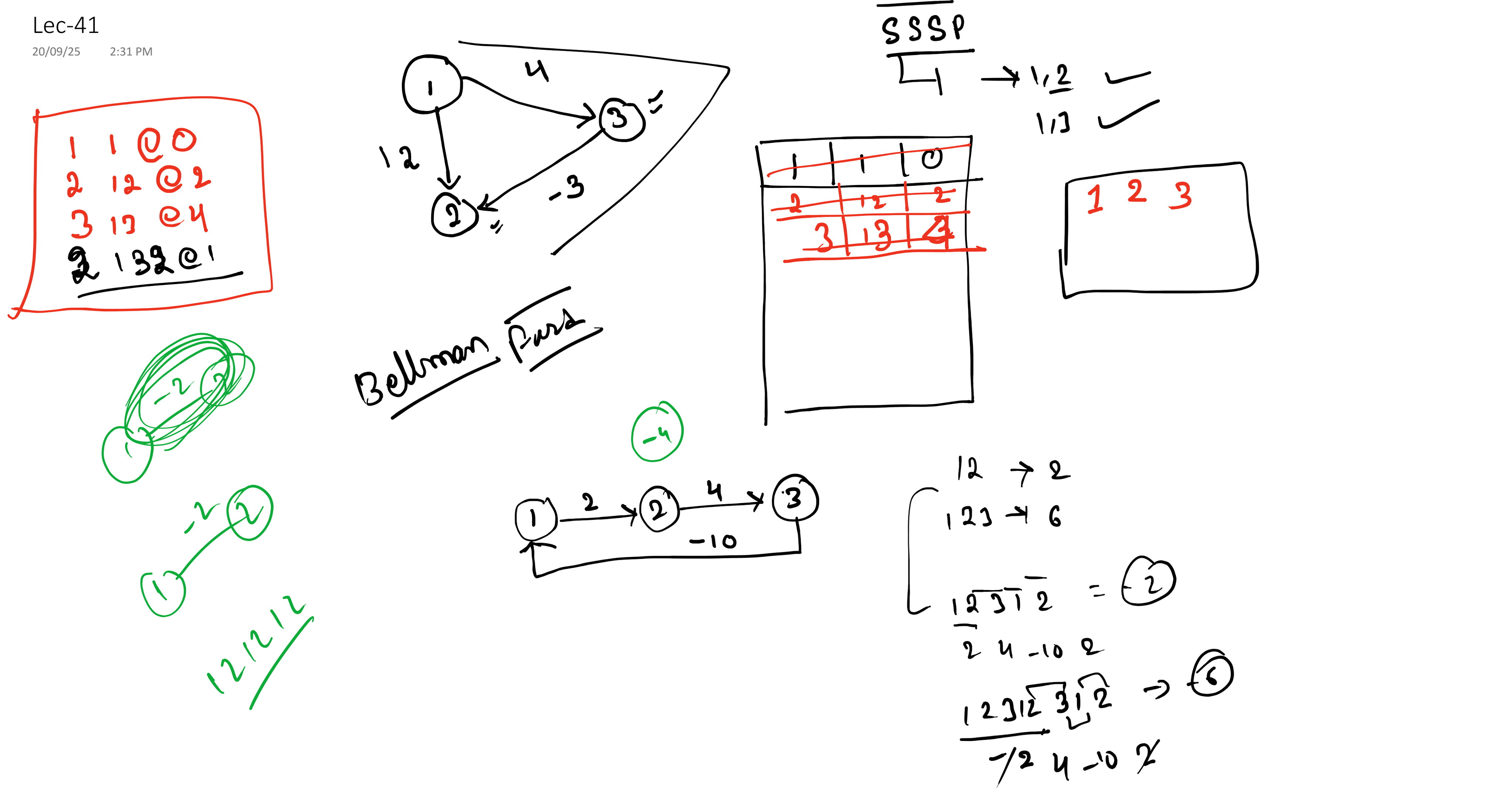
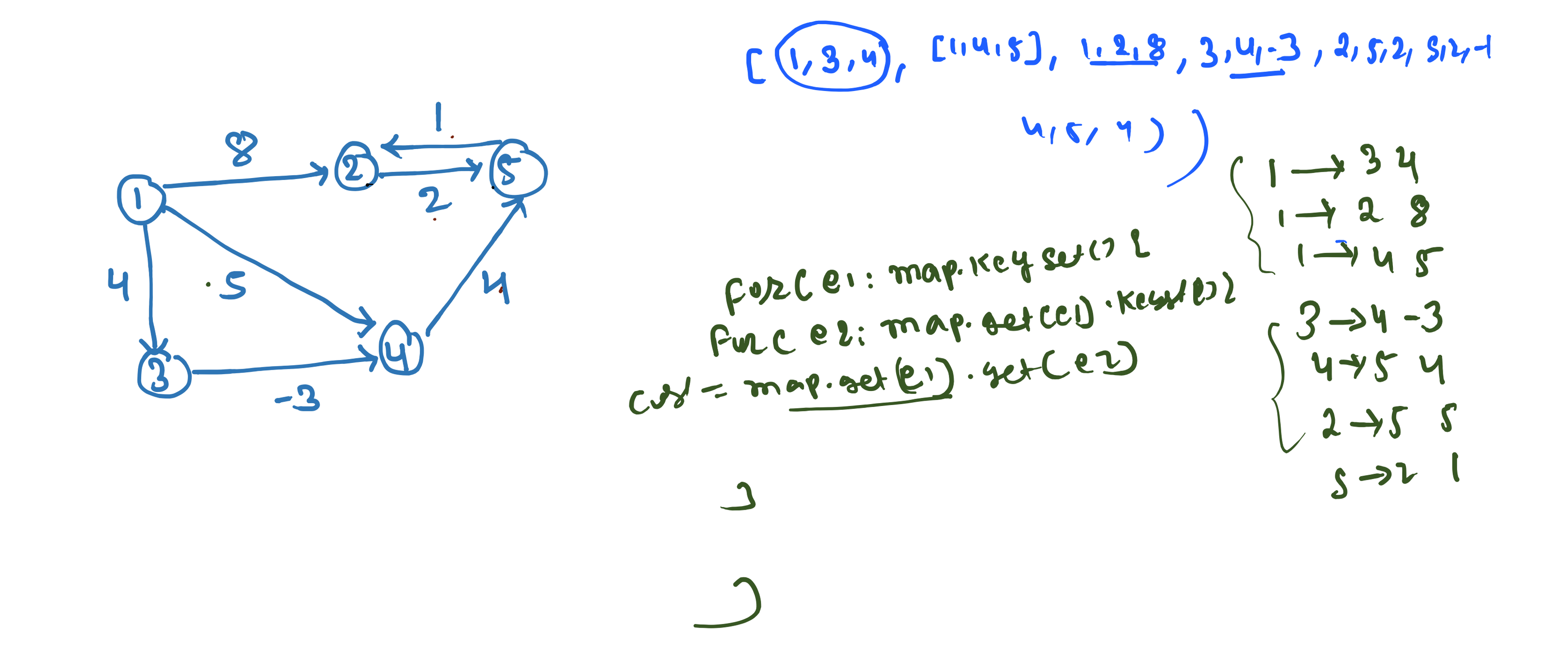
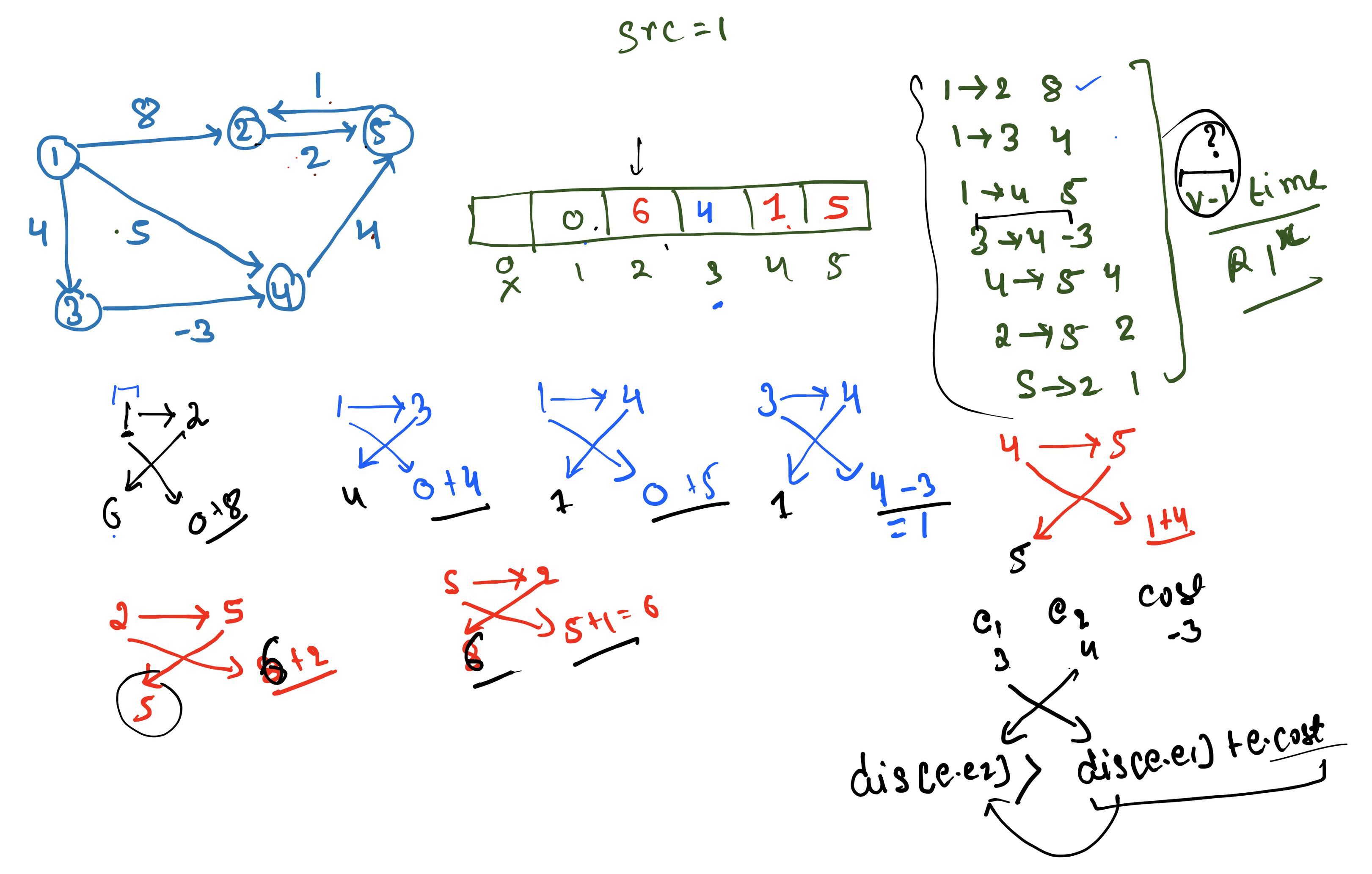
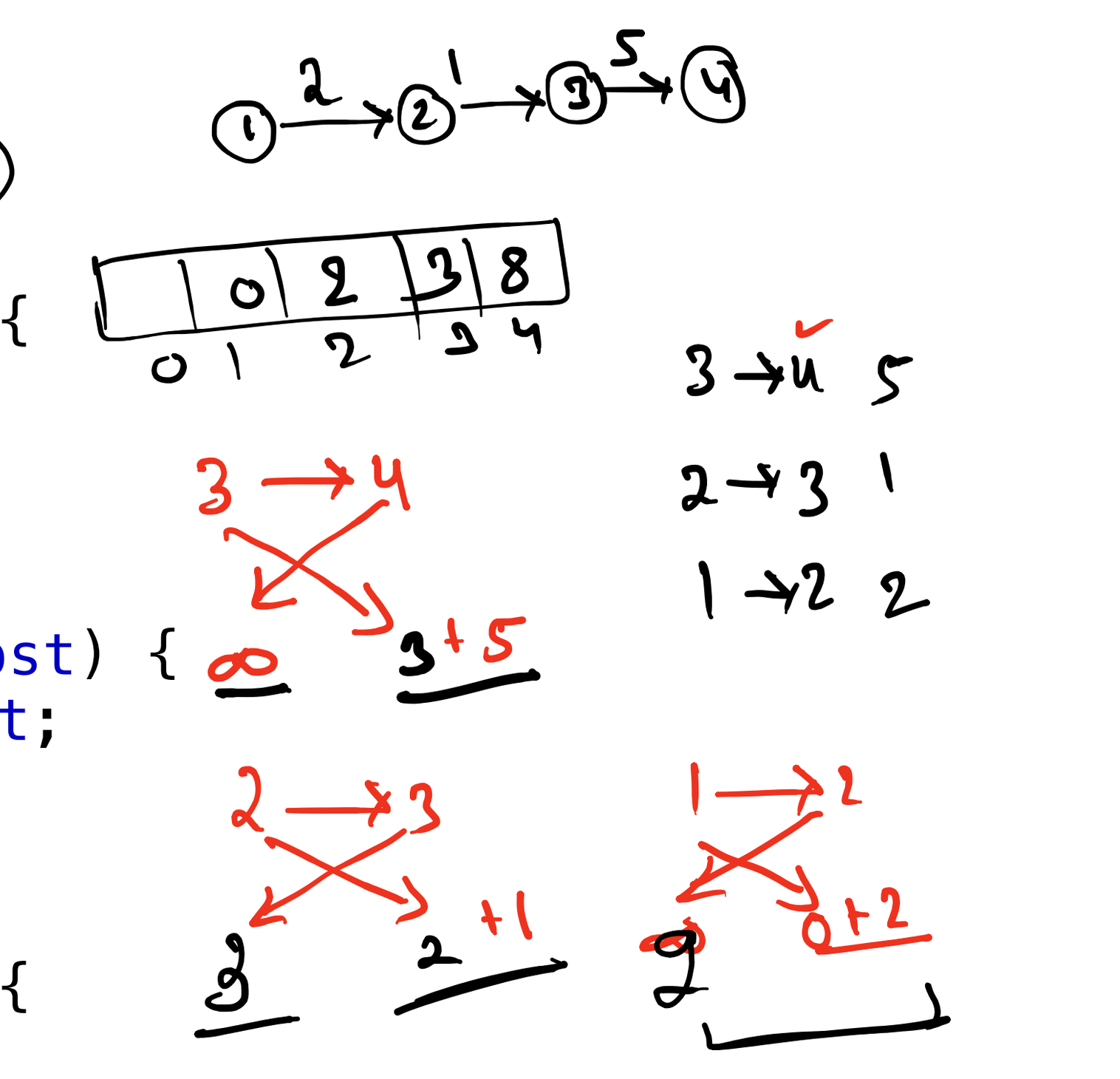
Lec-41
20/09/25 2:31 PM

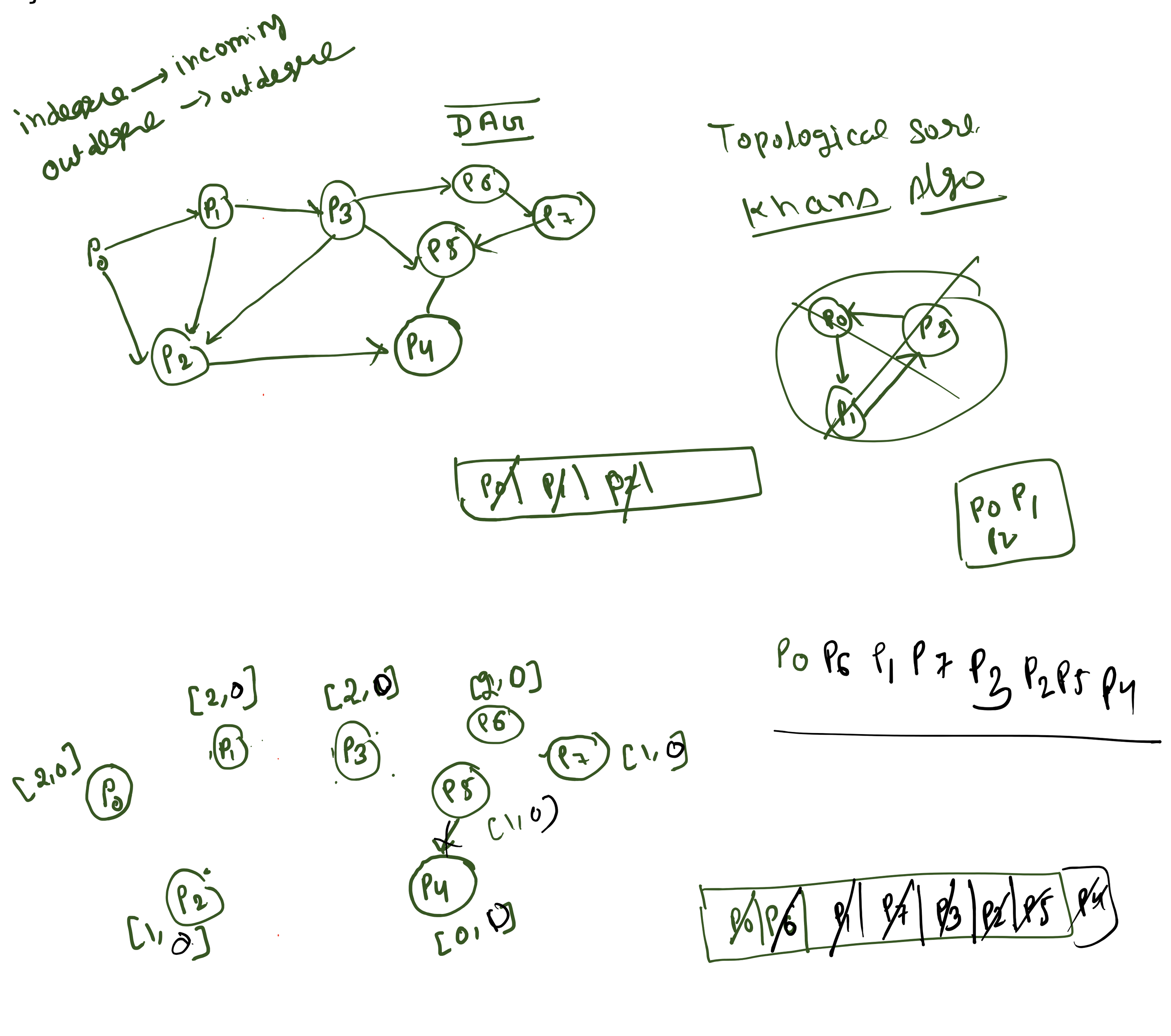


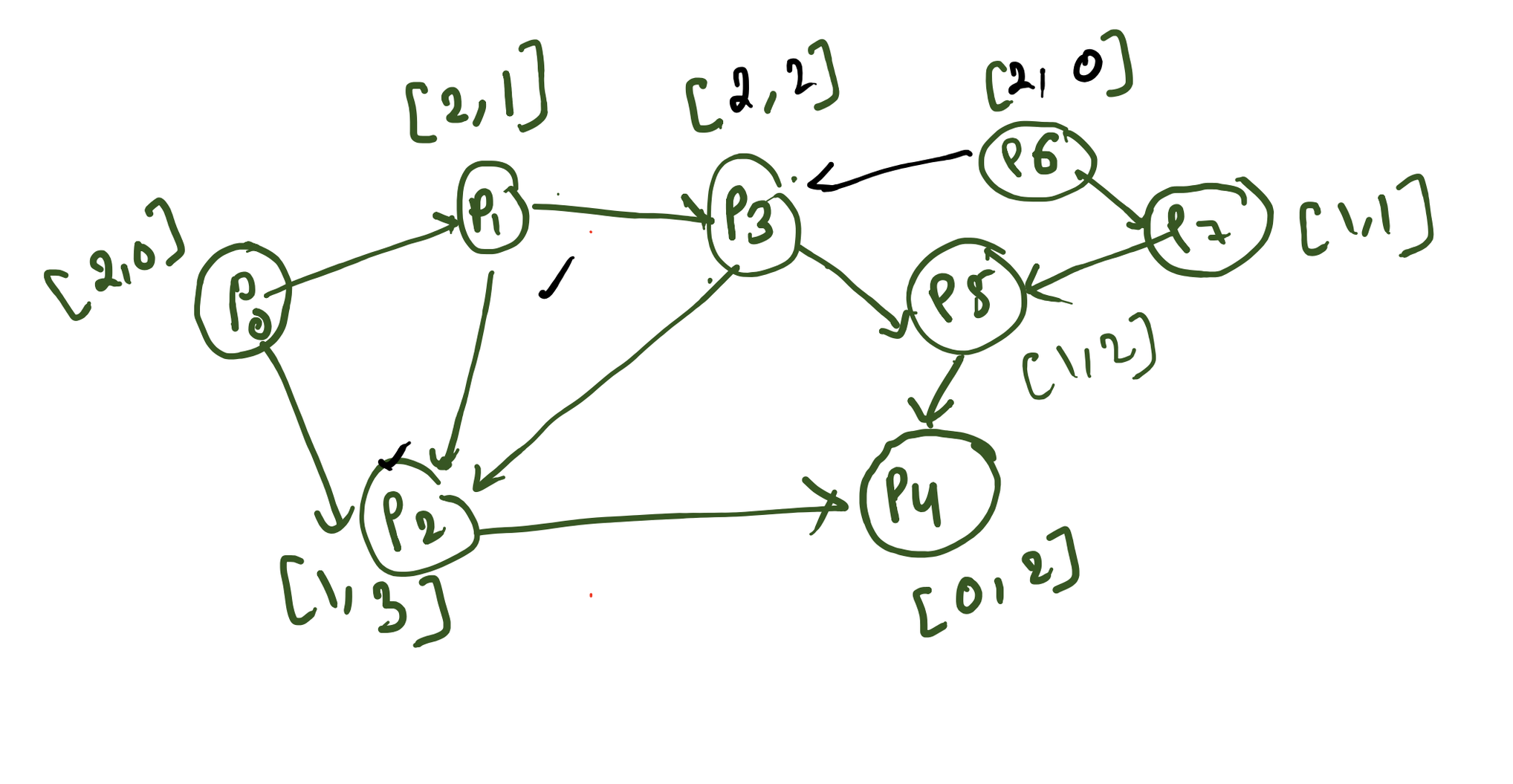


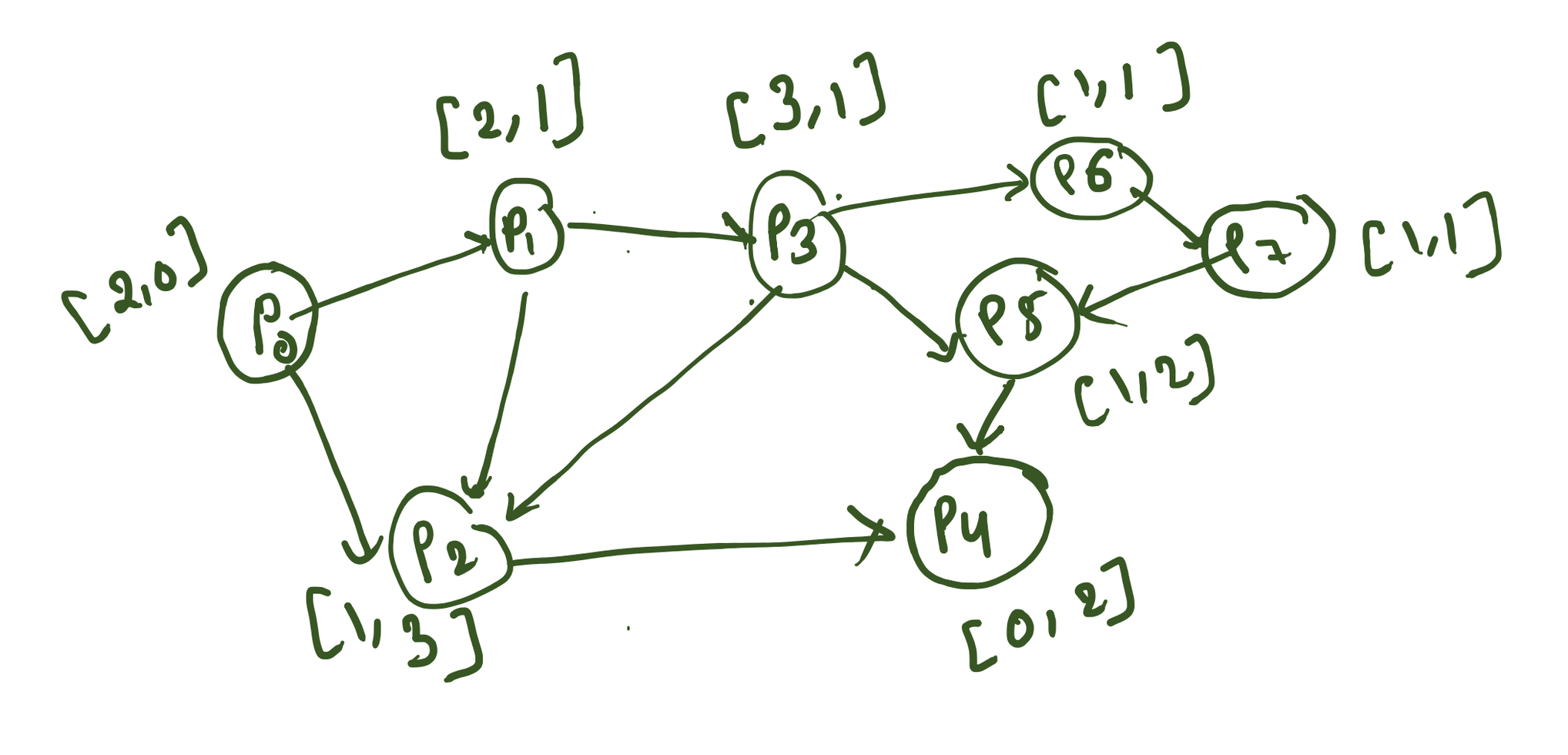



```java
public void BellMan_Ford() {
    List<EdgePair> ll = getALLEdge();
    int v = map.size();
    int[] dis = new int[v + 1];
    for (int i = 2; i < dis.length; i++) {
        dis[i] = 999999;
    }
    for (int i = 1; i < v; i++) {
        for (EdgePair e : ll) {
            if (dis[e.e2] > dis[e.e1] + e.cost) {
                dis[e.e2] = dis[e.e1] + e.cost;
            }
        }
    }
    for (int i = 1; i < dis.length; i++) {
        System.out.println(i+" "+dis[i]);
    }
}
```

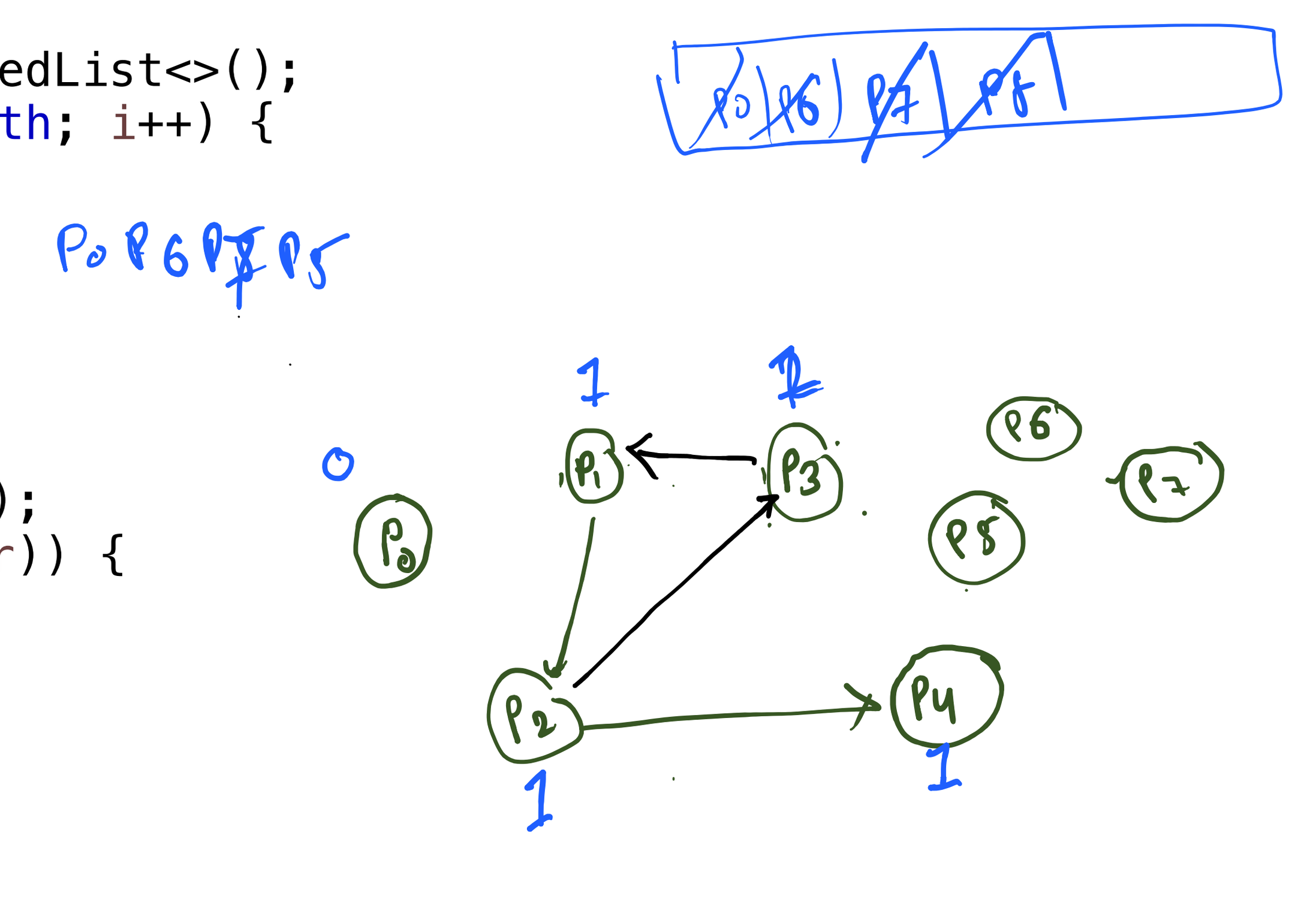




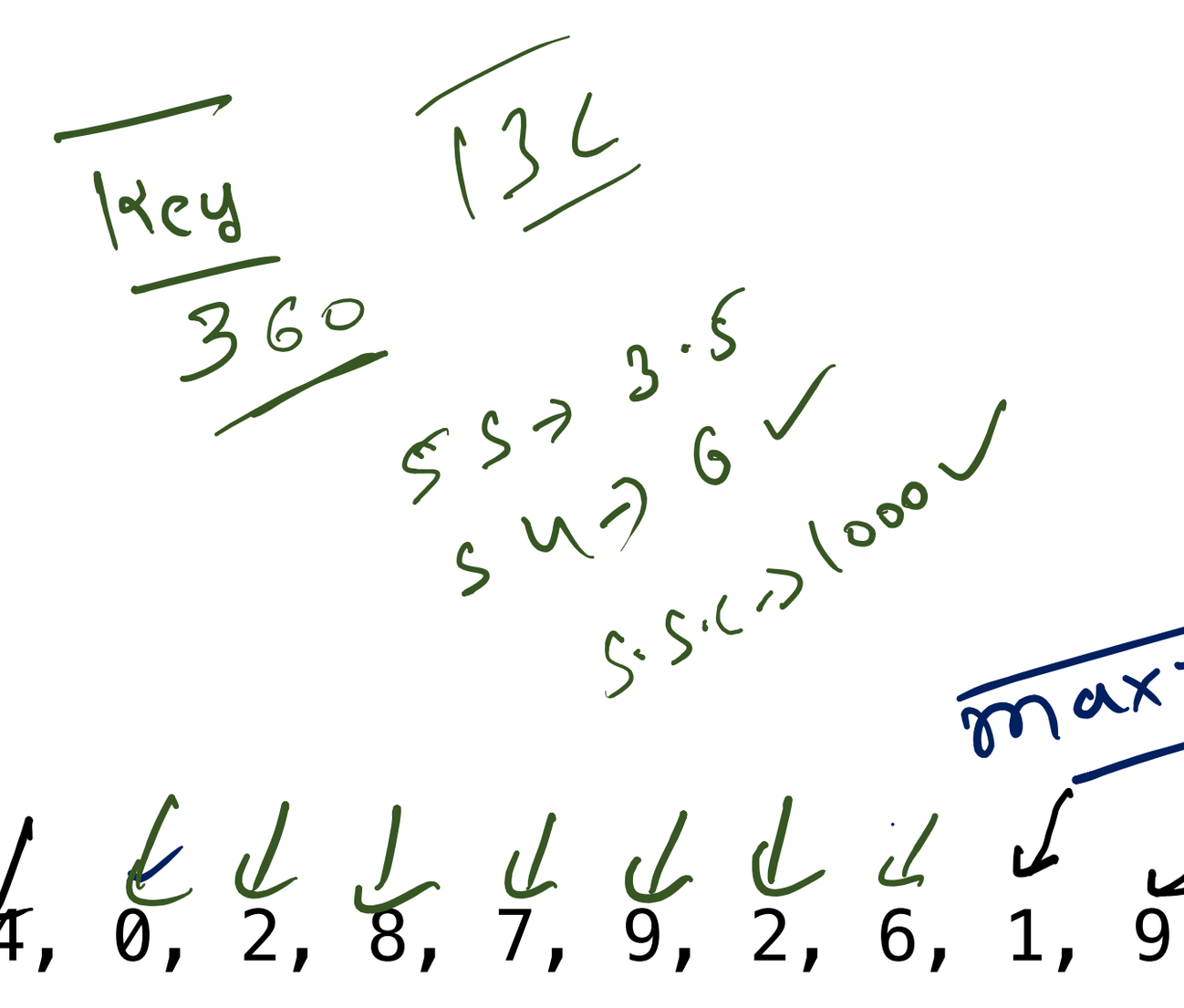




```java
public void TopologicalSort() {
    int[] in = Indegree();
    Queue<Integer> q = new LinkedList<>();
    for (int i = 0; i < in.length; i++) {
        if (in[i] == 0) {
            q.add(i);
        }
    }
    while (!q.isEmpty()) {
        int r = q.poll();
        System.out.print(r + " ");
        for (int nbrs : map.get(r)) {
            in[nbrs]--;
            if (in[nbrs] == 0) {
                q.add(nbrs);
            }
        }
    }
    System.out.println();
}
```



Counting Sort



```java
int[] arr = { 2, 1, 1, 0, 1, 2, 5, 4, 0, 2, 8, 7, 9, 2, 6, 1, 9 };
```