Date ....

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```
class DisjointUnion sets {
    vector <int> rank, parent;
    int n;

    public :
    DisjointUnionSets( int n) {
        rank . resize(n);
        parent . resize (n) ;
        this ->n = n;
        makeset ();
    }
    void makeset () {
        for (~~int~~ i-> n )
            parent [i] = i}; }

    int find (int x) {
        if (parent [x] != x)
                return  find (parent [x]);
        return x;
    }

    void Union (int x, y int y) {
        int xRoot = find (x) ;
        int yRoot = find (y) ;

        if (xRoot }== yRoot)
            return ;
```

Teacher's Signature :

```
    if (rank [ xRoot ] < rank [yRoot ])
            parent [xRoot] = yRoot ;
    else if  (rank [yRoot ]< rank [xRoot])
            parent [yRoot] =xRoot ;
    else {
      part [yRoot] = xRoot ;
      rank [xRoot] = rank [xRoot] +1 ;
      }
   }
};
```