(a) A reflexive Banach algebra.

(b) A non-reflexive Banach algebra.

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(a)$\mathcal{C}^n$ is reflexive. Note that $(\mathcal{C}^n)^{\#\#} = (\mathcal{C}^n)^{\#} = \mathcal{C}^n$ $(n \geq 1)$.

(b) $c_0^{\#\#} = (l^1)^{\#} = l^{\infty}$ and the inclusion $c_0 \longrightarrow l^{\infty}$ is proper. Hence c_0 is not reflexive.