**Problem Statement**

Find the trending topic “zzz” and the corresponding user details is required

JSON 1 – POSTS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Post 1**  Title: abc  User 2 | **Post 2**  Title: bcd  User 2 | **Post 3**  Title: cde  User 5 | **Post 4**  Title: def  User 5 | **Post 5**  Title: **zzz**  User 5 |

JSON 2 – USER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **User 1**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 2**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 3**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 4**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 5**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 |

**REST API**

POST JSON - - Time Complexity - - O(n)

USER JSON - - Time Complexity - - O(n)

**Issue: Increases Time Complexity**

**Solution 1 – Reduce Time Complexity – Changing the Structure of Data**

POST AND USER JSON

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Post 1**  Title: abc  User 2 | **Post 2**  Title: bcd  User 2 | **Post 3**  Title: cde  User 5 | **Post 4**  Title: def  User 5 | **Post 5**  Title: **zzz**  User 5 |
| **User 2**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 2**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 5**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 5**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 5**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 |

**Issue: Increases Space Complexity**

**Solution 2**

JSON 1 – POSTS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Post 1**  Title: abc  User 2 | **Post 2**  Title: bcd  User 2 | **Post 3**  Title: cde  User 5 | **Post 4**  Title: def  User 5 | **Post 5**  Title: **zzz**  User 5 |

JSON 2 – USER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **User 1**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 2**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 3**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 4**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 | **User 5**  Detail 1  Detail 2  Detail 3  Detail 4  Detail 5 |

**Idea:**

Same Space Complexity

Time Complexity: O(n)