DSolve[y'''[x]+y[x]==0,y,x]

Input:

$$\text{DSolve}\left[y^{(3)}(x) + y(x) = 0, \, y, \, x\right]$$

Exact result:

$$\left\{\left\{y \to \text{Function}\left[\{x\}, \, e^{-x} \, C[1] + e^{x/2} \, C[3] \cos\left[\frac{\sqrt{3} \, x}{2}\right] + e^{x/2} \, C[2] \sin\left[\frac{\sqrt{3} \, x}{2}\right]\right]\right\}\right\}$$

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