Introduction to Programming

Session 4: Sets and Dictionaries

Name:

Batch:

Date:

Please answer all the questions with outputs (values or completed: yes/no) and return the sheet.

1. Create a dictionary to store Cricketer name and Total runs scored. Start with the data: 'KL Rahul': 40, 'Shubman Gill': 30 and 'Virat Kohli': 110.

a. **Given player name, display the total runs if available. Else display "Yet to bat"**
b. **Add 2 new entries: 'Rohit Sharma': 90, 'Ravindra Jadeja': 35**
c. **Modify the runs of 'KL Rahul' as 60**
d. **Create another dictionary with data: 'Ishan Kishan':65, 'Hardik Pandya':70. Merge the two dictionaries**
e. **Add number of balls faced to all players**

2. Make a bird tracking program using dictionary:

a. **Prompt the user to input the spotted bird species**
b. **Given the inputs, keep a count of the number of times each species has been seen**
c. **If the bird has already been spotted, add one to its count. If it isn't, add the species to the dictionary with the value 1**
d. **Add a message to be displayed if the user input bird has already been spotted**

3. Create a software program for accounts management in a Telecommunication firm with the following features:

a. **Add a contact name, phone number and account credits on issue of connection**
b. **Search contact name based on phone number**
c. **Change the credits based on phone number**
d. **Remove a connection**

5. Using Set operations:

a. **Remove duplicate entries from a list**
b. **Find common elements in multiple list**
c. **Find Difference and Symmetric difference between two sets**
d. **Check for subsets and supersets (Hint: issubset(), issuperset())**

6. Create a software program for a Supermarket:

a. **Create a list called dairy_section with four elements from the dairy section of a supermarket: milk, butter, ghee and curd.**
b. **Print a string 'Product List' with the elements of the dairy_section list.**
c. **Create a tuple called milk_expiration with three elements: the month, day, and year of the expiration date of each diary product.**
d. **Print the values in the milk_expiration tuple in a string that reads "This milk carton will expire on DD/MM/YYYY".**
e. **Check whether a user entered purchase date of a product is after the expiry date and if so show expiry message " Expiry date over"**
f. **Create an empty dictionary called milk_carton. Add the following key/value pairs for the four elements from the dairy products.**
    i. **Expiration_date**
    ii. **Cost**
    iii. **Brand_name**
g. **Print out the values of all of the elements of the milk_carton**
h. **Get a list of items and quantity from the user.**
i. **Calculate the cost of purchased number of dairy products (user input) based on the data from milk_carton.**
j. **Add a dairy product called cheese and append to the milk_carton dictionary with necessary details.**