

Team Allocation for Class DS1801

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Data

```
class_roll <- read.table("../data/class_roll1801_masked.txt",
                        header = TRUE,
                        stringsAsFactors = FALSE,
                        encoding = "UTF-8")

str(class_roll)

## 'data.frame': 13 obs. of 6 variables:
## $ dept : chr "○○학과" "○○학과" "○○학과" "○○학과" ...
## $ id : int 20179999 20179999 20179999 20149999 20139999 20179999 20139999 20179999 20
149999 20169999 20159999 ...
## $ name : chr "김○○" "김○○" "박○○" "서○○" ...
## $ year : int 2 2 3 4 2 3 2 3 3 4 ...
## $ email : chr "user_name@naver.com" "user_name@naver.com" "user_name@naver.com"
"user_name@hanmail.net" ...
## $ cell_no: chr "010-4148-xxxx" "010-8417-xxxx" "010-6354-xxxx" "010-7474-xxxx"
...
```

랜덤하게 4 Team으로 나누기

```
set.seed(1)
N <- nrow(class_roll)
group <- 1 + sample(1:N) %% 4
class_roll$group <- factor(group,
                           levels = 1:4,
                           labels = paste("Team", 1:4))

kable(class_roll)
```

dept	id	name	year	email	cell_no	group
○○학과	20179999	김○○	2	user_name@naver.com (mailto:user_name@naver.com)	010-4148-xxxx	Team 1
○○학과	20179999	김○○	2	user_name@naver.com (mailto:user_name@naver.com)	010-8417-xxxx	Team 2
○○학과	20149999	박○○	3	user_name@naver.com (mailto:user_name@naver.com)	010-6354-xxxx	Team 4
○○학과	20139999	서○○	4	user_name@hanmail.net (mailto:user_name@hanmail.net)	010-7474-xxxx	Team 3
○○학과	20179999	손○○	2	user_name@naver.com (mailto:user_name@naver.com)	010-6604-xxxx	Team 3
○○학과	20139999	송○○	3	user_name@gmail.com (mailto:user_name@gmail.com)	010-2172-xxxx	Team 1

dept	id	name	year	email	cell_no	group
○○학과	20179999	신○○	2	user_name@gmail.com (mailto:user_name@gmail.com)	010-3298-xxxx	Team 4
○○학과	20149999	우○○	3	user_name@naver.com (mailto:user_name@naver.com)	010-6293-xxxx	Team 2
○○학과	20169999	이○○	3	user_name@naver.com (mailto:user_name@naver.com)	010-5104-xxxx	Team 3
○○학과	20159999	정○○	4	user_name@naver.com (mailto:user_name@naver.com)	010-7664-xxxx	Team 2
○○학과	20149999	조○○	3	user_name@naver.com (mailto:user_name@naver.com)	010-4191-xxxx	Team 1
○○학과	20159999	차○○	4	user_name@naver.com (mailto:user_name@naver.com)	010-5164-xxxx	Team 4
○○학과	20179999	황○○	2	user_name@naver.com (mailto:user_name@naver.com)	010-7569-xxxx	Team 2

학번

```
ID_17 <- factor(ifelse(substr(class_roll$id, 1, 4) >= 2017,
                           "17학번", "16학번이전"),
                levels = c("17학번", "16학번이전"))

kable(table("팀" = class_roll$group,
            "17학번 기준" = ID_17))
```

	17학번	16학번이전
Team 1	1	2
Team 2	2	2
Team 3	1	2
Team 4	1	2

```
ID_16 <- factor(ifelse(substr(class_roll$id, 1, 4) >= 2016,
                           "16학번이후", "15학번이전"),
                levels = c("16학번이후", "15학번이전"))

kable(table("팀" = class_roll$group,
            "16학번 기준" = ID_16))
```

	16학번이후	15학번이전
Team 1	1	2
Team 2	2	2
Team 3	2	1
Team 4	1	2

```
ID_15 <- factor(ifelse(substr(class_roll$id, 1, 4) >= 2015,
                             "15학번이후", "14학번이전"),
               levels = c("15학번이후", "14학번이전"))
kable(table("팀" = class_roll$group,
            "15학번 기준" = ID_15))
```

	15학번이후	14학번이전
Team 1	1	2
Team 2	3	1
Team 3	2	1
Team 4	2	1

```
ID_14 <- factor(ifelse(substr(class_roll$id, 1, 4) >= 2014,
                             "14학번이후", "13학번이전"),
               levels = c("14학번이후", "13학번이전"))
kable(table("팀" = class_roll$group,
            "14학번 기준" = ID_14))
```

	14학번이후	13학번이전
Team 1	2	1
Team 2	4	0
Team 3	2	1
Team 4	3	0

email 서비스업체

```
email_list <- strsplit(class_roll$email, "@", fixed = TRUE)
mail_com <- sapply(email_list, `[`, 2)
kable(table("팀" = class_roll$group,
            "e-mail" = mail_com))
```

	gmail.com	hanmail.net	nate.com	naver.com
Team 1	1	0	0	2
Team 2	0	0	1	3
Team 3	0	1	0	2
Team 4	1	0	1	1

학년 분포

```
kable(table("팀" = class_roll$group, "학년" = class_roll$year))
```

	2	3	4
--	---	---	---

	2	3	4
Team 1	1	2	0
Team 2	2	1	1
Team 3	1	1	1
Team 4	1	1	1

성씨 분포

```
f_name <- substring(class_roll$name,
                    first = 1, last = 1)
kable(table("팀" = class_roll$group,
            "Family Name" = f_name))
```

	김	박	서	손	송	신	우	이	정	조	차	황
Team 1	1	0	0	0	1	0	0	0	0	1	0	0
Team 2	1	0	0	0	0	0	1	0	1	0	0	1
Team 3	0	0	1	1	0	0	0	1	0	0	0	0
Team 4	0	1	0	0	0	1	0	0	0	0	1	0

많이 나오는 성씨

```
f_name <- substring(class_roll$name,
                    first = 1,
                    last = 1)
# f_name %in% c("김", "이", "박")
f_name_f <- factor(ifelse(f_name %in% c("김", "이", "박", "최"),
                          f_name, "기타"),
                  levels = c("김", "이", "박", "최", "기타"))
kable(table("팀" = class_roll$group, "Family Name" = f_name_f))
```

	김	이	박	최	기타
Team 1	1	0	0	0	2
Team 2	1	0	0	0	3
Team 3	0	1	0	0	2
Team 4	0	0	1	0	2

Team 별로 모으기

```
gr_names_o <- order(class_roll$group, class_roll$name)
gr_names_o
```

```
## [1] 1 6 11 2 8 10 13 4 5 9 3 7 12
```

```
names_by_gr <- class_roll[gr_names_o, c("group", "dept", "id", "name", "year", "email", "cell_no")]
kable(names_by_gr)
```

	group	dept	id	name	year	email	cell_no
1	Team 1	○○학과	20179999	김○○	2	user_name@naver.com (mailto:user_name@naver.com)	010-4148-xxxx
6	Team 1	○○학과	20139999	송○○	3	user_name@gmail.com (mailto:user_name@gmail.com)	010-2172-xxxx
11	Team 1	○○학과	20149999	조○○	3	user_name@naver.com (mailto:user_name@naver.com)	010-4191-xxxx
2	Team 2	○○학과	20179999	김○○	2	user_name@nate.com (mailto:user_name@nate.com)	010-8417-xxxx
8	Team 2	○○학과	20149999	우○○	3	user_name@naver.com (mailto:user_name@naver.com)	010-6293-xxxx
10	Team 2	○○학과	20159999	정○○	4	user_name@naver.com (mailto:user_name@naver.com)	010-7664-xxxx
13	Team 2	○○학과	20179999	황○○	2	user_name@naver.com (mailto:user_name@naver.com)	010-7569-xxxx
4	Team 3	○○학과	20139999	서○○	4	user_name@hanmail.net (mailto:user_name@hanmail.net)	010-7474-xxxx
5	Team 3	○○학과	20179999	손○○	2	user_name@naver.com (mailto:user_name@naver.com)	010-6604-xxxx
9	Team 3	○○학과	20169999	이○○	3	user_name@naver.com (mailto:user_name@naver.com)	010-5104-xxxx
3	Team 4	○○학과	20149999	박○○	3	user_name@nate.com (mailto:user_name@nate.com)	010-6354-xxxx
7	Team 4	○○학과	20179999	신○○	2	user_name@gmail.com (mailto:user_name@gmail.com)	010-3298-xxxx
12	Team 4	○○학과	20159999	차○○	4	user_name@naver.com (mailto:user_name@naver.com)	010-5164-xxxx