**Python and MongoDB Questions**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Employee\_id** | **Agent\_name** | **City** | **Designation** | **Salary** | **Year\_of\_joining** |
| **101** | **Shashi Ojha** | **Chandigarh** | **SPM** | **70, 000** | **2016** |
| **102** | **Rohan Banerjee** | **Vizag** | **JA** | **25, 000** | **2018** |
| **103** | **Fairy Sharma** | **Chandigarh** | **SA** | **35, 000** | **2018** |
| **104** | **Yogesh Rao** | **Vizag** | **SA** | **35, 000** | **2019** |
| **105** | **Gyan Prakash** | **Patna** | **Analyst** | **30, 000** | **2020** |
| **106** | **Anam Khan** | **Lucknow** | **SA** | **35, 000** | **2017** |
| **107** | **Thakur Singh** | **Chandigarh** | **PGM** | **90, 000** | **2015** |
| **108** | **Mitchell Johnson** | **Manchester** | **SPM** | **80, 000** | **2017** |
| **109** | **Abraham** | **Manchester** | **SPM** | **80, 000** | **2018** |

**Assumptions:**

**Database Name: DB\_EMP**

**Collection Name: COLLECTION\_TEST**

**Print all the documents by converting output cursor into list (Typecast result into list)**

1. **Write a python program to connect the mongodb database and insert multiple document**
2. **Write mongodb query to find the number of agents who belong to “Manchester” city.**
3. **Write mongodb query to display only the Agent name and his Employee code whose designation is senior analyst.**
4. **Write mongodb query to display the sum of salary designation wise.**
5. **Write a mongodb query to update salary by 5000 whose joining date is before 2018.**
6. **Write a mongodb query to find sum of salary city wise whose designation is SPM.**
7. **Write a mongodb query to list the unique designations.**
8. **Write a mongodb query to find the agent name and year of joining of employee who belongs to Chandigarh or Manchester.**

**Core Python and Flask Questions**

1. **Write a program to run a simple flask application containing simple get route which return a JSON data**
2. **Write a small snippet to wrap the flask application for enabling CORS (Cross Origin Resource Sharing)**
3. **Explain Multiple Inheritance with the help of a small program**
4. **Write a program to find the distinct element in python.**

**Data Structure**

1. **Write a python code to create a Linked List and insert node at the end of the Linked List in Python.**
2. **Write a python code to check whether the input list is circular or not.**
3. **Write a python code to reverse a singly linked list.**
4. **Write a python code to insert the node in the end of doubly linked list.**
5. **Write a python program to split a circular linked list into two half. (If odd numbers are present in list then first list should contain more elements)**
6. **Write a python program to rotate the singly linked list from a given node.**
7. **Write a python program for parenthesis balance using stack.**
8. **Write a python program to find an element and delete that node from a singly linked list.**
9. **Write a python program to merge two sorted linked list into a single sorted linked list.**
10. **Write a program to delete an element from linked list without using head pointer**