**Question :**

Give traces by showing how the keys E A S Y Q U E S T I O N are sorted with quicksort.

**Solution :**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| **E** | **A** | **S** | **Y** | **Q** | **U** | **E** | **S** | **T** | **I** | **O** | **N** |
| E | A | **E** | Y | Q | U | S | S | T | I | O | N |
| E | **E** | **E** | Y | Q | U | S | S | T | I | O | N |
| **A** | **E** | **E** | Y | Q | U | S | S | T | I | O | N |
| **A** | **E** | **E** | N | Q | U | S | S | T | I | O | **Y** |
| **A** | **E** | **E** | I | **N** | U | S | S | T | Q | O | **Y** |
| **A** | **E** | **E** | **I** | **N** | U | S | S | T | Q | O | **Y** |
| **A** | **E** | **E** | **I** | **N** | **O** | S | S | T | Q | **U** | **Y** |
| **A** | **E** | **E** | **I** | **N** | **O** | Q | **S** | T | S | **U** | **Y** |
| **A** | **E** | **E** | **I** | **N** | **O** | **Q** | **S** | T | S | **U** | **Y** |
| **A** | **E** | **E** | **I** | **N** | **O** | **Q** | **S** | S | **T** | **U** | **Y** |
| **A** | **E** | **E** | **I** | **N** | **O** | **Q** | **S** | **S** | **T** | **U** | **Y** |