Algorithm:

1. Start with a random guess for θ

2. Repeatedly update θ by going in the direction of the steepest descent of $J(\theta)$

$$\theta_j \longleftarrow \theta_j - \alpha \frac{\partial J(\theta)}{\partial \theta_j}; 0 \leq j \leq d$$

$$\longleftarrow \theta_j + \frac{\alpha}{m} \sum_{i=1}^{m} \left(y^{(i)} - \theta^T \left[1; x^{(i)}\right]\right) x_j^{(i)}$$

until θ converges.

Locally weighted linear regression is a non-parametric method. Because it has flexible parameters that will determine the output.