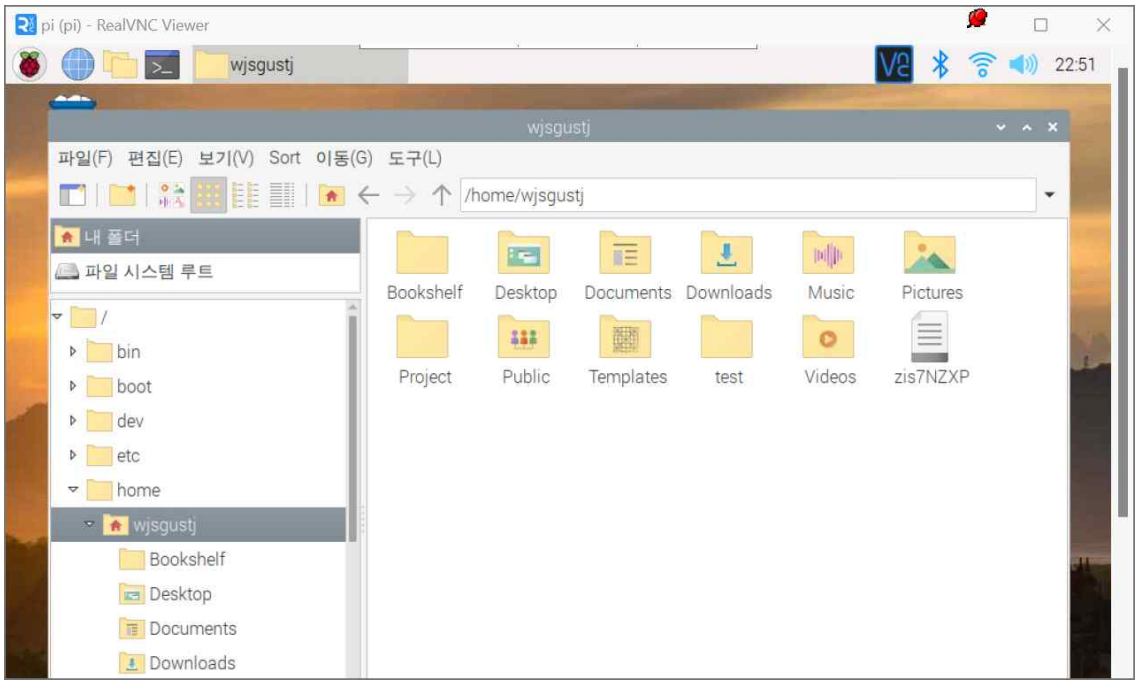
임베디드 응용 및 실습 과제1

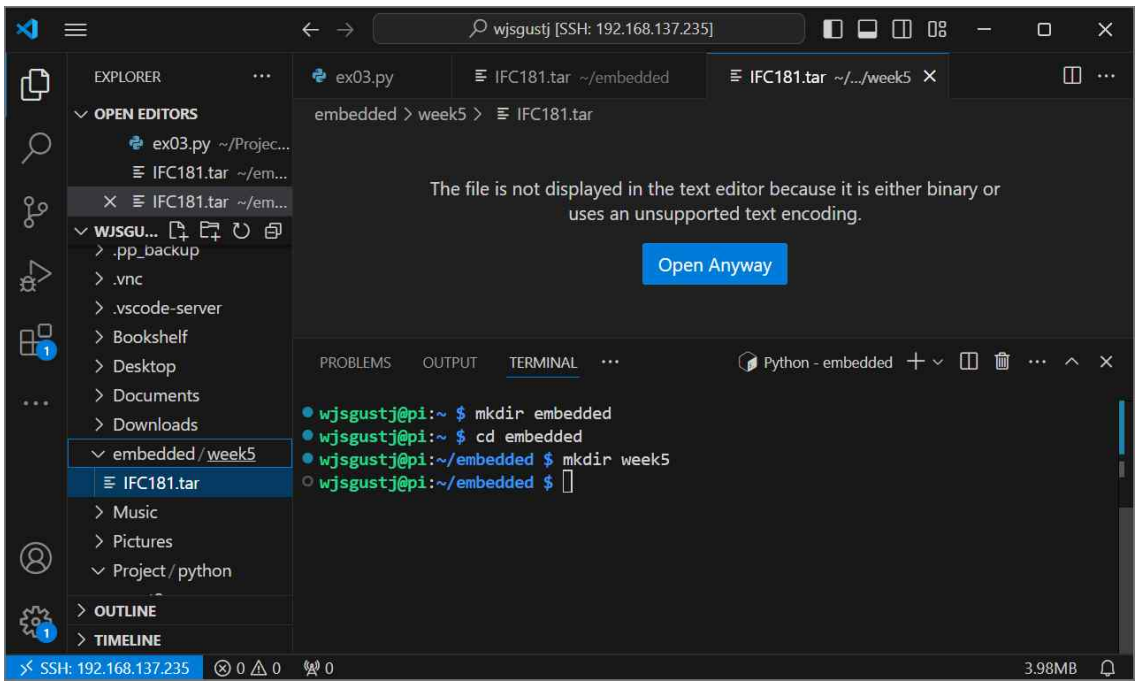
- 1. 리눅스 간단 명령 수행하기

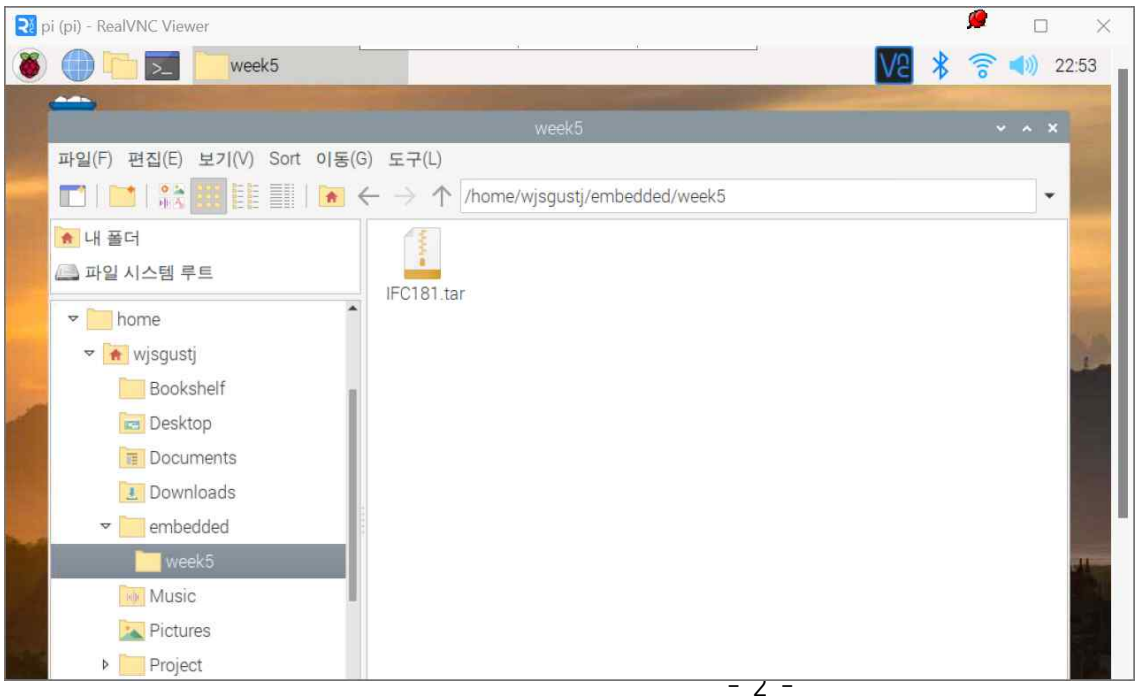
학과	전기공학과
학년	3학년
학번	2020161110
이름	전현서
과목명	임베디드 응용 및 실습
분반	01분반
담당교수님	우성민 교수님

<파일 압축 해제>

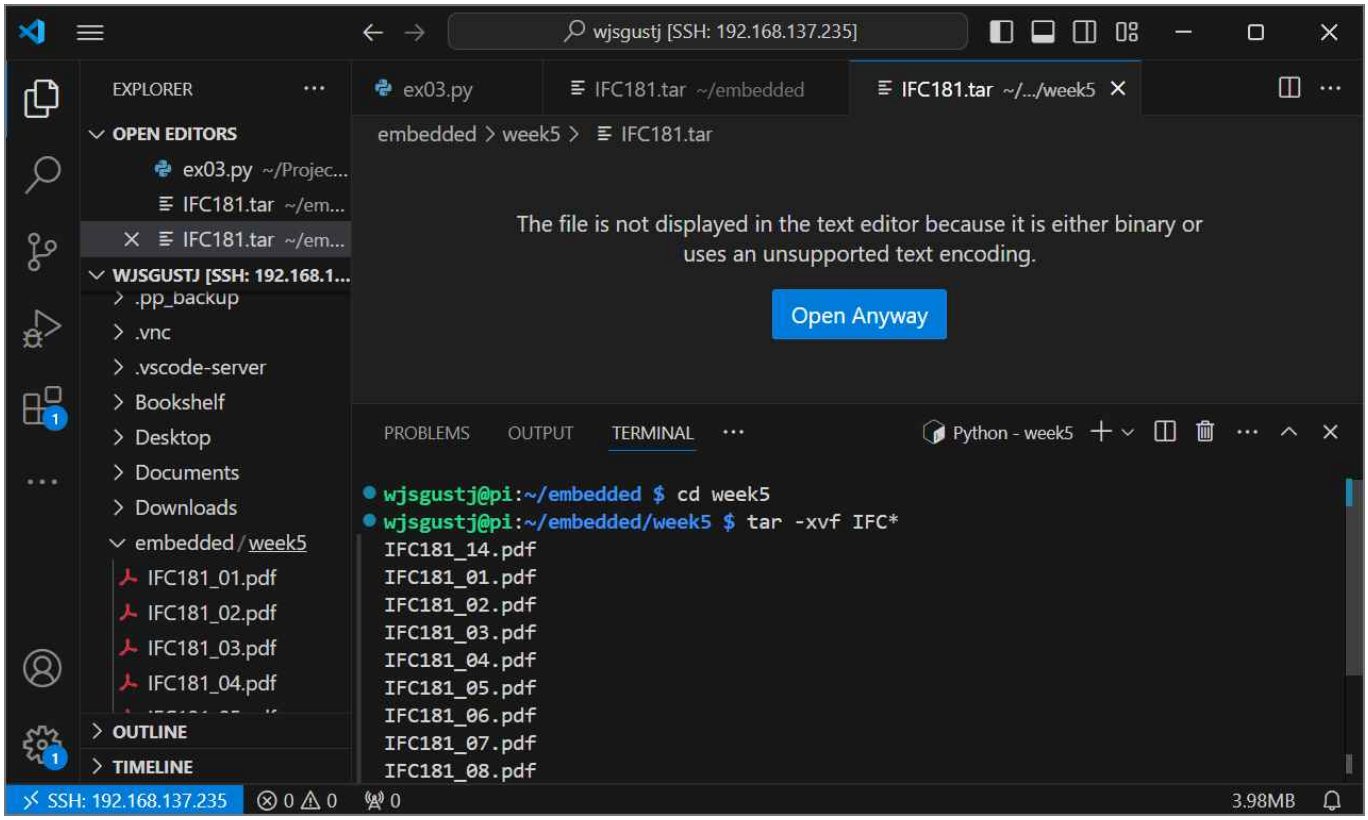
1. IFC181.tar 파일을 받아 ~/embedded/week5 로 옮긴다.

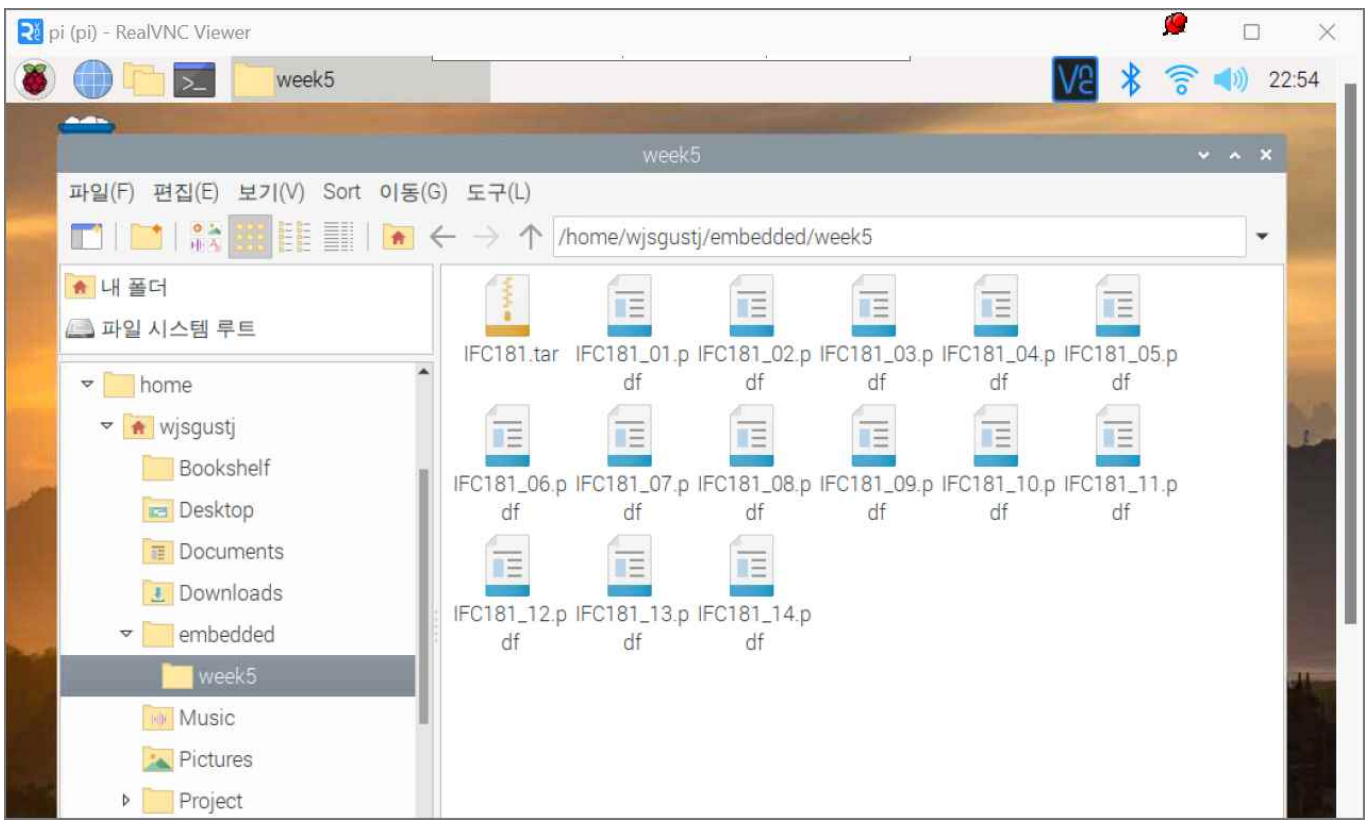




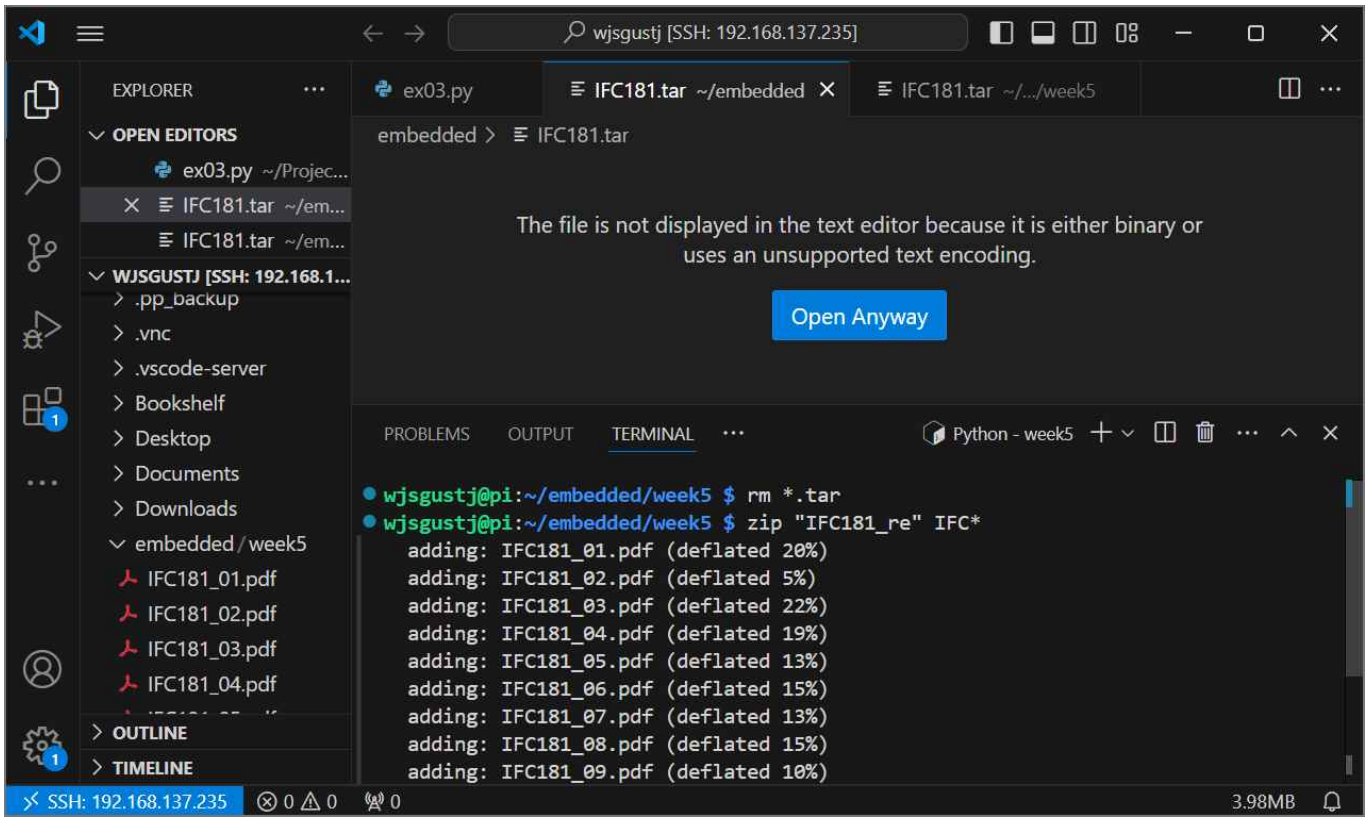


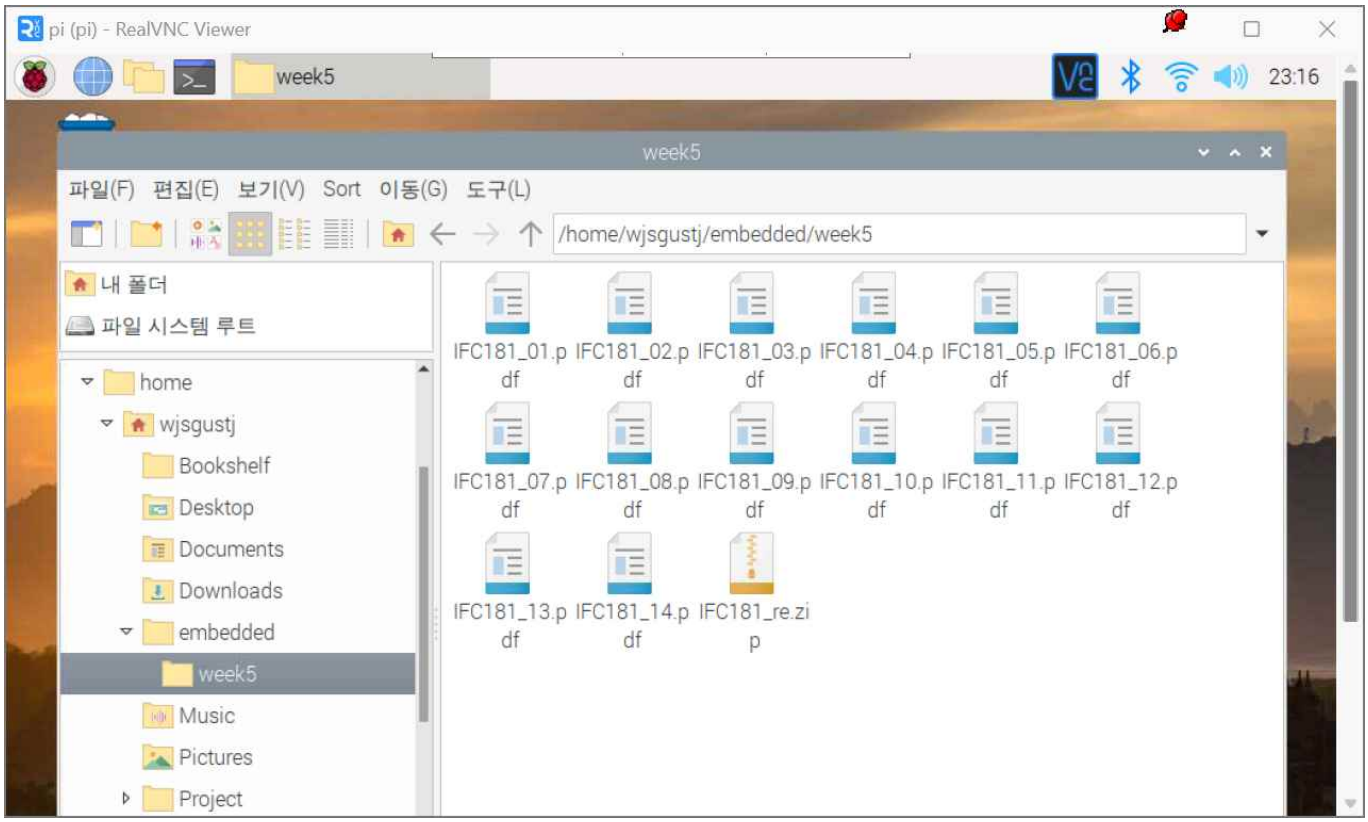
2. tar 명령으로 압축을 해제한다.



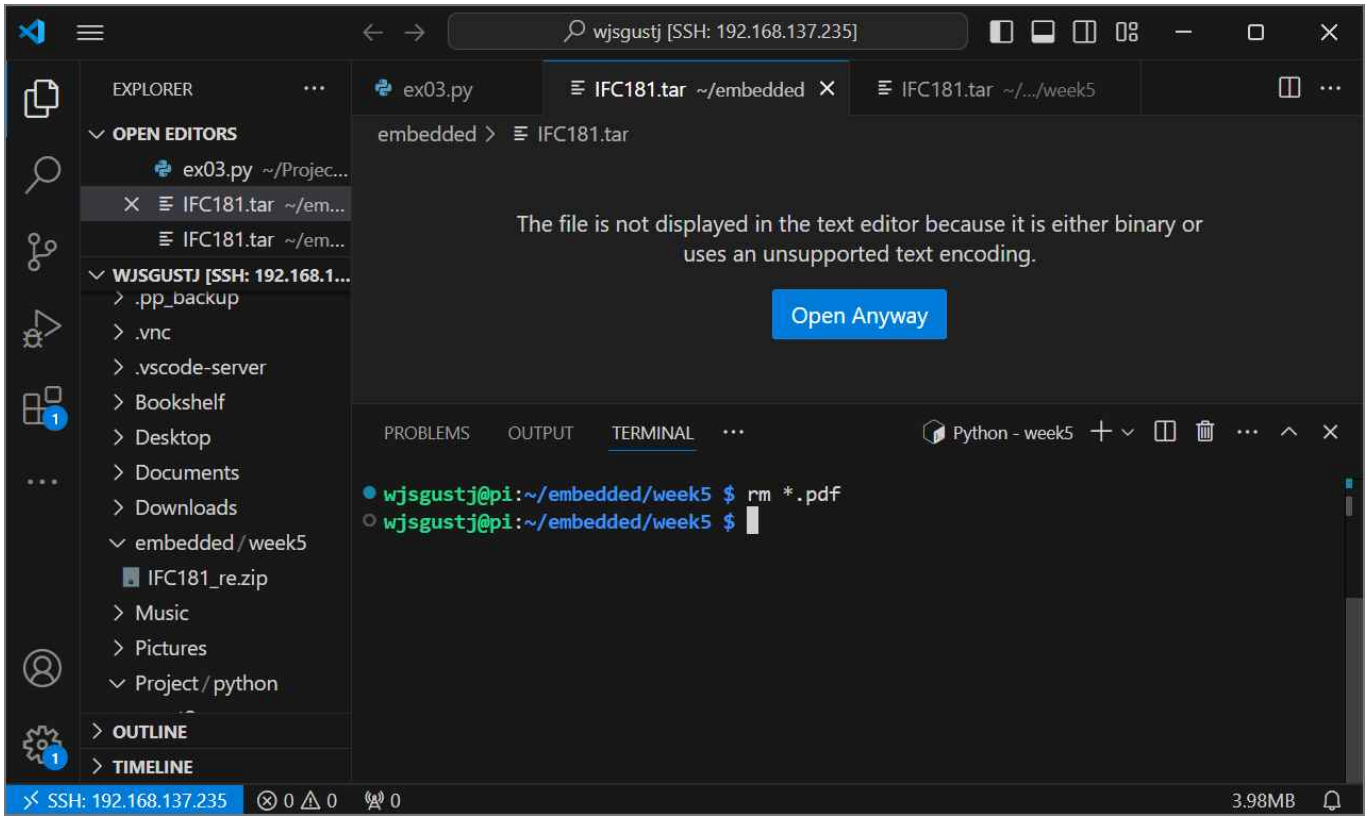


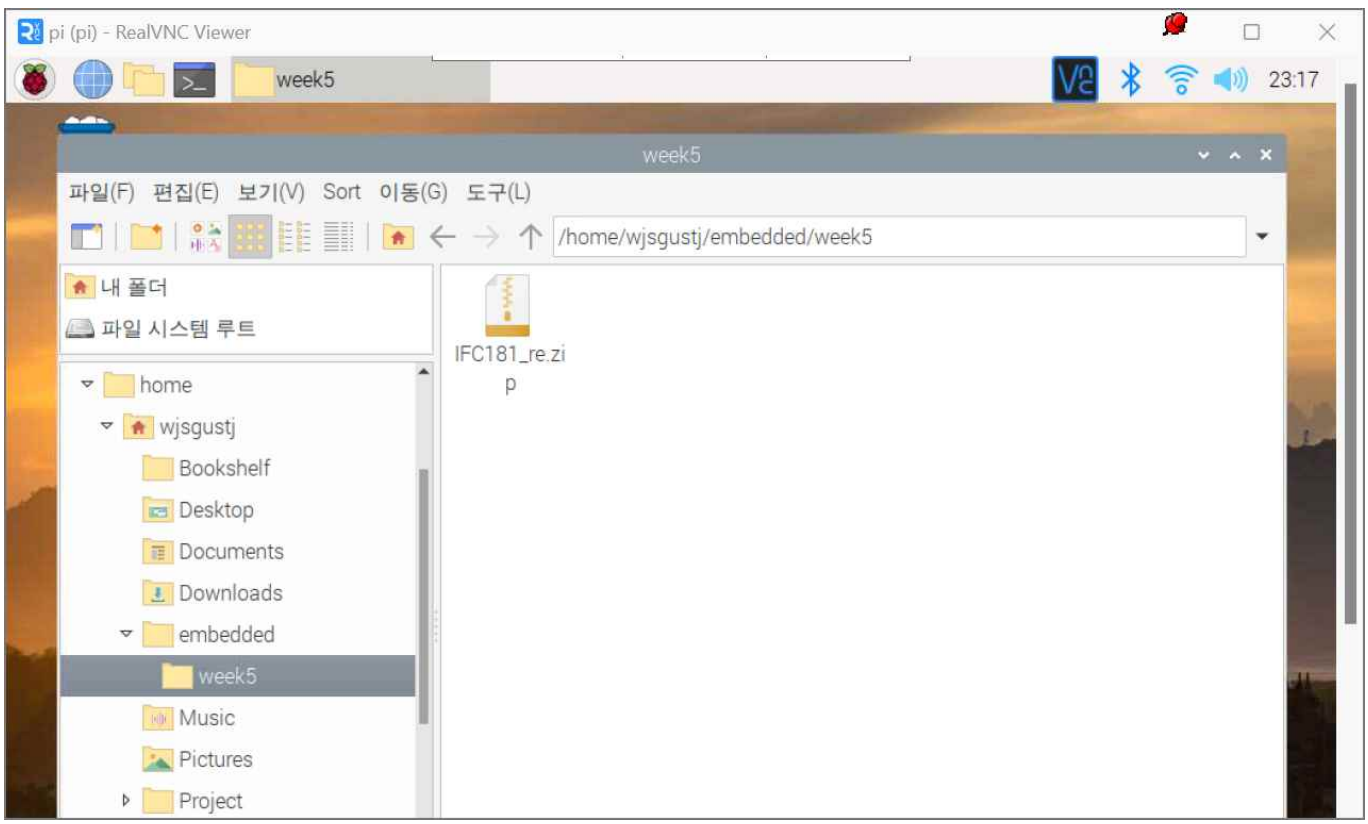
4. 2에서 압축해제된 파일들을 zip명령으로 IFC181_re.zip으로 압축한다.

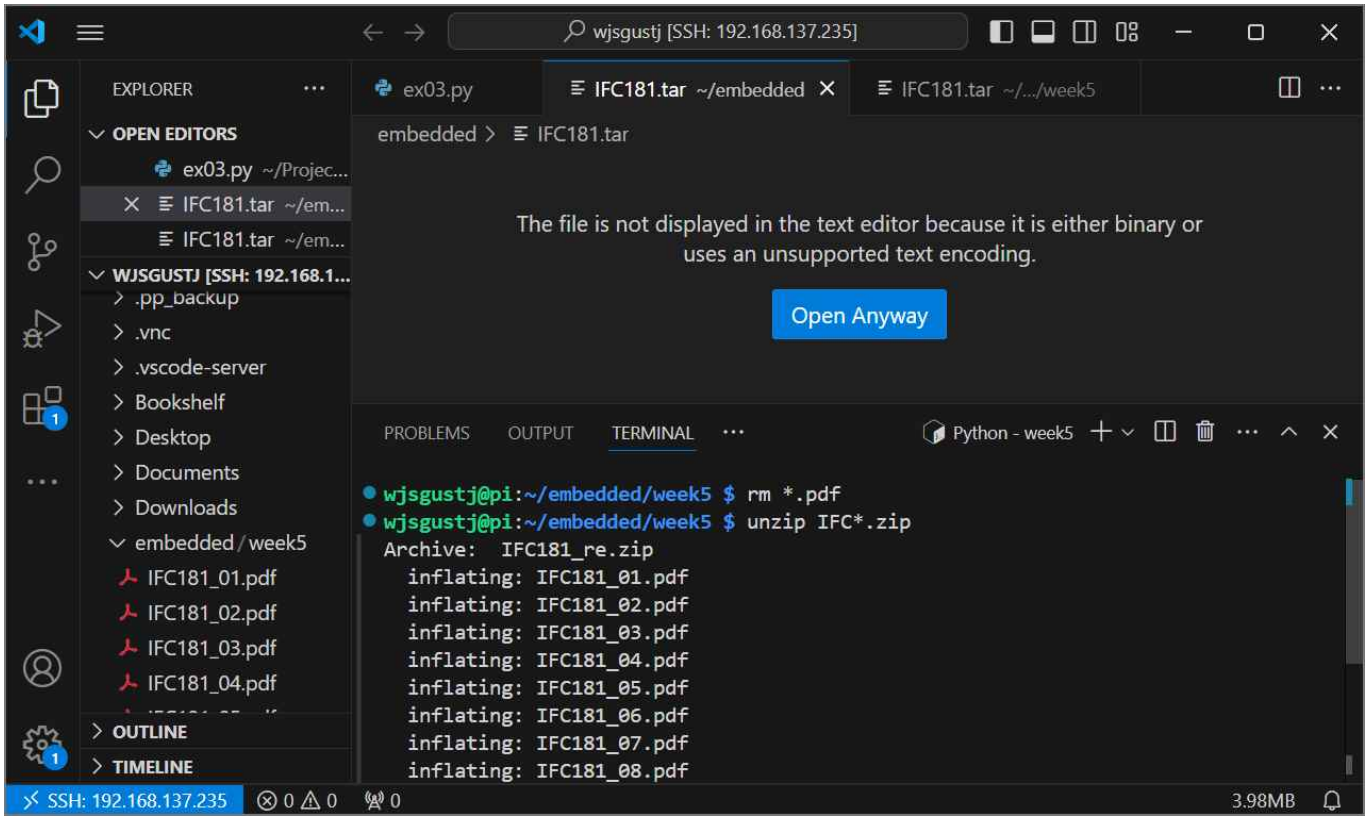




5. 4에서 나온 IFC181_re.zip 파일을 unzip 명령을 통해 압축해제 한다.






wjsgustj [SSH: 192.168.137.235]
EXPLORER
OPEN EDITORS
ex03.py ~/Projec...
IFC181.tar ~/em...
IFC181.tar ~/em...
WJSGUSTJ [SSH: 192.168.1...
.pp_backup
.vnc
.vscode-server
Bookshelf
Desktop
Documents
Downloads
embedded / week5
IFC181_01.pdf
IFC181_02.pdf
IFC181_03.pdf
IFC181_04.pdf
OUTLINE
TIMELINE
ex03.py
IFC181.tar ~/embedded
IFC181.tar ~/.../week5
embedded > IFC181.tar
The file is not displayed in the text editor because it is either binary or uses an unsupported text encoding.
Open Anyway
PROBLEMS
OUTPUT
TERMINAL
Python - week5
wjsgustj@pi:~/embedded/week5 $ rm *.pdf
wjsgustj@pi:~/embedded/week5 $ unzip IFC*.zip
Archive: IFC181_re.zip
inflating: IFC181_01.pdf
inflating: IFC181_02.pdf
inflating: IFC181_03.pdf
inflating: IFC181_04.pdf
inflating: IFC181_05.pdf
inflating: IFC181_06.pdf
inflating: IFC181_07.pdf
inflating: IFC181_08.pdf
SSH: 192.168.137.235
0 0
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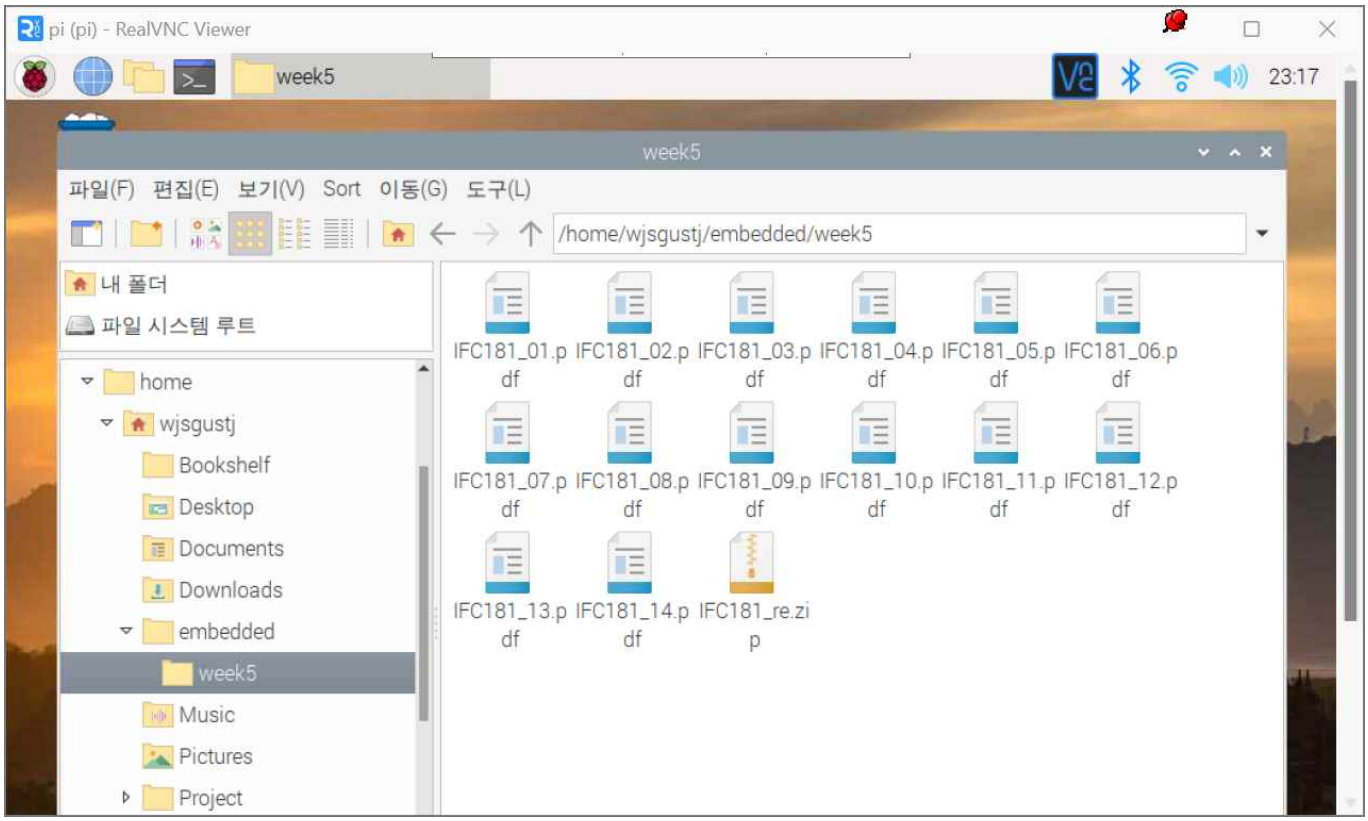
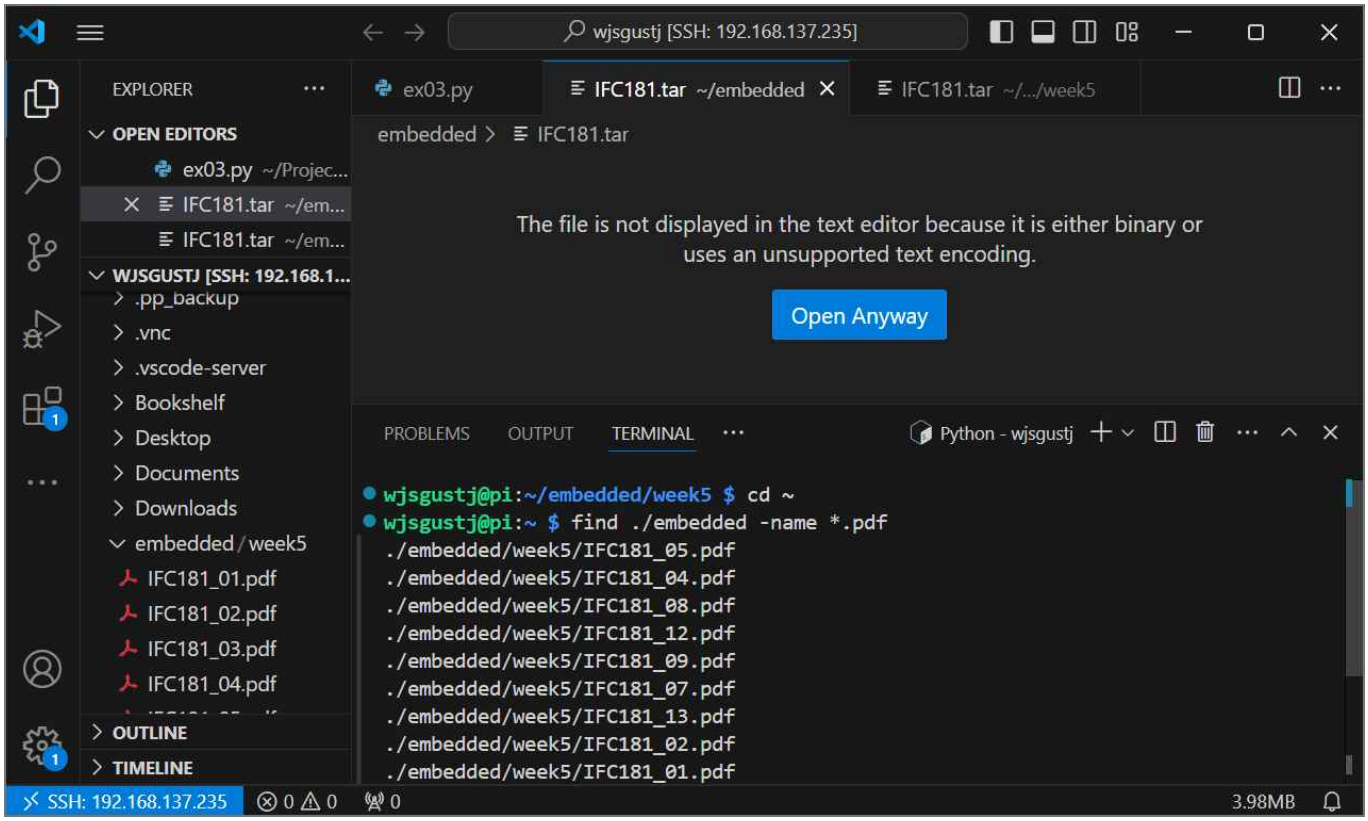
3.98MB


pi (pi) - RealVNC Viewer
week5
23:17
week5
파일(F) 편집(E) 보기(V) Sort 이동(G) 도구(L)
/home/wjsgustj/embedded/week5
내 폴더
파일 시스템 루트
home
wjsgustj
Bookshelf
Desktop
Documents
Downloads
embedded
week5
Music
Pictures
Project
IFC181_01.pdf
IFC181_02.pdf
IFC181_03.pdf
IFC181_04.pdf
IFC181_05.pdf
IFC181_06.pdf
IFC181_07.pdf
IFC181_08.pdf
IFC181_09.pdf
IFC181_10.pdf
IFC181_11.pdf
IFC181_12.pdf
IFC181_13.pdf
IFC181_14.pdf
IFC181_re.zip

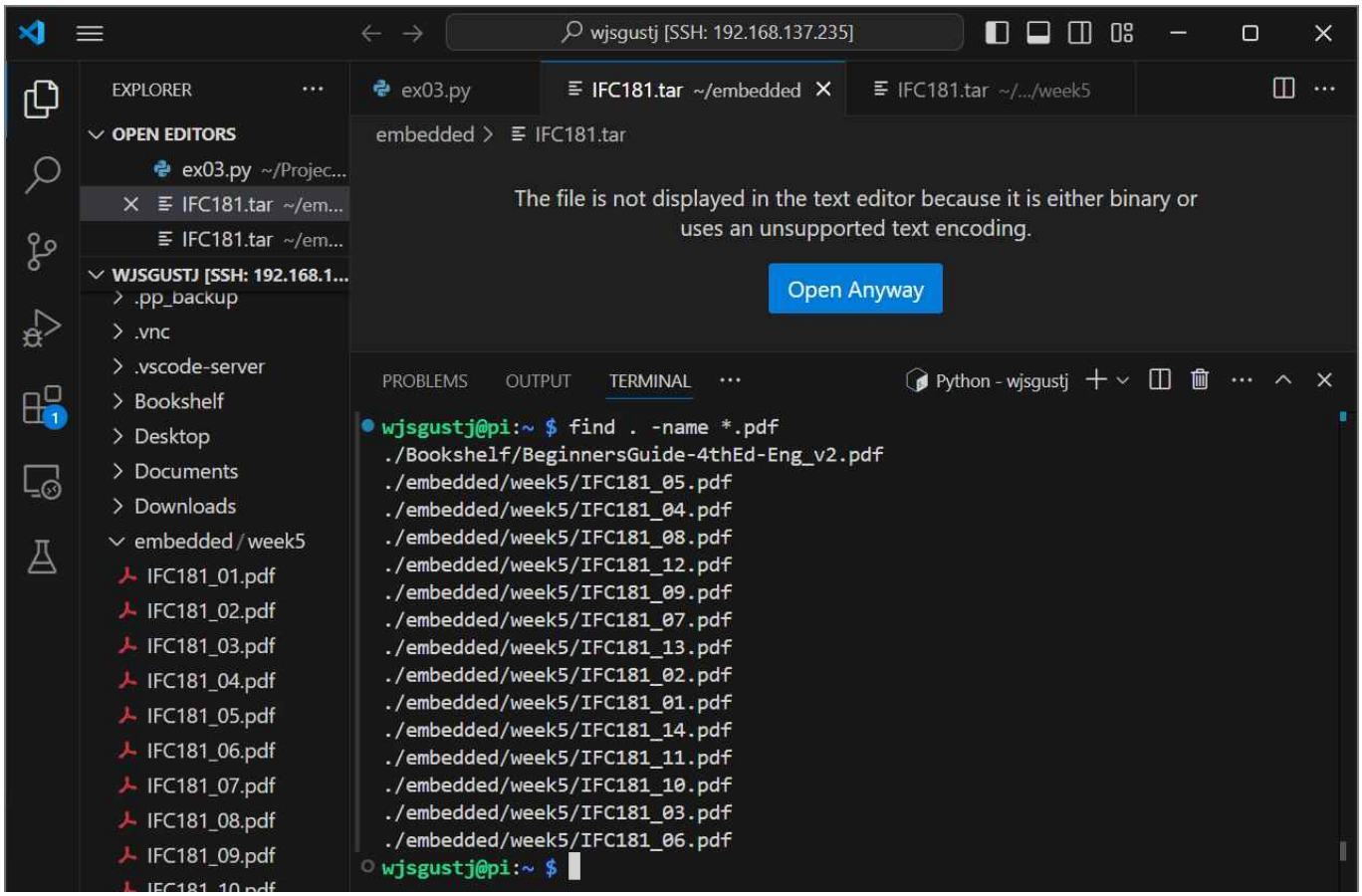
<find 명령어 연습>

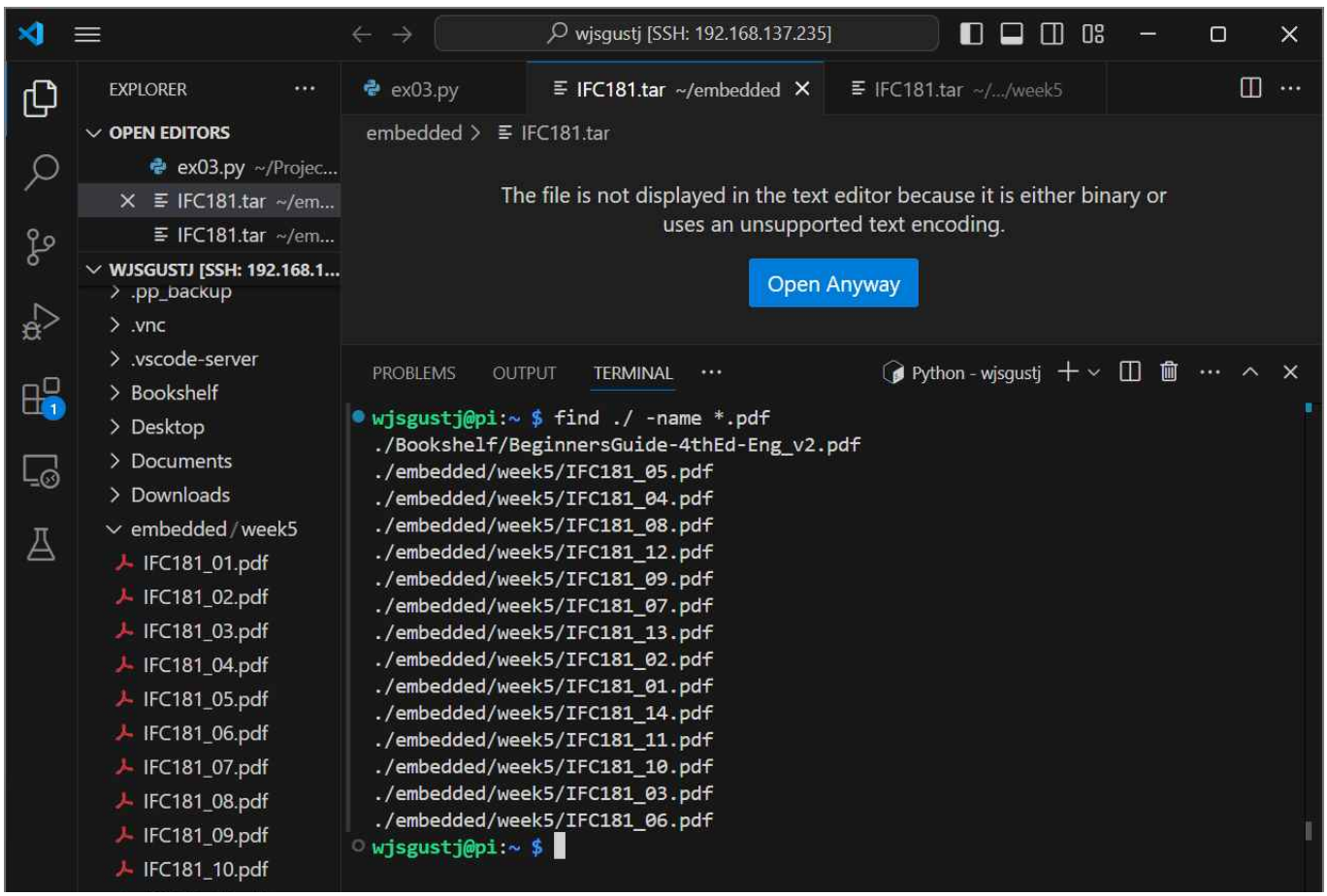
6. ~ (home) 디렉토리로 이동하고 find 명령을 통해 embedded폴더에서(하위폴더 포함) .pdf 파일을 찾는 명령을 수행해본다.

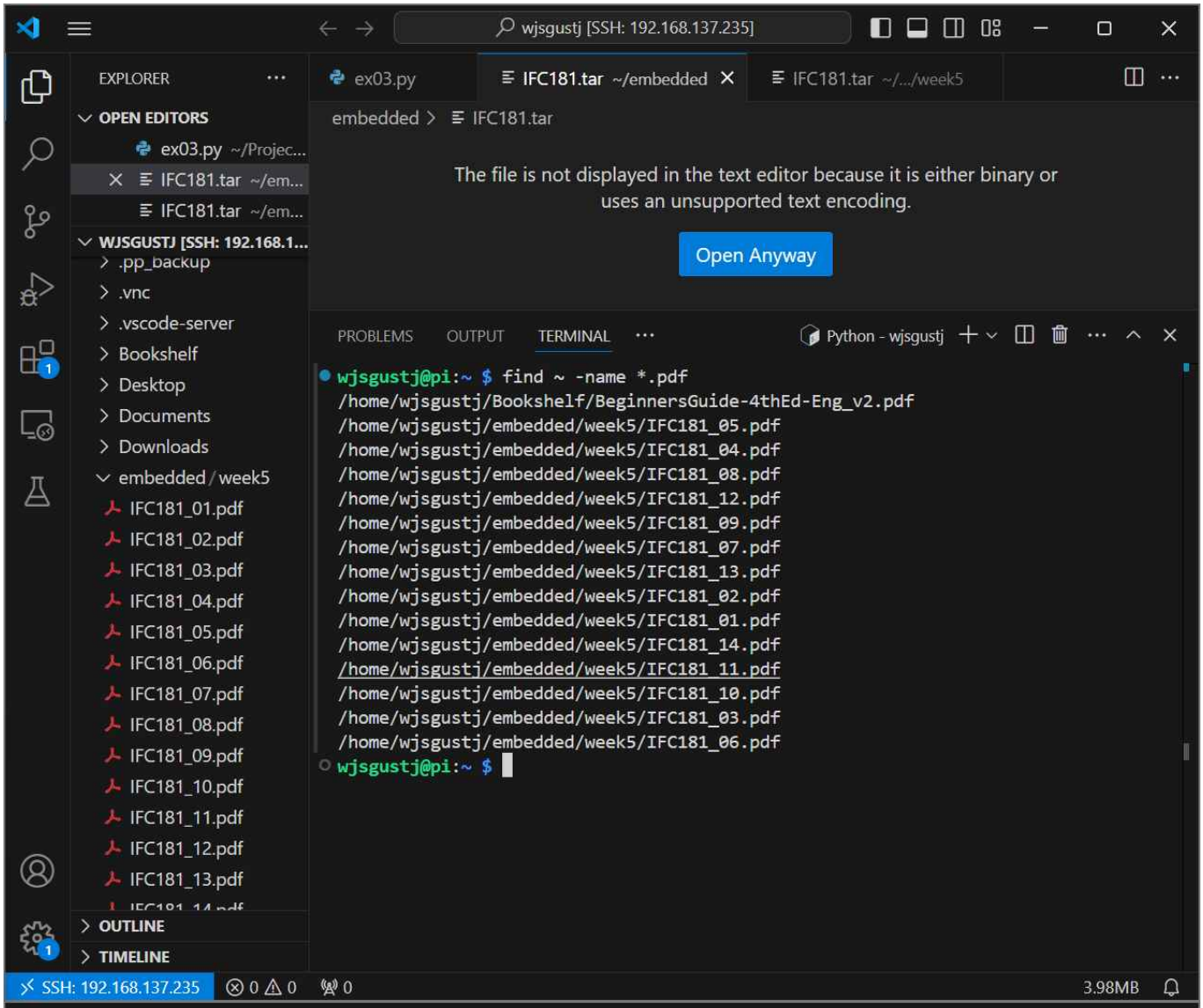


7. 아래의 명령 결과가 동일한지 아닌지 결과를 보이고 동작 결과를 설명하시오

innosm@innosm:~ $find . -name *.pdf
innosm@innosm:~ $find ./ -name *.pdf
innosm@innosm:~ $find -name *.pdf
innosm@innosm:~ $find ~ -name *.pdf
innosm@innosm:~ $find /home/innosm -name *.pdf






wjsgustj [SSH: 192.168.137.235]
EXPLORER
ex03.py
IFC181.tar ~/embedded
IFC181.tar ~/.../week5
OPEN EDITORS
ex03.py ~/Projec...
IFC181.tar ~/em...
IFC181.tar ~/em...
WJSGUSTJ [SSH: 192.168.1...
.pp_backup
.vnc
.vscode-server
Bookshelf
Desktop
Documents
Downloads
embedded / week5
IFC181_01.pdf
IFC181_02.pdf
IFC181_03.pdf
IFC181_04.pdf
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IFC181_06.pdf
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IFC181_13.pdf
OUTLINE
TIMELINE
embedded > IFC181.tar
The file is not displayed in the text editor because it is either binary or uses an unsupported text encoding.
Open Anyway
PROBLEMS
OUTPUT
TERMINAL
Python - wjsgustj
wjsgustj@pi:~ $ find ~ -name *.pdf
/home/wjsgustj/Bookshelf/BeginnersGuide-4thEd-Eng_v2.pdf
/home/wjsgustj/embedded/week5/IFC181_05.pdf
/home/wjsgustj/embedded/week5/IFC181_04.pdf
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/home/wjsgustj/embedded/week5/IFC181_03.pdf
/home/wjsgustj/embedded/week5/IFC181_06.pdf
wjsgustj@pi:~ $
SSH: 192.168.137.235
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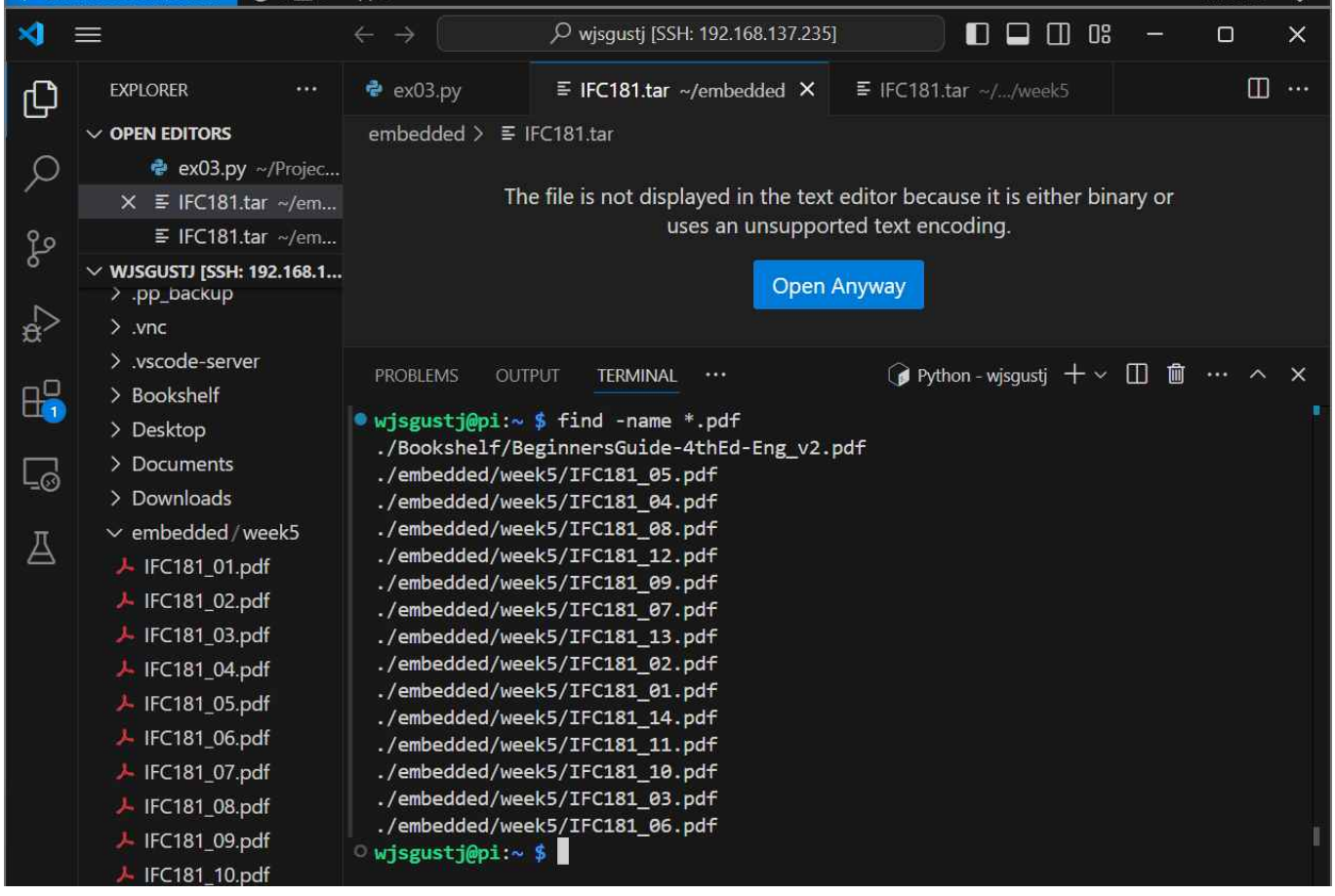
wjsgustj [SSH: 192.168.137.235]
EXPLORER
ex03.py
IFC181.tar ~/embedded
IFC181.tar ~/.../week5
OPEN EDITORS
ex03.py ~/Projec...
IFC181.tar ~/em...
IFC181.tar ~/em...
WJSGUSTJ [SSH: 192.168.1...
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.vnc
.vscode-server
Bookshelf
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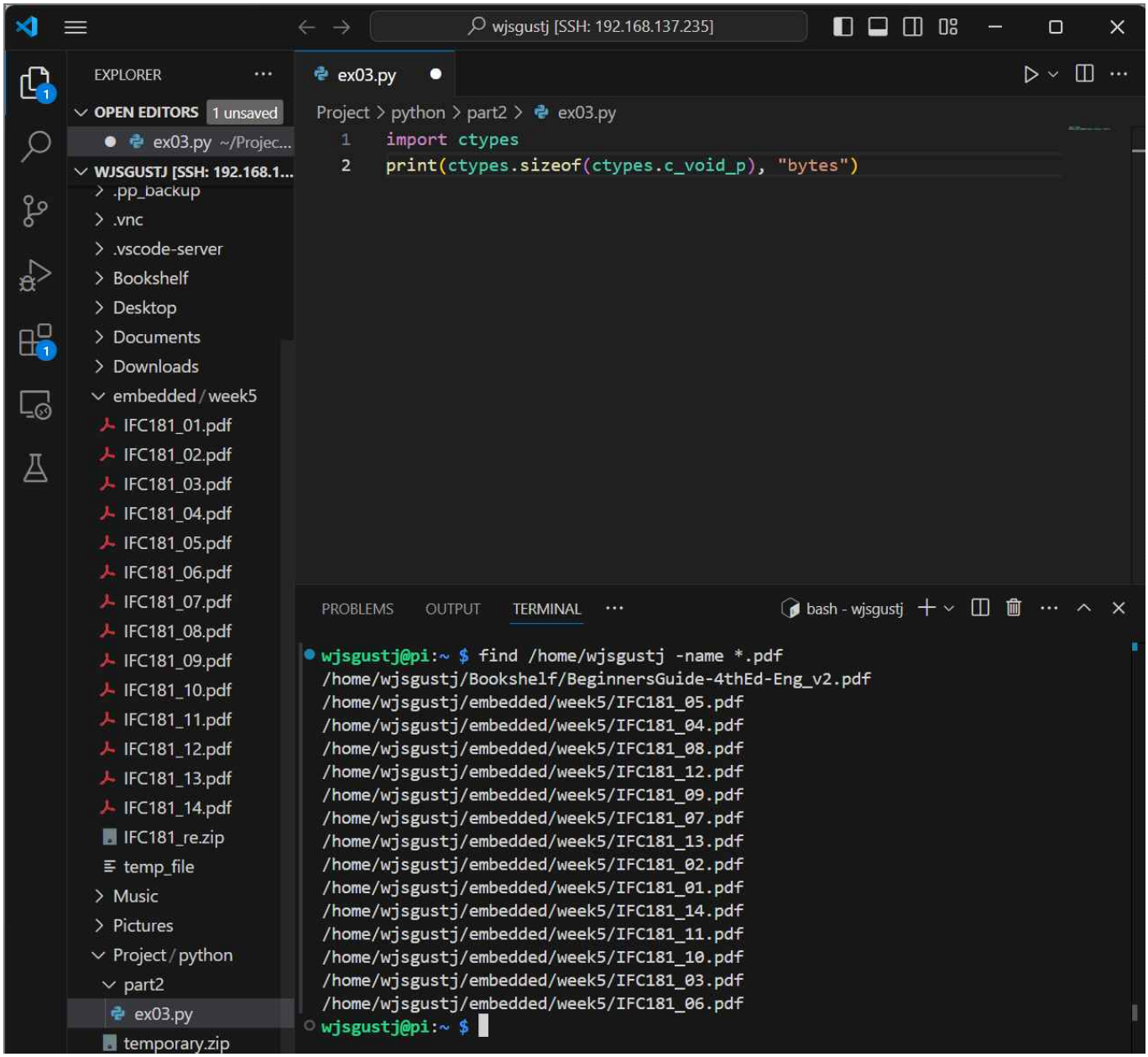
PROBLEMS
OUTPUT
TERMINAL
Python - wjsgustj
wjsgustj@pi:~ $ find -name *.pdf
./Bookshelf/BeginnersGuide-4thEd-Eng_v2.pdf
./embedded/week5/IFC181_05.pdf
./embedded/week5/IFC181_04.pdf
./embedded/week5/IFC181_08.pdf
./embedded/week5/IFC181_12.pdf
./embedded/week5/IFC181_09.pdf
./embedded/week5/IFC181_07.pdf
./embedded/week5/IFC181_13.pdf
./embedded/week5/IFC181_02.pdf
./embedded/week5/IFC181_01.pdf
./embedded/week5/IFC181_14.pdf
./embedded/week5/IFC181_11.pdf
./embedded/week5/IFC181_10.pdf
./embedded/week5/IFC181_03.pdf
./embedded/week5/IFC181_06.pdf
wjsgustj@pi:~ $


wjsgustj [SSH: 192.168.137.235]
EXPLORER
OPEN EDITORS 1 unsaved
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WJSGUSTJ [SSH: 192.168.1...
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.vscode-server
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IFC181_03.pdf
IFC181_04.pdf
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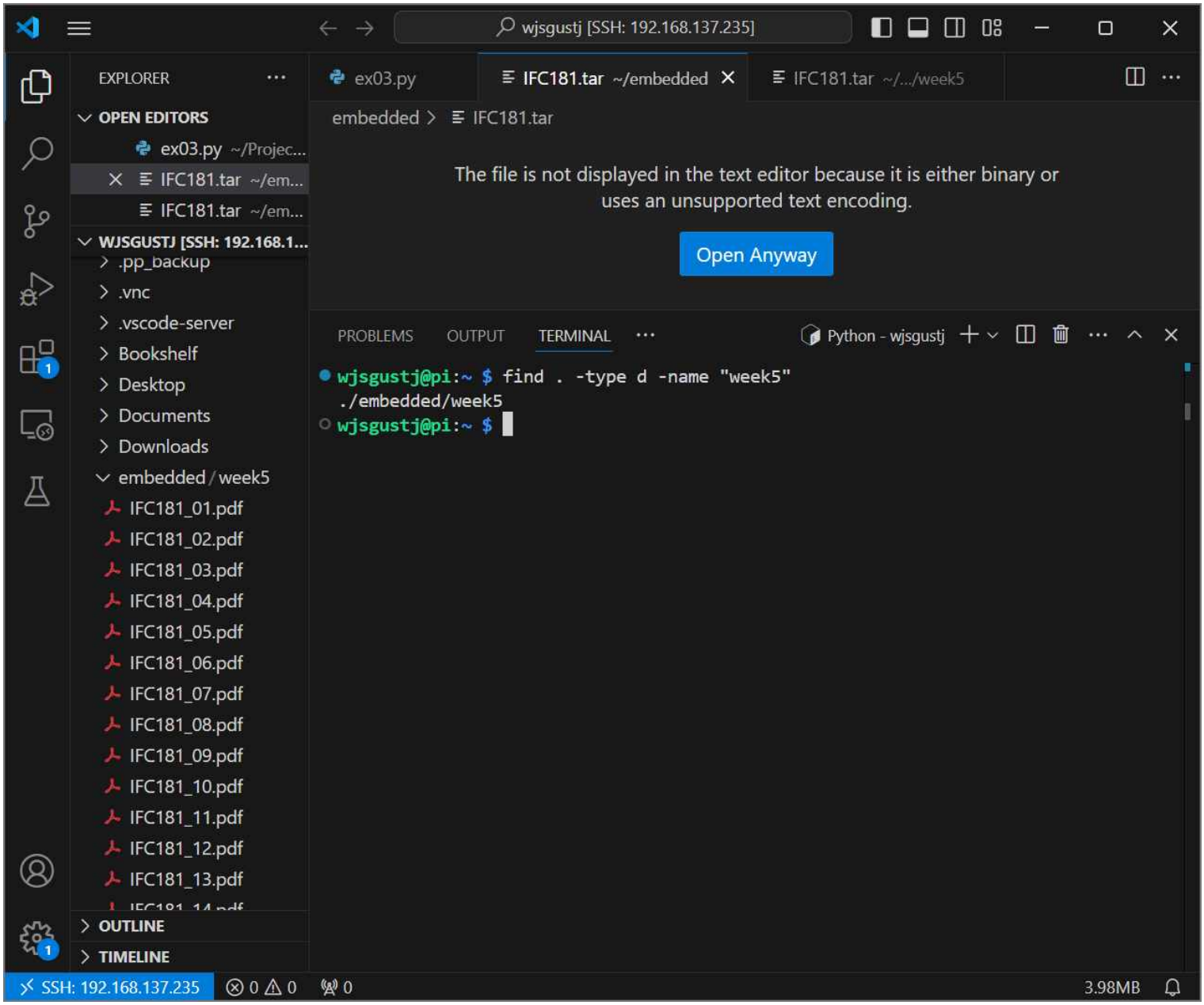
IFC181_10.pdf
IFC181_11.pdf
IFC181_12.pdf
IFC181_13.pdf
IFC181_14.pdf
IFC181_re.zip
temp_file
Music
Pictures
Project / python
part2
ex03.py
temporary.zip
ex03.py
Project > python > part2 > ex03.py
1 import ctypes
2 print(ctypes.sizeof(ctypes.c_void_p), "bytes")
PROBLEMS
OUTPUT
TERMINAL
bash - wjsgustj
wjsgustj@pi:~ $ find /home/wjsgustj -name *.pdf
/home/wjsgustj/Bookshelf/BeginnersGuide-4thEd-Eng_v2.pdf
/home/wjsgustj/embedded/week5/IFC181_05.pdf
/home/wjsgustj/embedded/week5/IFC181_04.pdf
/home/wjsgustj/embedded/week5/IFC181_08.pdf
/home/wjsgustj/embedded/week5/IFC181_12.pdf
/home/wjsgustj/embedded/week5/IFC181_09.pdf
/home/wjsgustj/embedded/week5/IFC181_07.pdf
/home/wjsgustj/embedded/week5/IFC181_13.pdf
/home/wjsgustj/embedded/week5/IFC181_02.pdf
/home/wjsgustj/embedded/week5/IFC181_01.pdf
/home/wjsgustj/embedded/week5/IFC181_14.pdf
/home/wjsgustj/embedded/week5/IFC181_11.pdf
/home/wjsgustj/embedded/week5/IFC181_10.pdf
/home/wjsgustj/embedded/week5/IFC181_03.pdf
/home/wjsgustj/embedded/week5/IFC181_06.pdf
wjsgustj@pi:~ $

1. innosm@innosm:~ $find . -name *.pdf
2. innosm@innosm:~ $find ./ -name *.pdf
3. innosm@innosm:~ $find -name *.pdf
4. innosm@innosm:~ $find ~ -name *.pdf
5. innosm@innosm:~ $find /home/innosm –name *.pdf

번호	현재 폴더	경로 명령어	명령어 설명	검색 대상
1	Home directory	.	현재 디렉토리	Home directory 로 모두 동일
2	Home directory	./	현재 디렉토리 하 경로를 지정하지 않음	
3	Home directory		경로를 지정하지 않았으므로 현재 디렉토리	
4	Home directory	~	Home directory	
5	Home directory	/home/wjsgustj	Home directory를 직접 주소 입력	

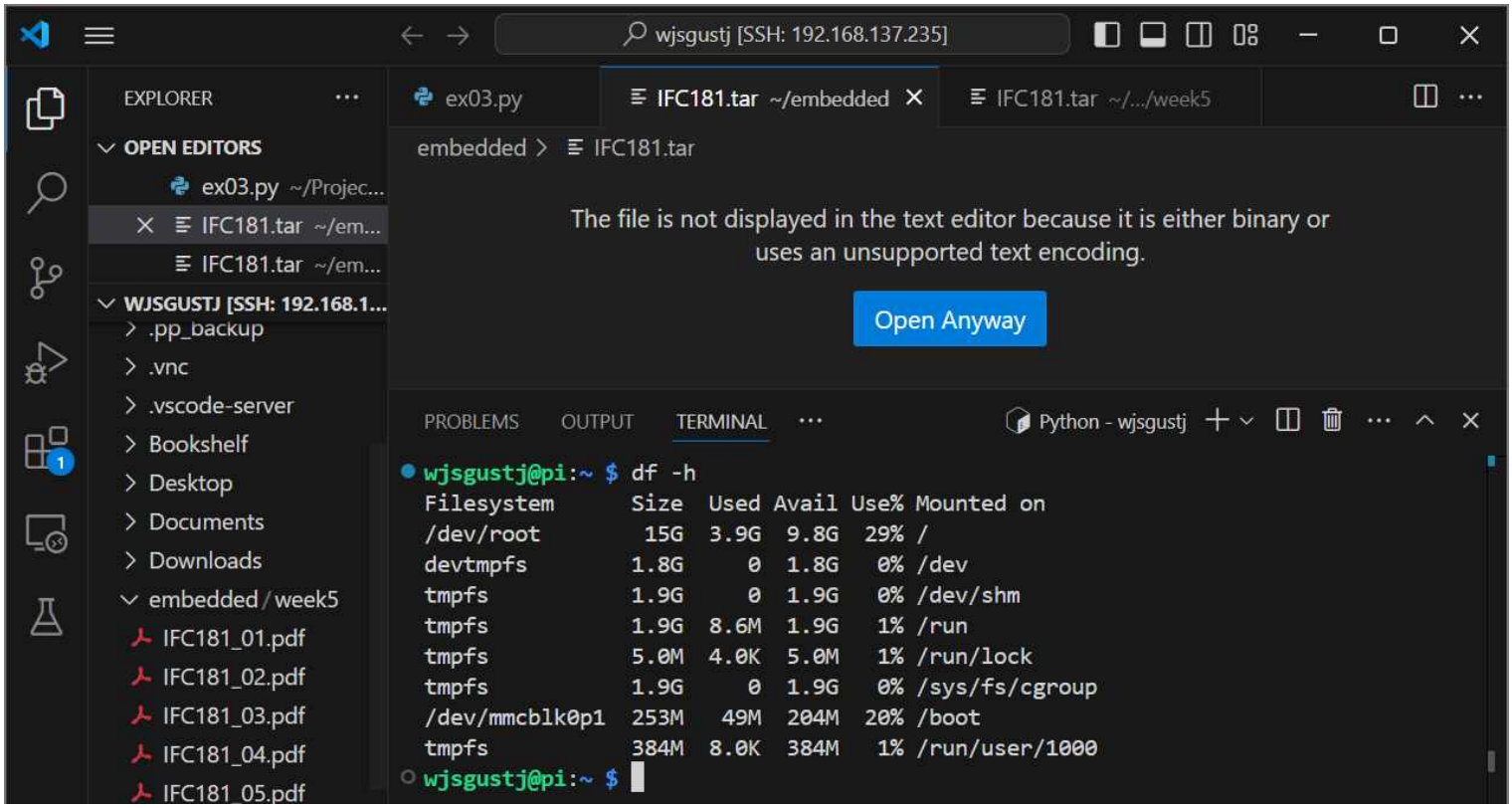
8. ~ (home) 디렉토리로 이동하고, week5 폴더가 있는지 검색하려고 한다.
적절한 명령을 수행하여 week5 폴더를 검색하고 결과를 보이시오.



<파일 용량 확인>

9. 아래 명령을 수행한 결과를 보이시오.

df -h

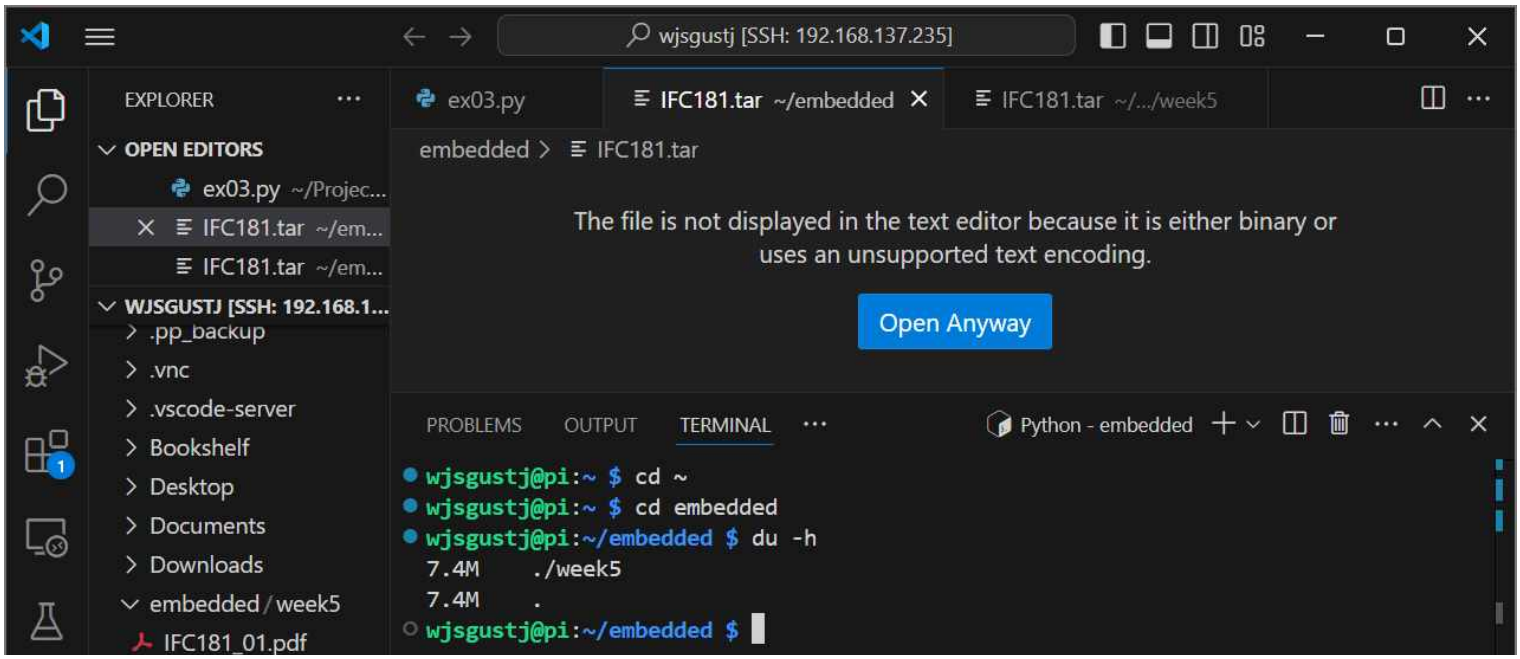


10. 아래 명령을 수행한 결과를 보이시오.

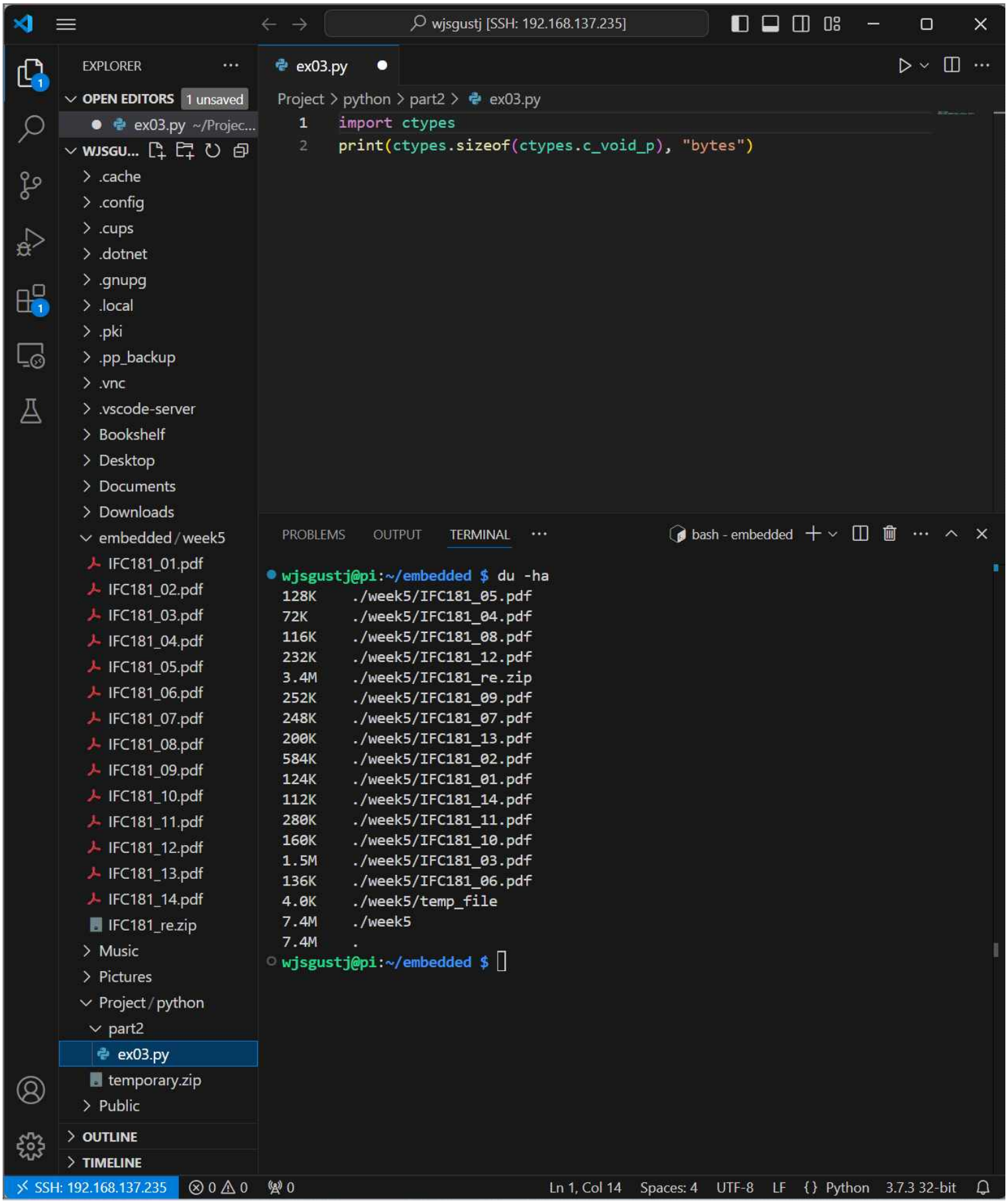
cd ~

cd embedded

du -h

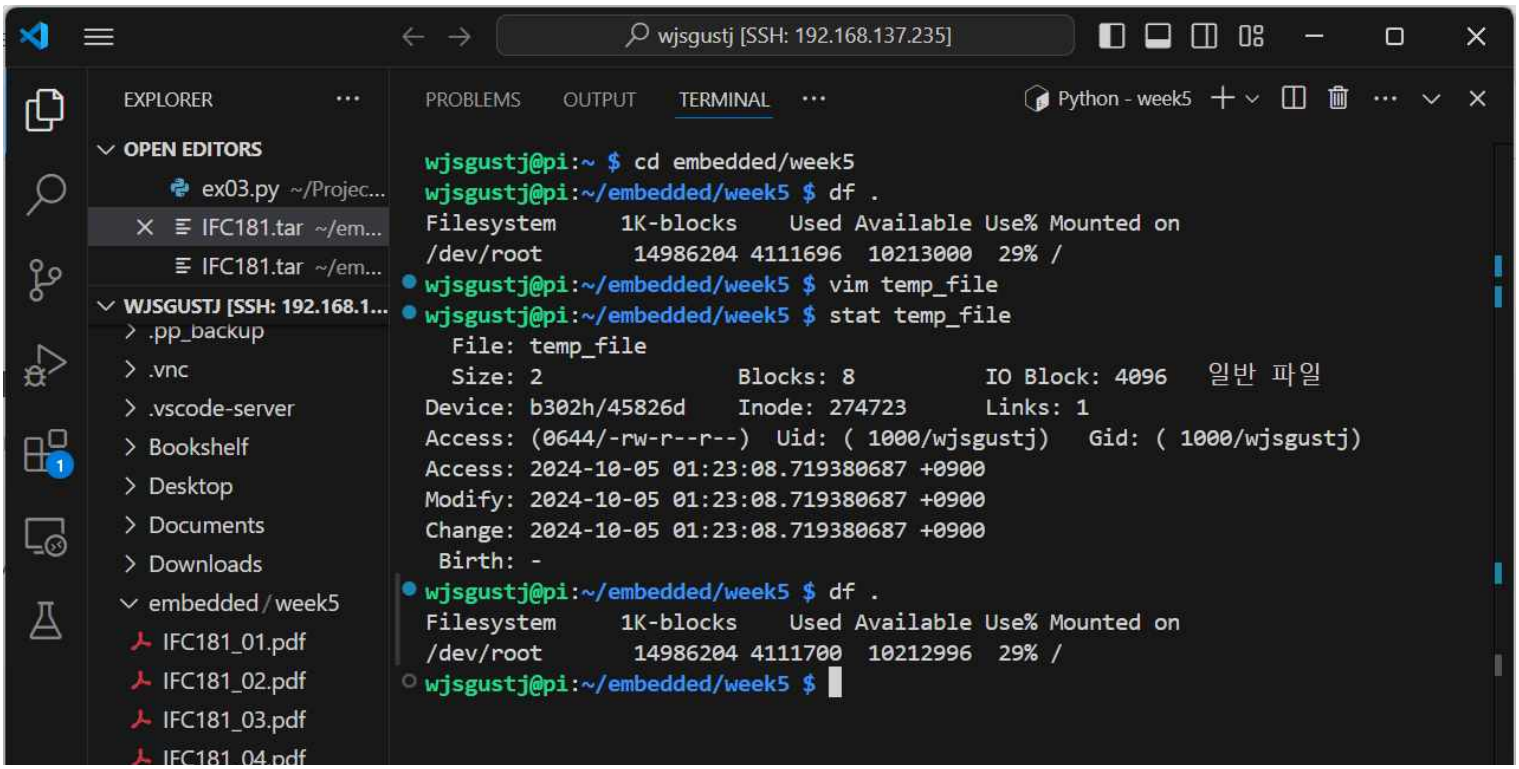


11. 10번에서 현재 embedded 폴더의 총 사용량은(하위폴더 포함, 단위 표시)?



12. cd embedded/week5 를 수행하여 위치를 이동하고, 아래 명령을 차례로 수행하시오

1) df .
2) 이 폴더에 temp_file 파일 생성하고 파일에 1을 기록
3) stat temp_file 명령을 통해 파일의 크기를 확인
4) df .
1)과 4)에서 줄어든 용량과 3)에서 확인한 용량이 다르다면 그 이유는?



vim 명령어를 통해 생성한 temp_file은 2 byte 크기의 파일이나, Linux는 파일을 저장하기 위해 파티션을 block으로 나눔. 최소 block의 크기가 4K이므로, temp_file은 4K byte 크기를 차지함. 따라서 사용 가능한 용량은 4K byte가 감소했으나, 파일 크기는 2byte임.

<cpu architecture>
13. 현재 사용하는 라즈비언 OS가 몇비트 시스템인지 확인하고 결과를 첨부하시오.