PROGRAM-1

Program to count the number of words starting with Letter 't' in a text file Book.txt"

```
F = open("Book.txt", "r")

C = 0

D = F.read()

W = D.split()

for I in W:

if (I[0] == 't'):

C = C + 1

print("Total Number of Words starting with letter t are", C)

F.close()
```

CONTENTS OF Book.txt

Hi there!!

My name is tina thareja

I teach information technology at Tagore baalniketanschool, karnal

OUTPUT

Total Number of Words starting with letter t are 5

PROGRAM-2

"Write a Function to Copy the words starting with capital letters from Book.txt to Temp.txt"

```
def COPYWORDS():

F = open("Book.txt", "r")

F1 = open("Temp.txt", "w")

D = F.read()

W = D.split()

for i in W:

if (i[0].isupper()):
```

```
F1.write(i + "\n") # Added newline for better readability in Temp.txt

print("Copied Successfully")

F.close()

F1.close()

# Contents of book.txt

# I worship LORD SHIVA.

# I go to Shiv Mandir with my father every Monday.

# We all should worship God.

COPYWORDS()

# Output: Copied Successfully

# PROGRAM-3

# "Write a function to count Capital Letters, Small letters, digits and Spaces from a text file Book.txt"

def COUNT():

F = open("Book.txt", "r")

CC = 0 # counting capital letters

CS = 0 # counting small letters

CD = 0 # counting digits

CSP = 0 # counting spaces

D = F.read()

for i in D:

if (i.isupper()):

CC = CC + 1

elif (i.islower()):

CS = CS + 1

elif (i.isdigit()):

CD = CD + 1
```

```
elif (i.isspace()):
CSP = CSP + 1
print("Total Capital Letters:", CC)
print("Total Small Letters:", CS)
print("Total Digits:", CD)
print("Total Spaces:", CSP)
F.close()
# Contents of book.txt
# Hello Everyone
# My name is VARCHASVI
# I am currently studying in class 12
# IN WHICH CLASS DO YOU READ?
COUNT()
# OUTPUT
# Total Capital Letters : 34
# Total Small Letters : 44
# Total Digits : 2
# Total Spaces: 20
# PROGRAM-4
# #Write a function to append some records of student containing (Rollno, Name, Age, Percentage) in a binary file Student.dat
import pickle
def Append():
F = open("Student.dat", "ab")
D = {}
Ans = 'y'
while Ans in 'yY':
```

```
D["Rollno"] = int(input("Enter Roll Number"))

D["Name"] = input("Enter Name of Student")

D["Age"] = int(input("Enter Age of Student"))

D["Percentage"] = float(input("Enter Percentage"))

pickle.dump(D, F)

print("One Record Added")

Ans = input("Do you want to add more records?")

F.close()

Append()

# OUTPUT

# Enter Roll Number54

# Enter Name of Studentgritvik

# Enter Age of Student30

# Enter Percentage92

# One Record Added

# Do you want to add more records?

# PROGRAM-5

# "Write a function to append some records of teacher containing (TNO, TNAME, SUBJECT) in a binary file Teacher.dat.

# Also write one more function to search and display the details of all the teachers teaching Hindi'"

import pickle

def APPEND():

F = open("Teacher.dat", "ab")

D = {}

Ans = 'y'

while Ans in 'yY':
```

```
D["TNO"] = int(input("Enter Teacher Number"))

D["TNAME"] = input("Enter Name of Teacher")

D["SUBJECT"] = input("Enter Subject")

pickle.dump(D, F)

print("One Record Added")

Ans = input("Do you want to add more records?")

F.close()

def SEARCH():

F = open("Teacher.dat", "rb")

try:

while True:

D = pickle.load(F)

if (D["SUBJECT"] == "HINDI"): # Changed to "HINDI" to match case in provided output

print(D)

except EOFError:

F.close()

APPEND()

SEARCH()

# OUTPUT

# OUTPUT (i)

# Enter Teacher Number1230

# Enter Name of TeacherNIDHI

# Enter SubjectECONOMICS

# One Record Added

# Do you want to add more records?Y

# Enter Teacher Number1097
```

Enter Name of TeacherSUPRIYA

Enter SubjectHINDI

One Record Added

Do you want to add more records?Y

Enter Teacher Number5609

Enter Name of TeacherHEENA

Enter SubjectHINDI

One Record Added

OUTPUT (ii)

{'TNO': 1097, 'TNAME': 'SUPRIYA', 'SUBJECT': 'HINDI'} # Corrected TNO from 7654 to 1097 based on input

{'TNO': 5609, 'TNAME': 'HEENA', 'SUBJECT': 'HINDI'} # Corrected TNO from 6789 to 5609 based on input

PROGRAM-6

"Write a function to append some records of teacher containing (TNO, TNAME, SUBJECT) in a binary file Teacher.dat.

Also write one more function to copy the details of a teacher teaching "Math" from Teacher.dat to Maths.dat"

```
import pickle

def APPEND():

F = open("Teacher.dat", "ab")

D = {}

Ans = 'y'

while Ans in 'yY':

D["TNO"] = int(input("Enter Teacher Number"))

D["TNAME"] = input("Enter Name of Teacher")

D["SUBJECT"] = input("Enter Subject")

pickle.dump(D, F)
```

```
print("One Record Added")
Ans = input("Do you want to add more records?")
F.close()
def COPYDATA():
F = open("Teacher.dat", "rb")
F1 = open("Maths.dat", "ab")
try:
while True:
D = pickle.load(F)
if (D["SUBJECT"] == "Math"):
pickle.dump(D, F1)
print("Record Copied") # Print inside the if block to match output
except EOFError:
F.close()
F1.close()
APPEND()
COPYDATA()
# OUTPUT
# Enter Teacher Number120
# Enter Name of TeacherVinay
# Enter SubjectMath
# One Record Added
# Do you want to add more records?y
# Enter Teacher Number121
# Enter Name of TeacherVarchasvi
# Enter Subjecthindi
```

One Record Added

Do you want to add more records?y

Enter Teacher Number122

Enter Name of TeacherSonia

Enter SubjectEnglish

One Record Added

Do you want to add more records?n

Record Copied

PROGRAM-6

"Write a function to append some records of teacher containing (TNO, TNAME, SUBJECT) in a binary file Teacher.dat.

Also write one more function to copy the details of a teacher teaching "Math" from Teacher.dat to Maths.dat"

```
import pickle

def APPEND():

F = open("Teacher.dat", "ab")

D = {}

Ans = 'y'

while Ans in 'yY':

D["TNO"] = int(input("Enter Teacher Number"))

D["TNAME"] = input("Enter Name of Teacher")

D["SUBJECT"] = input("Enter Subject")

pickle.dump(D, F)

print("One Record Added")

Ans = input("Do you want to add more records?")

F.close()

def COPYDATA():
```

```
F = open("Teacher.dat", "rb")
F1 = open("Maths.dat", "ab")
try:
while True:
D = pickle.load(F)
if (D["SUBJECT"] == "Math"):
pickle.dump(D, F1)
print("Record Copied") # Print inside the if block to match output
except EOFError:
F.close()
F1.close()
APPEND()
COPYDATA()
# OUTPUT
# Enter Teacher Number120
# Enter Name of TeacherVinay
# Enter SubjectMath
# One Record Added
# Do you want to add more records?y
# Enter Teacher Number121
# Enter Name of TeacherVarchasvi
# Enter Subjecthindi
# One Record Added
# Do you want to add more records?y
# Enter Teacher Number122
# Enter Name of TeacherSonia
```

```
# Enter SubjectEnglish

# One Record Added

# Do you want to add more records?n

# Record Copied

# PROGRAM-7 (reconstructed based on provided snippets)

import pickle

def APPEND():

F = open("Teacher.dat", "ab")

D = {}

Ans = 'y'

while Ans in 'yY':

D["TNO"] = int(input("Enter Teacher Number"))

D["TNAME"] = input("Enter Name of Teacher")

D["SUBJECT"] = input("Enter Subject")

pickle.dump(D, F)

print("One Record Added")

Ans = input("Do you want to add more records?")

F.close()

def UPDATE():

F = open("Teacher.dat", "rb+") # Open in read-write binary mode

found = False

records = []

TNO_to_update = int(input("Enter Teacher number to update: ")) # Assuming
user input for which record to update

try:

while True:

pos = F.tell() # Get current file position
```

```
D = pickle.load(F)
if D['TNO'] == TNO_to_update:
print("Record Found") [cite: 245, 286]
print(D) [cite: 247, 288]
print("Enter New Values") [cite: 248, 289]
D["TNO"] = int(input("Enter Teacher Number")) [cite: 249, 290]
D["TNAME"] = input("Enter Name of Teacher") [cite: 250, 291]
D["SUBJECT"] = input("Enter Subject") [cite: 251, 292]
found = True
records.append(D)
except EOFError:
pass # End of file reached
if found:
F.seek(0) # Go to the beginning of the file
F.truncate(0) # Clear the file content
for rec in records:
pickle.dump(rec, F)
print("Record Updated Succcessfully") [cite: 252, 293]
else:
print("Record not found.")
F.close()
# The APPEND function needs to be called first to populate Teacher.dat
# with some data before UPDATE can find and modify records.
# Example calls and output simulation:
APPEND() # This will run the appending process as per the output given in the problem
UPDATE() # This will then run the update process
```

Original OUTPUT (from problem description for context):

Enter Teacher Number1230

Enter Name of TeacherNIDHI

Enter SubjectECONOMICS

One Record Added

Do you want to add more records?Y

Enter Teacher Number1111

Enter Name of TeacherSONIA

Enter SubjectENGLISH

One Record Added

Do you want to add more records?Y

Enter Teacher Number1345

Enter Name of TeacherDINESH

Enter SubjectMATHS

One Record Added

Do you want to add more records?N

Record Found

{'TNO': 1111, 'TNAME': 'SONIA', 'SUBJECT': 'ENGLISH'}

Enter New Values

Enter Teacher Number9800

Enter Name of TeacherSONIA

Enter SubjectECONOMICS

Record Updated Succcessfully

PROGRAM-8

write a function to write the details of student (Rollno, Name and age) in a csv file stud.csv

import csv

```
def ADD():
Ans = "y"
F = open("stud.csv", "w", newline="")
W = csv.writer(F)
W.writerow(["Rollno", "Name", "Age"])
while(Ans in "yY"):
R = int(input("Enter Rollno"))
N = input("Enter Name")
A = int(input("Enter Age"))
L = [R, N, A]
W.writerow(L)
Ans = input("Do you want to add more") # Corrected "mre" to "more"
F.close()
ADD()
# OUTPUT
# Enter Rollno11230
# Enter NameLAVANYA
# Enter Age17
# Do you want to add moreY
# Enter Rollno11231
# Enter NameLAKSHITA
# Enter Age16
# Do you want to add moreY
# Enter Rollno11345
# Enter NameLAVISHA
# Enter Age34
```

Do you want to add moreY

Enter Rollno12356

Enter NameVANSHIKA

Enter Age23

Do you want to add moreN

PROGRAM-9

Write a Program to read and display the details of stud.csv file containing Rno, Name and Age of Students

```
import csv

def DISPLAY():

F = open("stud.csv", "r")

R = csv.reader(F)

for i in R:

print(i)

F.close()

DISPLAY()
```

OUTPUT

CONTENTS OF stud.csv

Rollno, Name, Age

11230, LAVANYA, 17

11231, LAKSHITA, 16

11345, LAVISHA, 34

12356,VANSHIKA, 23

OUTPUT

['Rollno', 'Name', 'Age']

['11230', 'LAVANYA', '17']

['11231', 'LAKSHITA', '16']

```
# ['11345', 'LAVISHA', '34']

# ['12356', 'VANSHIKA', '23']

# PROGRAM-10

# Write a Program to read and display the details of students having age less than 20 from

# stud.csv file containing Rno, Name and Age of Students

import csv

def DISPLAY():

k = 0

F = open("stud.csv", "r")

R = csv.reader(F)

for i in R:

if (k >= 1): # Skip the header row

if (int(i[2]) < 20):

print(i)

k = k + 1

F.close()

DISPLAY()

# OUTPUT

# CONTENTS OF stud.csv

# 11230, LAVANYA, 17

# 11231, LAKSHITA, 16

# 11345, LAVISHA,34

# 12356,VANSHIKA, 23

# OUTPUT

# ['11230', 'LAVANYA', '17']

# ['11231', 'LAKSHITA', '16']
```