1 on the relationship", "Actor 2 in the relationship", "Index that shows how strong ancd close is the relationship")  
table.df <- data.frame(column\_names, column\_description)  
knitr::kable(table.df, "simple", col.names = c("Column Name", "Column Description"), align = c("c", "c"))

| Column Name | Column Description |
| --- | --- |
| actors | Actor 1 on the relationship |
| Other Actor | Actor 2 in the relationship |
| Relationship Index | Index that shows how strong ancd close is the relationship |

#Section 5 #Adjacencies Dataset

data\_pick3 <- select(adjacencies, "actors", "Other Actor", "Relationship Index")

Summarytable<-summary(data\_pick3)   
Summarytable

## actors Other Actor Relationship Index  
## Length:196 Length:196 Min. : 0.00   
## Class :character Class :character 1st Qu.: 1.00   
## Mode :character Mode :character Median : 1.00   
## Mean : 2.61   
## 3rd Qu.: 3.00   
## Max. :13.00   
## NA's :91