CYCLE 7

PROGRAM 1

Aim : Write a Python program to read a file line by line and store it into a list.

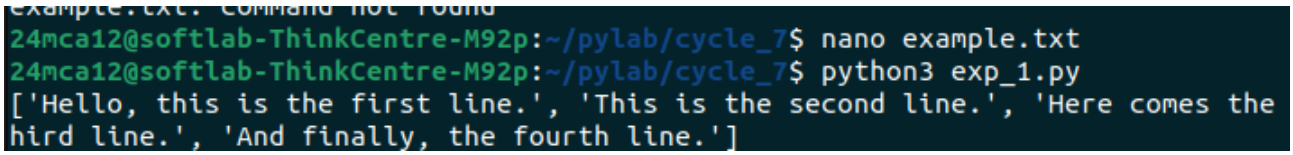
Source code :

```
def read_file_into_list(filename):
    with open(filename, 'r') as file:
        lines = file.readlines()
    return [line.strip() for line in lines]

filename = "example.txt"
lines_list = read_file_into_list(filename)
print(lines_list)
```

example.txt

```
Hello, this is the first line.
This is the second line.
Here comes the third line.
And finally, the fourth line.
```

Output :



PROGRAM 2

Aim : Python program to copy odd lines of one file to other.

Source code :

```
def copy_odd_lines(source_file, destination_file):
    with open(source_file, 'r') as src:
        lines = src.readlines()

    with open(destination_file, 'w') as dest:
        for i in range(0, len(lines), 2):
            dest.write(lines[i])

source = "sample.txt"
destination = "odd_lines.txt"
copy_odd_lines(source, destination)
print("Odd lines have been copied.")
```

sample.txt

```
Hello, this is the first line.
This is the second line.
Here comes the third line.
And finally, the fourth line.
```

Output

```
24mca12@softlab-ThinkCentre-M92p:~/pylab/cycle_7$ nano exp_2.py
24mca12@softlab-ThinkCentre-M92p:~/pylab/cycle_7$ python3 exp_2.py
Odd lines have been copied.
```

```
  GNU nano 4.8                          odd_lines.txt
]Hello, this is the first line.
Here comes the third line.
```

PROGRAM 3

Aim : Write a Python program to read each row from a given csv file and print a list of strings.

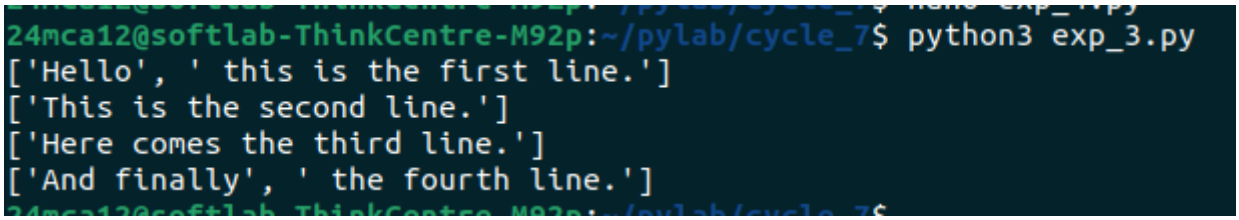
Source code :

```
import csv

def read_csv_file(filename):
    with open(filename, mode='r', newline='') as file:
        reader = csv.reader(file)
        for row in reader:
            print(row)

csv_filename = "example.csv"
read_csv_file(csv_filename)
```

example.csv

```
Hello, this is the first line.
This is the second line.
Here comes the third line.
And finally, the fourth line.
```

Output :



PROGRAM 4

Aim : Write a Python program to read specific columns of a given CSV file and print the content of the columns.

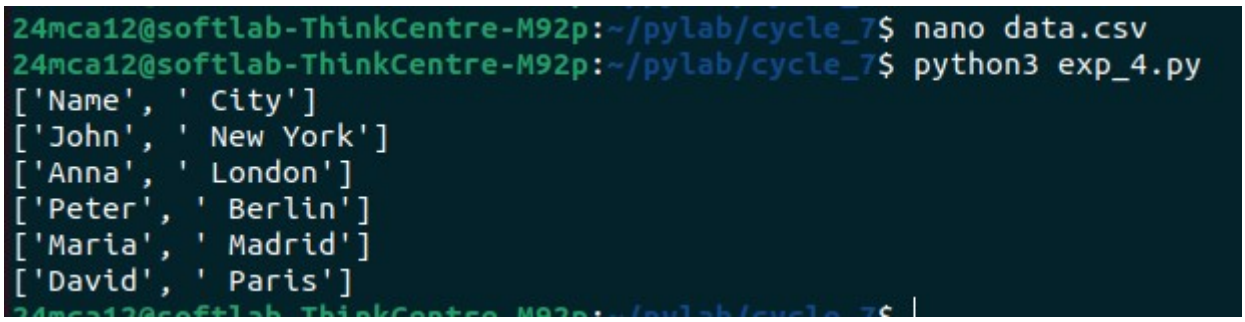
Source code :

```
import csv

def read_specific_columns(filename, columns):
    with open(filename, mode='r', newline='') as file:
        reader = csv.reader(file)
        for row in reader:
            selected_columns = [row[i] for i in columns]
            print(selected_columns)

csv_filename = "data.csv"
columns_to_read = [0, 2]
read_specific_columns(csv_filename, columns_to_read)
```

data.csv

```
Name, Age, City
John, 28, New York
Anna, 22, London
Peter, 34, Berlin
Maria, 25, Madrid
David, 30, Paris
```

Output :



PROGRAM 5

Aim : Write a Python program to write a Python dictionary to a csv file. After writing the CSV file, read the CSV file and display the content.

Source code :

```
import csv

def write_dict_to_csv(filename, data):
    with open(filename, mode='w', newline='') as file:
        writer = csv.DictWriter(file, fieldnames=data[0].keys())
        writer.writeheader()
        writer.writerows(data)

def read_csv_file(filename):
    with open(filename, mode='r', newline='') as file:
        reader = csv.DictReader(file)
        for row in reader:
            print(row)

dict_data = [
    {'Name': 'John', 'Age': 28, 'City': 'New York'},
    {'Name': 'Anna', 'Age': 22, 'City': 'London'},
    {'Name': 'Peter', 'Age': 34, 'City': 'Berlin'}
]

csv_filename = "output.csv"
write_dict_to_csv(csv_filename, dict_data)
print("CSV file content:")
read_csv_file(csv_filename)
```

Output :

```
24mca12@softlab-ThinkCentre-M92p:~/pylab/cycle_7$ nano exp_5.py
24mca12@softlab-ThinkCentre-M92p:~/pylab/cycle_7$ python3 exp_5.py
CSV file content:
{'Name': 'John', 'Age': '28', 'City': 'New York'}
{'Name': 'Anna', 'Age': '22', 'City': 'London'}
{'Name': 'Peter', 'Age': '34', 'City': 'Berlin'}
```