
CBSE 2024 COMPARTMENT

28. (a) Write a method/function `COUNTWORDS()` in Python to read contents from a text file `DECODE.TXT`, to count and return the occurrence of those words, which are having 5 or more characters. 3

OR

- (b) Write a method/function `COUNTLINES()` in Python to read lines from a text file `CONTENT.TXT`, and display those lines, which have @ anywhere in the line. 3

For example :

If the content of the file is :

Had an amazing time at the concert last night with
@MusicLoversCrew.

Excited to announce the launch of our new website!

G20 @ India

The method/function should display

Had an amazing time at the concert last night with
@MusicLoversCrew

G20 @ India

32. Mr. Mahesh is a Python Programmer working in a school. He has to maintain the records of the sports students. He has created a csv file named `sports.csv`, to store the details. The structure of `sports.csv` is :

`[sport_id, competition, prize_won]`

where

`sport_id`, is Sport id (integer)

`competition` is competition name (string)

`prize_won` is ("Gold", "Silver", "Bronze")

Mr. Mahesh wants to write the following user-defined functions :

`Add_detail()`: to accept the detail of a student and add to a csv file, "`sports.csv`".

`Count_Medal()`: to display the name of competitions in which students have won "Gold" medal.

Help him in writing the code of both the functions.

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34. (a) (i) What is the main purpose of `seek()` and `tell()` method ?
(ii) Consider a binary file, `Cinema.dat` containing information in the following structure :
`[Mno, Mname, Mtype]`
Write a function, `search_copy()`, that reads the content from the file `Cinema.dat` and copies all the details of the "Comedy" movie type to file named `movie.dat`. 5

OR

- (b) (i) Give one difference between `write()` and `writeline()` function in text file.
(ii) A Binary file, "`Items.dat`" has the following structure :
`[Icode, Description, Price]`
Where
`Icode` - Item code
`Description` - Detail of item
`Price` - Price of item
Write a function `Add_data()`, that takes `Icode`, `Description` and `Price` from the user and writes the information in the binary file "`Items.dat`". 5

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28. (A) Write a user defined function in Python named `showInLines()` which reads contents of a text file named `STORY.TXT` and displays every sentence in a separate line. 3
Assume that a sentence ends with a full stop (.), a question mark (?), or an exclamation mark (!).
For example, if the content of file `STORY.TXT` is as follows :
`Our parents told us that we must eat vegetables to be healthy. And it turns out, our parents were right! So, what else did our parents tell?`
Then the function should display the file's content as follows :
`Our parents told us that we must eat vegetables to be healthy.`
`And it turns out, our parents were right!`
`So, what else did our parents tell?`
OR
(B) Write a function, `c_words()` in Python that separately counts and displays the number of uppercase and lowercase alphabets in a text file, `Words.txt`.

32. Sangeeta is a Python programmer working in a computer hardware company. She has to maintain the records of the peripheral devices. She created a csv file named **Peripheral.csv**, to store the details. The structure of **Peripheral.csv** is :

4

[P_id,P_name,Price]

where

P_id is Peripheral device ID (integer)

P_name is Peripheral device name (String)

Price is Peripheral device price (integer)

Sangeeta wants to write the following user defined functions :

Add_Device() : to accept a record from the user and add it to a csv file, **Peripheral.csv**.

Count_Device() : To count and display number of peripheral devices whose price is less than 1000.

34. (A) (i) Differentiate between '**w**' and '**a**' file modes in Python. **2 + 3 = 5**
- (ii) Consider a binary file, **items.dat**, containing records stored in the given format :

{item_id: [item_name,amount]}

Write a function, **Copy_new()**, that copies all records whose amount is greater than 1000 from **items.dat** to **new_items.dat**.

OR

- (B) (i) What is the advantage of using **with** clause while opening a data file in Python ? Also give syntax of **with** clause.
- (ii) A binary file, **EMP.DAT** has the following structure :

[Emp_Id, Name, Salary]

where

Emp_Id : Employee id

Name : Employee Name

Salary : Employee Salary

Write a user defined function, **disp_Detail()**, that would read the contents of the file **EMP.DAT** and display the details of those employees whose salary is below 25000.

- 27.** (a) Write a function in Python that displays the book names having 'Y' or 'y' in their name from a text file "Bookname.txt". 3

Example :

If the file 'Bookname.txt' contains the names of following books :

One Hundred Years of Solitude

The Diary of a Young Girl

On the Road

After execution, the output will be :

One Hundred Years of Solitude

The Diary of a Young Girl

OR

- (b) Write a function **RevString()** to read a textfile "Input.txt" and prints the words starting with 'O' in reverse order. The rest of the content is displayed normally. 3

Example :

If content in the text file is :

UBUNTU IS AN OPEN SOURCE OPERATING SYSTEM

Output will be :

UBUNTU IS AN NEPO SOURCE GNITAREPO SYSTEM

(words 'OPEN' and 'OPERATING' are displayed in reverse order)

- 33.** (a) Write a point of difference between append (**a**) and write (**w**) modes in a text file. 5

Write a program in Python that defines and calls the following user defined functions :

- (i) **Add_Teacher()** : It accepts the values from the user and inserts record of a teacher to a csv file 'Teacher.csv'. Each record consists of a list with field elements as **T_id**, **Tname** and **desig** to store teacher ID, teacher name and designation respectively.
- (ii) **Search_Teacher()** : To display the records of all the PGT (designation) teachers.

OR

- (b) Write one point of difference between `seek()` and `tell()` functions in file handling. Write a program in Python that defines and calls the following user defined functions : 5
- (i) `Add_Device()` : The function accepts and adds records of the peripheral devices to a csv file 'peripheral.csv'. Each record consists of a list with field elements as `P_id`, `P_name` and `Price` to store peripheral device ID, device name, and price respectively.
 - (ii) `Count_Device()` : To count and display number of peripheral devices, whose price is less than ₹ 1000.

35. Atharva is a programmer, who has recently been given a task to write a Python code to perform the following binary file operation with the help of a user defined function/module :

- `Copy_new()` : to create a binary file `new_items.dat` and write all the item details stored in the binary file, `items.dat`, except for the item whose `item_id` is 101. The data is stored in the following format :
{item_id:[item_name,amount]}

```
import _____ # Statement 1

def Copy_new() :

    f1=_____ # Statement 2

    f2=_____ # Statement 3

    item_id=int(input("Enter the item id"))

    item_detail=_____ # Statement 4

    for key in item_detail:

        if _____: # Statement 5

            pickle._____ # Statement 6

    f1.close()

    f2.close()
```

He has succeeded in writing partial code and has missed out certain statements. Therefore, as a Python expert, help him to complete the code based on the given requirements :

- (i) Which module should be imported in the program ? (Statement 1) 1
- (ii) Write the correct statement required to open the binary file "items.dat". (Statement 2) 1
- (iii) Which statement should Atharva fill in Statement 3 to open the binary file "new_items.dat" and in Statement 4 to read all the details from the binary file "items.dat". 2

OR (Option for part iii only)

- (iii) What should Atharva write in Statement 5 to apply the given condition and in Statement 6 to write data in the binary file "new_items.dat". 2

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27. (a) Write the definition of a Python function named LongLines() which reads the contents of a text file named 'LINES.TXT' and displays those lines from the file which have at least 10 words in it. For example, if the content of 'LINES.TXT' is as follows : 3

Once upon a time, there was a woodcutter

He lived in a little house in a beautiful, green wood.

One day, he was merrily chopping some wood.

He saw a little girl skipping through the woods, whistling happily.

The girl was followed by a big gray wolf.

Then the function should display output as :

He lived in a little house in a beautiful, green wood.

He saw a little girl skipping through the woods, whistling happily.

OR

- (b) Write a function count_Dwords() in Python to count the words ending with a digit in a text file "Details.txt". 3

Example:

If the file content is as follows :

On seat2 VIP1 will sit and

On seat1 VVIP2 will be sitting

Output will be:

Number of words ending with a digit are 4

33. (a) Write one difference between CSV and text files. 5
 Write a program in Python that defines and calls the following user defined functions :
 (i) COURIER_ADD(): It takes the values from the user and adds the details to a csv file 'courier.csv'. Each record consists of a list with field elements as cid, s_name, Source, destination to store Courier ID, Sender name, Source and destination address respectively.
 (ii) COURIER_SEARCH() : Takes the destination as the input and displays all the courier records going to that destination.

OR

- (b) Why it is important to close a file before exiting ? 5
 Write a program in Python that defines and calls the following user defined functions :
 (i) Add_Book() : Takes the details of the books and adds them to a csv file 'Book.csv'. Each record consists of a list with field elements as book_ID, B_name and pub to store book ID, book name and publisher respectively.
 (ii) Search_Book() : Takes publisher name as input and counts and displays number of books published by them.

35. Shreyas is a programmer, who has recently been given a task to write a user defined function named write_bin() to create a binary file called Cust_file.dat containing customer information – customer number (c_no), name (c_name), quantity (qty), price (price) and amount (amt) of each customer.

The function accepts customer number, name, quantity and price. Thereafter, it displays the message 'Quantity less than 10..... Cannot SAVE', if quantity entered is less than 10. Otherwise the function calculates amount as price * quantity and then writes the record in the form of a list into the binary file.

```
import pickle
def write_bin():
    bin_file=_____ #Statement 1
    while True:
        c_no=int(input("enter customer number"))
        c_name=input("enter customer name")
        qty=int(input("enter qty"))
        price=int(input("enter price"))
        if _____ #Statement 2
            print("Quantity less than 10..Cannot SAVE")
        else:
            amt=price * qty
            c_detail=[c_no,c_name,qty,price,amt]
            _____ #Statement 3
            ans=input("Do you wish to enter more records y/n")
            if ans.lower()=='n':
                _____ #Statement 4
                _____ #Statement 5
                _____ #Statement 6
```

- (i) Write the correct statement to open a file 'Cust_file.dat' for writing the data of the customer. 1
 (ii) Which statement should Shreyas fill in Statement 2 to check whether quantity is less than 10. 1
 (iii) Which statement should Shreyas fill in Statement 3 to write data to the binary file and in Statement 4 to stop further processing if the user does not wish to enter more records. 2

OR

(Option for part (iii) only)

- (iii) What should Shreyas fill in Statement 5 to close the binary file named Cust_file.dat and in Statement 6 to call a function to write data in binary file ? 2