1.Write a Pandas program to select distinct department id from employees file.

Aim

The aim of this program is to select distinct department IDs from an employees dataset 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. **Select Distinct Department IDs**: Use the `unique` method on the 'DEPARTMENT_ID' column to obtain distinct department IDs.
4. **Print Output**: Print the array of distinct department IDs.
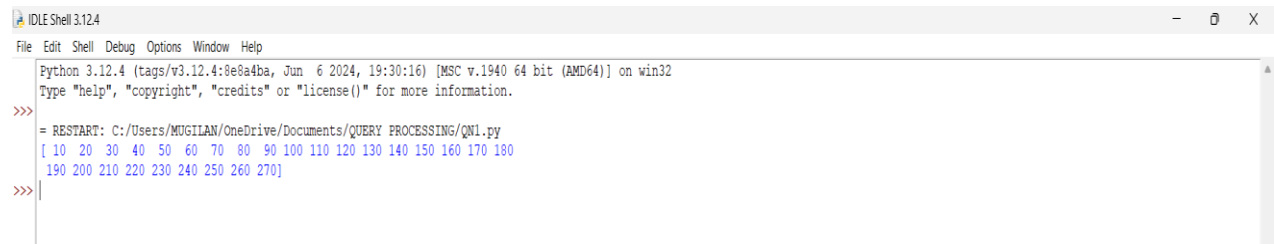
CODE

```python
import pandas as pd

data = {

'DEPARTMENT_ID': [10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270],

'DEPARTMENT_NAME': ['Administration', 'Marketing', 'Purchasing', 'Human Resources', 'Shipping', 'IT', 'Public Relations', 'Sales', 'Executive', 'Finance', 'Accounting', 'Treasury', 'Corporate Tax', 'Control And Credit', 'Shareholder Services', 'Benefits', 'Manufacturing', 'Construction', 'Contracting', 'Operations', 'IT Support', 'NOC', 'IT Helpdesk', 'Government Sales', 'Retail Sales', 'Recruiting', 'Payroll'],

'MANAGER_ID': [200, 201, 114, 203, 121, 103, 204, 145, 100, 108, 205, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0],

'LOCATION_ID': [1700, 1800, 1700, 2400, 1500, 1400, 2700, 2500, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700, 1700]

}

df = pd.DataFrame(data)

distinct_department_ids = df['DEPARTMENT_ID'].unique()

print(distinct_department_ids)
```

OUTPUT


```
IDLE Shell 3.12.4                                                                    —  ☐  X

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/QN1.py
    [ 10  20  30  40  50  60  70  80  90 100 110 120 130 140 150 160 170 180
     190 200 210 220 230 240 250 260 270]
>>>
```

RESULT

The program successfully selects and prints the distinct department IDs from the employees dataset.