An electrostatic potential built from a collection of point charges $q_i$ at positions $p_i$:

```
ElectroStaticPotential[q_, p_, r_]:=Sum[q[[i]]/Norm[r-p[[i]]], {i, Length[q]}]
```

```
ElectroStaticPotential[{q1, q2}, {{x1, y1}, {x2, y2}}, {x, y}] //TraditionalForm
```

$$\frac{q_1}{\sqrt{|x-x_1|^2+|y-y_1|^2}}+\frac{q_2}{\sqrt{|x-x_2|^2+|y-y_2|^2}}$$

Charge colors, using green for negative and orange for positive:

```
c = Join[Table[Lighter[Green, i/4], {i, 0, 3}], Table[Lighter[Orange, i/4], {i, 3, 0, -1}]];
```

Two charges, $q_1 = -1$ and $q_2 = 1$:

```
ContourPlot[Evaluate[ElectroStaticPotential[{-1, 1}, {{-1, 0}, {1, 0}}, {x, y}]],
{x, -4, 4}, {y, -4, 4}, Contours -> {-0.75, -0.25, -0.1, 0, 0.1, 0.25, 0.75},
PlotRange -> 1, ClippingStyle -> Automatic, ContourShading -> c]
```