

2. Write a Pandas program to display the ID for those employees who did two or more jobs in the past.

Aim

The aim of this program is to display the IDs of employees who have held two or more different jobs in the past using Pandas.

Algorithm

1. **Import Pandas:** Import the Pandas library to handle the data in a DataFrame.
2. **Create DataFrame:** Create a DataFrame using the provided data.
3. **Group by EMPLOYEE_ID:** Group the data by 'EMPLOYEE_ID' to count the number of distinct jobs each employee had.
4. **Filter Employees:** Filter employees who had two or more jobs by checking the count of jobs.
5. **Print Output:** Print the IDs of employees who had two or more jobs.

Code

```
import pandas as pd

data = {

'EMPLOYEE_ID': [102, 101, 101, 201, 114, 122, 200, 176, 176, 200],

'START_DATE': ['2001-01-13', '1997-09-21', '2001-10-28', '2004-02-17', '2006-03-24', '2007-01-01', '1995-09-17', '2006-03-24', '2007-01-01', '2002-07-01'],

'END_DATE': ['2006-07-24', '2001-10-27', '2005-03-15', '2007-12-19', '2007-12-31', '2007-12-31', '2001-06-17', '2006-12-31', '2007-12-31', '2006-12-31'],

'JOB_ID': ['IT_PROG', 'AC_ACCOUNT', 'AC_MGR', 'MK_REP', 'ST_CLERK', 'ST_CLERK', 'AD_ASST', 'SA_REP', 'SA_MAN', 'AC_ACCOUNT'],

'DEPARTMENT_ID': [60, 110, 110, 20, 50, 50, 90, 80, 80, 90]

}

df = pd.DataFrame(data)

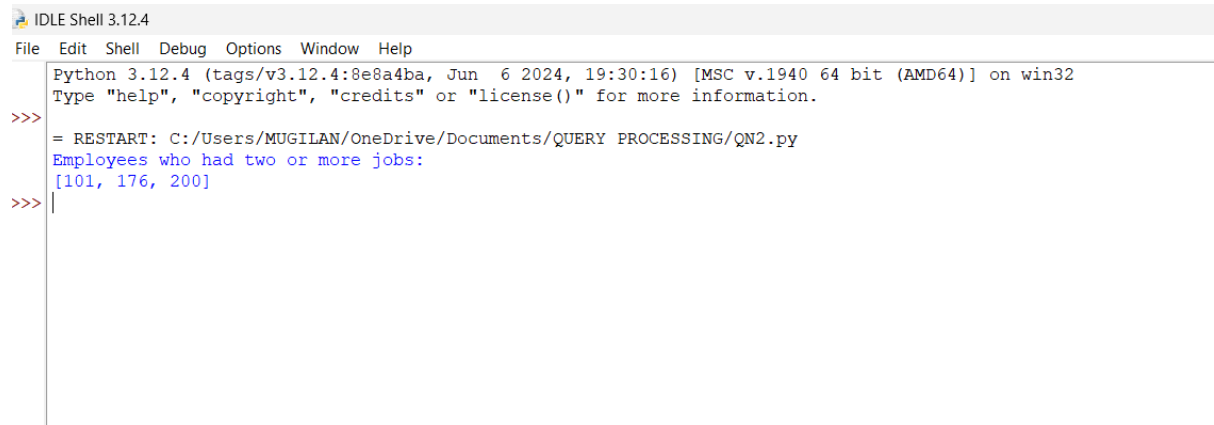
job_counts = df.groupby('EMPLOYEE_ID')['JOB_ID'].nunique()

employees_with_multiple_jobs = job_counts[job_counts >= 2].index

print("Employees who had two or more jobs:")

print(employees_with_multiple_jobs.tolist())
```

OUTPUT

A screenshot of the IDLE Shell 3.12.4 interface. The window title is 'IDLE Shell 3.12.4'. The menu bar includes 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The main text area shows the following content: 'Python 3.12.4 (tags/v3.12.4:8e8a4ba, Jun 6 2024, 19:30:16) [MSC v.1940 64 bit (AMD64)] on win32' followed by 'Type "help", "copyright", "credits" or "license()" for more information.' Below this, there are three lines of input and output: a prompt '>>>' followed by a blank line, a line starting with '=' indicating a restart of the shell, and a line of output 'Employees who had two or more jobs:' followed by a list '[101, 176, 200]'. The prompt '>>>' is shown again on the next line.

```
IDLE Shell 3.12.4
File Edit Shell Debug Options Window Help
Python 3.12.4 (tags/v3.12.4:8e8a4ba, Jun 6 2024, 19:30:16) [MSC v.1940 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/MUGILAN/OneDrive/Documents/QUERY PROCESSING/QN2.py
Employees who had two or more jobs:
[101, 176, 200]
>>>|
```

RESULT

The program successfully identifies and prints the IDs of employees who had two or more different jobs in the past.