

Dial's Algorithm.

The reason for this bound is.

At most max weight of an edge is w .

also is more efficient than Dijkstra but it only works when the number of edge weights is limited.

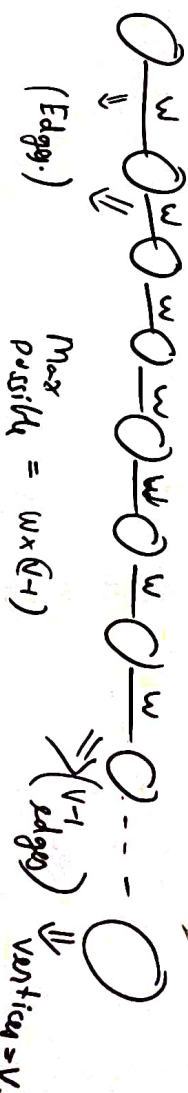
$w = \text{MAX-WEIGHT}$ possible for a branch.

$V =$ total number of variables.

Algo's upper limit is bounded by

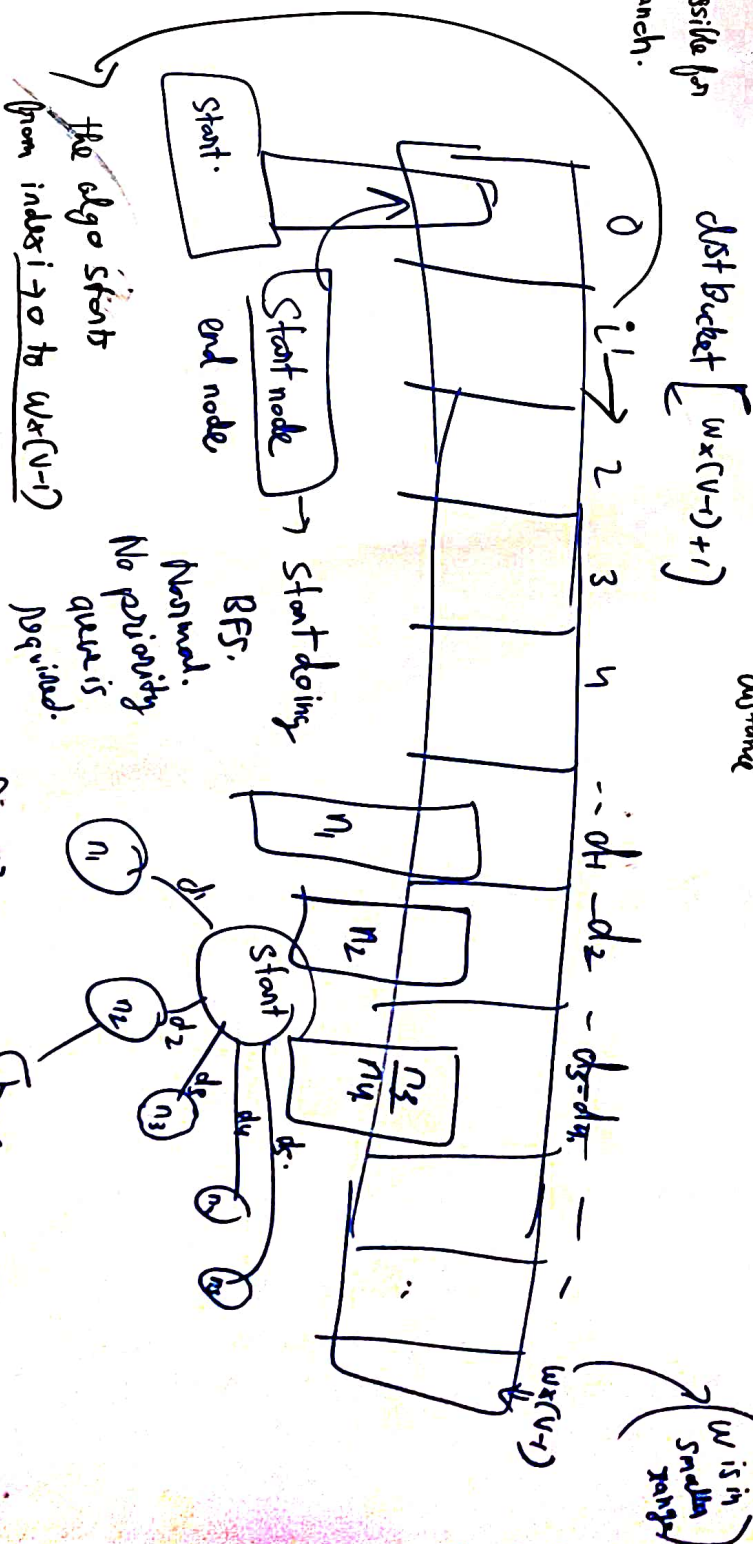
$$W(V-1) = \text{Bound}.$$

The reason for this bound is.



distance

W is in small range


$$\text{dist}[\text{start}] = 0$$

at any distance index if
check if node is parent or not.
if (node, child).

check if node is present
 $newdistance = 1 + dist(C_{nd}, child)$
 if $(newdistance < distf(child))$ {
 $bucket.get(distf(child)).add$
 $bucket.put(newdistance, child)$;
 $dist[n_1] = dist[stroot] + d_1$
 $dist[n_2] = dist[stroot] + d_2 \rightarrow$ let's suppose
 $dist[n_3] = dist[stroot] + d_3$
 $dist[n_4] = dist[stroot] + d_4$;
 $(d_3 = d_4)$