

❖Range Query:

Explanation: -

The problem involves manipulating an array through a series of range update queries, where each query specifies a start index, an end index, and a value to add. The task is to efficiently apply all the queries to the array and calculate the final sum of its elements. The objective is to demonstrate the cumulative effect of all queries on the array and output the resulting sum.

Time Complexity: - $O(n.m)$

Space Complexity: - $O(n)$

```
+-----+
|  Start  |
+-----+
      |
      v
+-----+
| Initialize Array |
+-----+
      |
      v
+-----+
| For Each Query in |
|   queries         |
+-----+
      |
      v
+-----+
| Read start, end, |
|   value          |
+-----+
      |
      v
+-----+
```

```
| Call applyQuery(array,  |  
| start - 1, end - 1, value)|
```

```
+-----+
```

```
|
```

```
v
```

```
+-----+
```

```
| End of Queries      |
```

```
+-----+
```

```
|
```

```
v
```

```
+-----+
```

```
| Calculate Sum      |
```

```
| sum = sumArray(array)|
```

```
+-----+
```

```
|
```

```
v
```

```
+-----+
```

```
| Display Result  |
```

```
+-----+
```

```
|
```

```
v
```

```
+-----+
```

```
| End              |
```

```
+-----+
```