**Binary Search Tree Construction for [7, 5, 1, 8, 3, 6, 0, 9, 4, 2]**

**A Binary Search Tree (BST) is built by inserting elements one by one, following these rules:**

* **Left child < parent**
* **Right child > parent**

**Step-by-step insertion:**

1. **Root: 7 → becomes the root.**
2. **5 < 7 → goes to the left of 7.**
3. **1 < 5 → goes to the left of 5.**
4. **8 > 7 → goes to the right of 7.**
5. **3 > 1 → goes to the right of 1.**
6. **6 > 5 → goes to the right of 5.**
7. **0 < 1 → goes to the left of 1.**
8. **9 > 8 → goes to the right of 8.**
9. **4 > 3 → goes to the right of 3.**
10. **2 < 3 → goes to the left of 3**

7

/ \

5 8

/ \ \

1 6 9

/ \

0 3

/ \

2 4

 **Root is 7**

 5 is on the left of 7, 8 is on the right

 1 is on the left of 5, 6 is on the right

 0 and 3 are children of 1

 2 and 4 are children of 3

 9 is on the right of 8