

## Pseudocode to find no. of Islands:

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```
class Islands {
```

```
    public: int numIslands (char[][] grid) {
```

```
        To find no. of islands if (grid == null || grid.length == 0) {
```

```
            return 0; }
```

```
    public: int numIslands() {
```

```
        for (int i = 0; i < grid.length; i++)
```

```
        {
```

```
            for (int j = 0; j < grid[i].length; j++)
```

```
            {
```

```
                if (grid[i][j] == '1')
```

```
                {
```

```
                    numIslands += dfs(grid, i, j);
```

```
                }
```

```
            }
```

```
        }
```

```
        return numIslands;
```

```
    }
```

```
    public: int dfs(char[][] grid, int i, int j)
```

```
    {
```

```
        if (i < 0 || i >= grid.length || j < 0 || j >= grid[i].length ||  
            grid[i][j] == '0')
```

```
        { return 0; }
```

```
    }
```

```
        grid[i][j] = '0'
```

```
        dfs(grid, i+1, j);
```

```
        dfs(grid, i-1, j);
```

```
        dfs(grid, i, j+1);
```

```
        dfs(grid, i, j-1);
```

```
        return 1;
```

```
    }
```

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