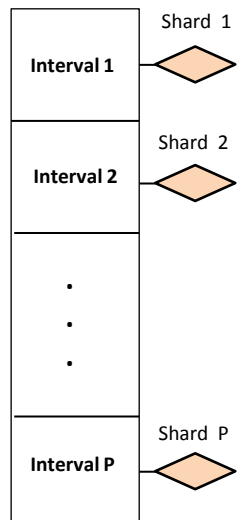## Data Structures for Shard and Interval



```
0.     struct interval
1.     {
2.         int start, end;
3.     };
4.     struct edge
5.     {
6.         int src, dest;
7.         float val;
8.     };
9.     struct vertex
10.    {
11.        int num_of_in_edges;
12.        int num_of_out_edges;
13.        float val;
14.    };
```

```
15.    struct shard
16.    {
17.        int start_vertex, end_vertex;
18.        union
19.        {
20.            int in_edge_v_index[MAX_V_PER_SHARD];
21.            int out_edge_v_index[MAX_V_PER_SHARD];
22.        }
23.        vertex in_edge_array[MAX_INEDGE_PER_SHARD];
24.        vertex out_edge_array[MAX_OUTEDGE_PER_SHARD];
25.        edge edge_update_array[MAX_INEDGE_PER_SHARD];
26.        vertex vertex_update_array[MAX_VERTEX_PER_SHARD];
27.    };
```