

# 2025 학년도 2 학기 출석수업과제물(온라인 제출용)

- 교 과 목 명 : 파이썬과 R
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※ A4용지 편집 사용

※ 과제를 표지등에 개인정보(주민번호, 운전면허번호)가 포함될 경우 삭제처리로 과제물을 다시 제출해야 하는 경우가 발생할 수 있습니다.

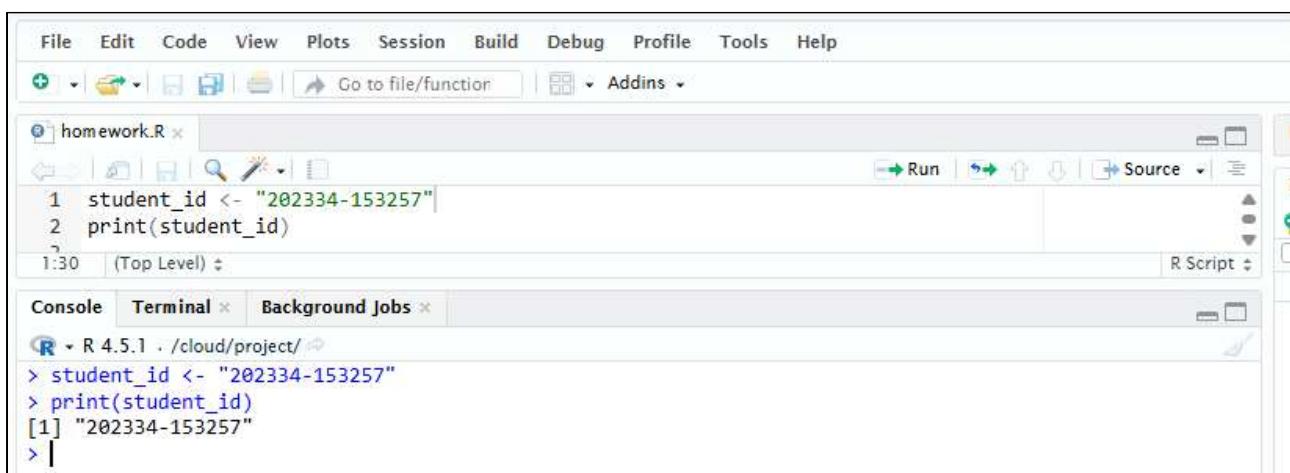
[1]

(1) 파이썬

```
subjects > 3-2 > (전2) 파이썬과R > Provided_Files > hom
 1 student_id = "202334-153257"
 2 print(student_id)
 3

PROBLEMS      OUTPUT      DEBUG CONSOLE      TERMINAL      PO
PS C:\project\airtown\University_KNOU> & C:/Users
● 202334-153257
○ PS C:\project\airtown\University_KNOU>
```

(2) R



The screenshot shows the RStudio IDE. The top menu bar includes File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. Below the menu is a toolbar with various icons. The main area has two tabs: 'homework.R' (script editor) and 'Console' (terminal). The 'homework.R' tab contains the following R code:

```
student_id <- "202334-153257"
print(student_id)
```

The 'Console' tab shows the output of running this code in R 4.5.1:

```
R 4.5.1 . /cloud/project/
> student_id <- "202334-153257"
> print(student_id)
[1] "202334-153257"
>
```

[2]

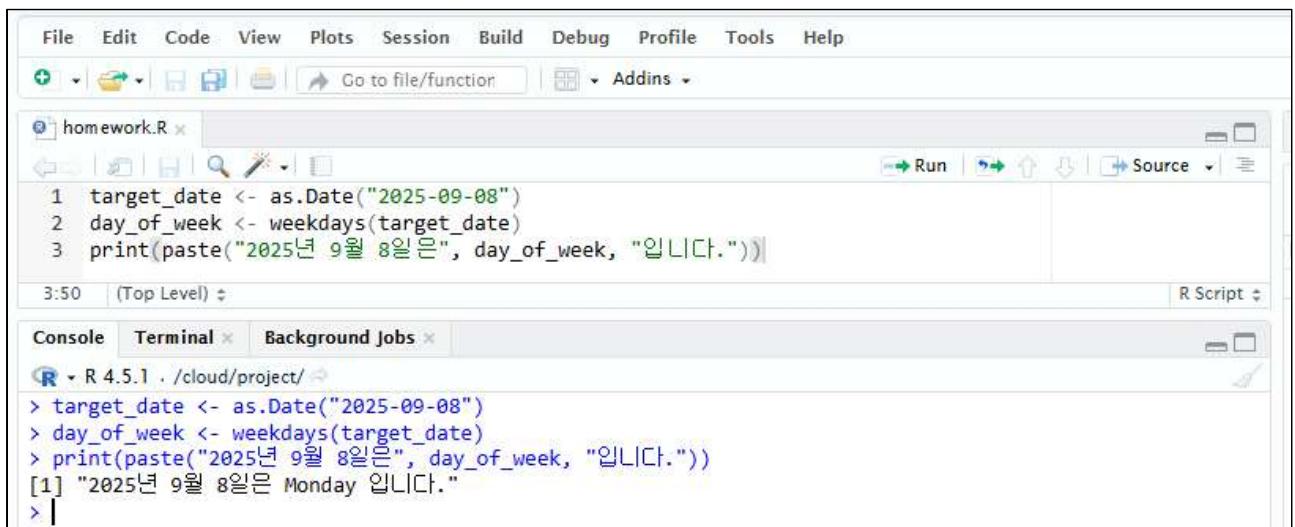
(1) 파일썬

```
subjects > 3-2 > (전2) 파일썬과 R > Provided_Files > homework.py > ...
  8 import datetime
  9 target_date = datetime.date(2025, 9, 8)
10 days = ["월요일", "화요일", "수요일", "목요일", "금요일", "토요일", "일요일"]
11 day_name = days[target_date.weekday()]
12 print(f"2025년 9월 8일은 {day_name}입니다.")
13

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS C:\project\airtown\University_KNOU> & C:/Users/airto/AppData/Local/Programs/Python/Python311/python.exe C:/Users/airto/Desktop/University_KNOU/homework.py
● 2025년 9월 8일은 월요일입니다.
○ PS C:\project\airtown\University_KNOU>
```

(2) R



The screenshot shows the RStudio interface. The top menu bar includes File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. Below the menu is a toolbar with various icons. A script editor window titled "homework.R" is open, containing the following R code:

```
1 target_date <- as.Date("2025-09-08")
2 day_of_week <- weekdays(target_date)
3 print(paste("2025년 9월 8일은", day_of_week, "입니다."))

```

Below the editor is a status bar showing "3:50 (Top Level)". To the right of the editor is a "Source" button. At the bottom of the screen is a "Console" tab, which displays the R session output:

```
R 4.5.1 . /cloud/project/
> target_date <- as.Date("2025-09-08")
> day_of_week <- weekdays(target_date)
> print(paste("2025년 9월 8일은", day_of_week, "입니다."))
[1] "2025년 9월 8일은 Monday 입니다."
> |
```

[3]

(1) 파일썬

The screenshot shows a Jupyter Notebook interface. At the top, the path is displayed as: subjects > 3-2 > (전2) 파일썬과 R > Provided\_Files > homework.py > ... . Below the path, the code is shown:

```
18 i = 1
19 while i <= 10:
20     if i % 3 == 0:
21         i += 1
22         continue
23     print(i)
24     i += 1
25
```

Below the code, there are tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTS. The TERMINAL tab is selected, showing the command PS C:\project\airtown\University\_KNOU> & C:/Users/airto/AppData/Local/Programs/Pyt followed by the output of the script:

```
1
2
4
5
7
8
10
```

At the bottom, it shows PS C:\project\airtown\University\_KNOU>

(2) R

The screenshot shows an RStudio interface. At the top, the menu bar includes File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. Below the menu is a toolbar with various icons. The main workspace shows a file named "homework.R" with the following code:

```
1 i <- 1
2 while (i <= 10) {
3   if (i %% 3 == 0) {
4     i <- i + 1
5     next
6   }
7   print(i)
8   i <- i + 1
9 }
```

Below the code, there is a "Console" tab showing the output of the script:

```
R 4.5.1 - /cloud/project/
[1] 2
[1] 4
[1] 5
[1] 7
[1] 8
[1] 10
>
```

[4]

(1) 파일쓰

```
subjects > 3-2 > (전2) 파일썬과R > Provided_Files > homework.py > ...
38 import csv
39
40 # 1. iris.txt 파일을 읽기
41 # CSV 파일은 보통 리스트의 리스트(list of lists) 형태로 데이터를 담습니다.
42 file_path = r'C:\project\airtown\University_KNOU\subjects\3-2\파이썬과R\Provided_Files\iris.txt'
43
44 header = []
45 data_rows = []
46 with open(file_path, 'r', encoding='utf-8') as f:
47     reader = csv.reader(f)
48     header = next(reader) # 첫 줄(헤더)을 읽음
49     for row in reader:
50         data_rows.append(row) # 나머지 데이터 행들을 리스트에 추가
51
52 # 2. 첫 5행만 저장
53 iris_5_rows = data_rows[:5]
54 print("... iris_5 (리스트 형태) ...")
55 print(iris_5_rows)
56
57 # 3. 마지막 행을 새 번째 위치에 끼워 넣기
58 last_row = data_rows[-1]
59 iris_6_rows = iris_5_rows[:-2] + [last_row] + iris_5_rows[2:]
60 print("\n... iris_6 (리스트 형태) ...")
61 print(iris_6_rows)
62
63 # 4. iris_6.csv 파일로 저장
64 output_filepath = r'subjects\3-2\파이썬과R\Provided_Files\iris_6.csv'
65 with open(output_filepath, 'w', newline='', encoding='utf-8-sig') as f:
66     writer = csv.writer(f)
67     writer.writerow(header) # 헤더 쓰기
68     writer.writerows(iris_6_rows) # 데이터 행들 쓰기
69
70 print(f"\n'{output_filepath}' 파일이 생성되었습니다.")

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
--- iris_5 (리스트 형태) ---
[['5.1 3.5 1.4 0.2 setosa'], ['4.9 3 1.4 0.2 setosa'], ['4.7 3.2 1.3 0.2 setosa'], ['4.6 3.1 1.5 0.2 setosa'], ['5 3.6 1.4 0.2 setosa']]
--- iris_6 (리스트 형태) ---
[['5.1 3.5 1.4 0.2 setosa'], ['4.9 3 1.4 0.2 setosa'], ['5.9 3 5.1 1.8 virginica'], ['4.7 3.2 1.3 0.2 setosa'], ['4.6 3.1 1.5 0.2 setosa'], ['5 3.6 1.4 0.2 setosa']]
'subjects\3-2\파이썬과R\Provided_Files\iris_6.csv' 파일이 생성되었습니다.
PS C:\project\airtown\University_KNOU>
```

subjects > 3-2 > (전2) 파일썬과R > Provided\_Files > iris\_6.csv > data

```
1 Sepal.Length Sepal.Width Petal.Length Petal.Width Species
2 5.1 3.5 1.4 0.2 setosa
3 4.9 3 1.4 0.2 setosa
4 5.9 3 5.1 1.8 virginica
5 4.7 3.2 1.3 0.2 setosa
6 4.6 3.1 1.5 0.2 setosa
7 5 3.6 1.4 0.2 setosa
8
```

(2) R

≡ Your Workspace / knou\_RnPython

File Edit Code View Plots Session Build Debug Profile Tools Help

homework.R

```
1 iris_all <- read.table("iris.txt", header = TRUE)
2 iris_5 <- head(iris_all, 5)
3 last_row <- tail(iris_all, 1)
4 iris_6 <- rbind(iris_5[1:2, ], last_row, iris_5[3:5, ])
5
6 write.csv(iris_6, "iris_6.csv", row.names = TRUE, fileEncoding = "UTF-8")
7 print("iris_6 데이터 프레임이 생성되었습니다:")
8 print(iris_6)
9 print("iris_6.csv 파일 저장이 완료되었습니다. Posit Cloud의 Files 창에서 확인하세요.")
```

1:50 | (Top Level) R Script

Console Terminal Background Jobs

```
R - R 4.5.1 . /cloud/project/
> iris_all <- read.table("iris.txt", header = TRUE)
> iris_5 <- head(iris_all, 5)
> last_row <- tail(iris_all, 1)
> iris_6 <- rbind(iris_5[1:2, ], last_row, iris_5[3:5, ])
>
> write.csv(iris_6, "iris_6.csv", row.names = TRUE, fileEncoding = "UTF-8")
> print("iris_6 데이터 프레임이 생성되었습니다:")
[1] "iris_6 데이터 프레임이 생성되었습니다:"
> print(iris_6)
  Sepal.Length Sepal.Width Petal.Length Petal.Width Species
1          5.1         3.5         1.4         0.2   setosa
2          4.9         3.0         1.4         0.2   setosa
150        5.9         3.0         5.1         1.8 virginica
3          4.7         3.2         1.3         0.2   setosa
4          4.6         3.1         1.5         0.2   setosa
5          5.0         3.6         1.4         0.2   setosa
> print("iris_6.csv 파일 저장이 완료되었습니다. Posit Cloud의 Files 창에서 확인하세요.")
[1] "iris_6.csv 파일 저장이 완료되었습니다. Posit Cloud의 Files 창에서 확인하세요."
>
```

Environment History Connections

Files Plots Packages Help

Cloud project

Name

..

.Rhistory

homework.R

iris\_6.csv

iris.txt

project.Rproj

File Edit Code View Plots Session Build Debug Profile Tools Help

homework.R

iris\_6.csv

Show whitespace

```
1 "", "Sepal.Length", "Sepal.Width", "Petal.Length", "Petal.Width", "Species"
2 "1", 5.1, 3.5, 1.4, 0.2, "setosa"
3 "2", 4.9, 3.0, 1.4, 0.2, "setosa"
4 "150", 5.9, 3.0, 5.1, 1.8, "virginica"
5 "3", 4.7, 3.2, 1.3, 0.2, "setosa"
6 "4", 4.6, 3.1, 1.5, 0.2, "setosa"
7 "5", 5, 3.6, 1.4, 0.2, "setosa"
```

7:27 Text file