$$C_{out,i+1} = C_{out,i} + rac{C_{2,i} - C_{out,i}}{(1 - lpha_1)(1 - lpha_2)\, au} \; \Delta t$$

$$(\mathbf{1} - \boldsymbol{\alpha}_1)(\mathbf{1} - \boldsymbol{\alpha}_2) \tau$$

$$\nu C_2 = \nu C_{out} + (1 - \alpha_1)(1 - \alpha_2) V \frac{\mathrm{d}C_{out}}{\mathrm{d}t} \Longrightarrow$$

$$\Longrightarrow C_2 = C_{out} + (1 - \alpha_1)(1 - \alpha_2) \tau \frac{\mathrm{d}C_{out}}{\mathrm{d}t} \Longrightarrow$$

$$\nu C_2 = \nu C_{out} + (1 - \alpha_1)(1 - \alpha_2) V \frac{dC_{out}}{dt} \Longrightarrow$$

$$\Longrightarrow C_2 = C_{out} + (1 - \alpha_1)(1 - \alpha_2) \tau \frac{dC_{out}}{dt} \Longrightarrow$$

$$dC_{out} \qquad C_2 - C_{out}$$

$$\Rightarrow C_2 = C_{out} + (1 - \alpha_1)(1 - \alpha_2) \tau \xrightarrow{dt} \Rightarrow$$

$$\Rightarrow \frac{dC_{out}}{dt} = \frac{C_2 - C_{out}}{(1 - \alpha_1)(1 - \alpha_2) \tau} \Rightarrow$$

$$\Rightarrow \frac{\Delta C_{out}}{\Delta t} = \frac{C_{out,i+1} - C_{out,i}}{\Delta t} = \frac{C_{2,i} - C_{out,i}}{(1 - \alpha_1)(1 - \alpha_2) \tau} \Rightarrow$$

$$\Rightarrow \frac{\mathrm{d}C_{out}}{\mathrm{d}t} = \frac{C_2 - C_{out}}{(1 - \alpha_1)(1 - \alpha_2)\tau} \Rightarrow$$

$$\Rightarrow \frac{\Delta C_{out}}{\Delta t} = \frac{C_{out,i+1} - C_{out,i}}{\Delta t} = \frac{C_{2,i} - C_{out,i}}{\Delta t} \Rightarrow$$

 $\implies C_{out,i+1} = C_{out,i} + \frac{C_{2,i} - C_{out,i}}{(1 - \alpha_1)(1 - \alpha_2)\tau} \Delta t$