LAB CYCLE 7

PROGRAM NO:1

AIM Write a Python program to read a file line by line and store it into a list.
PROGRAM CODE

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

filename = 'example.txt'
lines_list = read_file_to_list(filename)

print(lines_list)
```

example.txt
Hello, world!
This is a test.
Python is fun.

OUTPUT

```
24mca21@softlab-ThinkCentre-M92p:~/pylab$ python3 cy7exp1.py
['Hello, world!', 'This is a test.', 'Python is fun.', '']
24mca21@softlab-ThinkCentre-M92p:~/pylab$
```

PROGRAM NO:2

AIM Python program to copy odd lines of one file to other
PROGRAM CODE

cy7exp2.py

```
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

```
24mca21@softlab-ThinkCentre-M92p:~/pylab$ python3 cy7exp2.py
Odd lines have been copied.
24mca21@softlab-ThinkCentre-M92p:~/pylab$
```

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

PROGRAM NO:3

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

```
24mca21@softlab-ThinkCentre-M92p:~/pylab$ python3 cy7exp3.py
['Hello', ' this is the first line.']
['This is the second line.']
['Here comes the third line.']
['And finally', ' the fourth line.']
24mca21@softlab-ThinkCentre-M92p:~/pylab$ _
```

PROGRAM NO:4

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

PROGRAM CODE

cy7exp4.py

```
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 NO: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.

PROGRAM 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