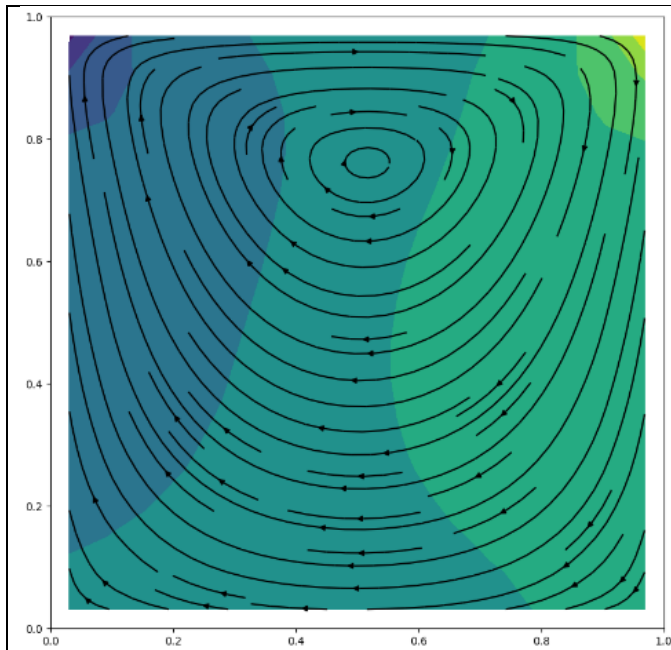


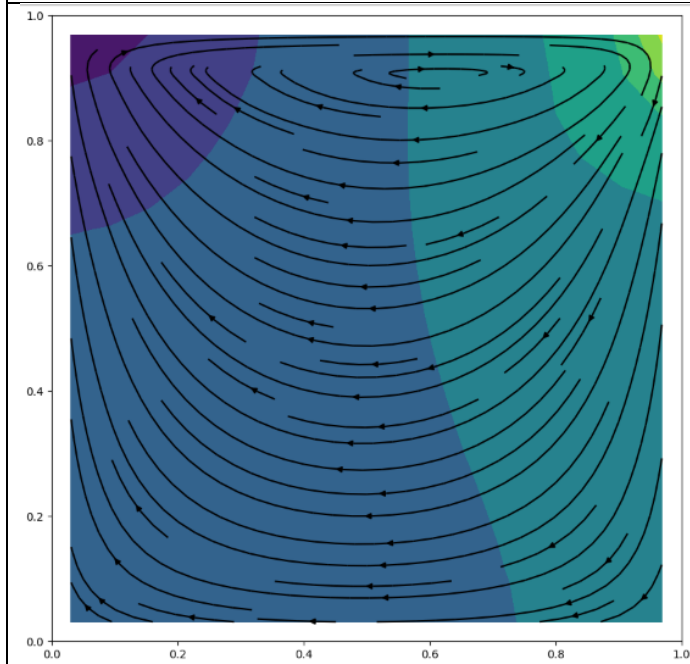
Отчет по задаче о каверне и метод SIMPLE

Изменение значений ν :



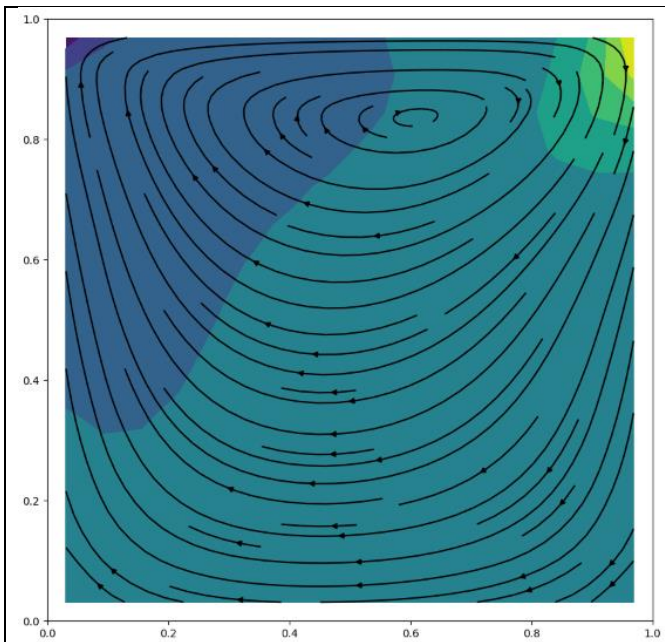
$N = 16$
 $\nu = 0.1$
 $\epsilon = 0.01$
 $\Delta t = 0.01$

$t = 0$
 $T = 1$



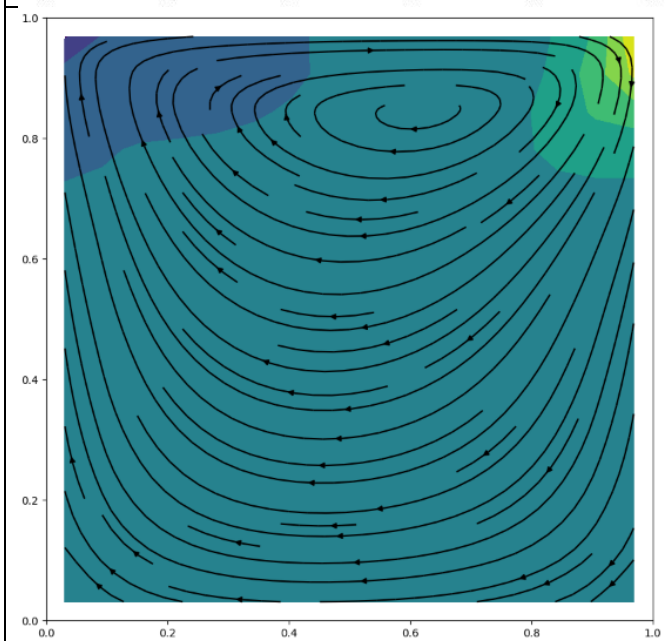
$N = 16$
 $\nu = 0.01$
 $\epsilon = 0.01$
 $\Delta t = 0.1$

$t = 0$
 $T = 1$



$N = 16$
 $\nu = 0.001$
 $\epsilon = 0.01$
 $\Delta t = 0.1$

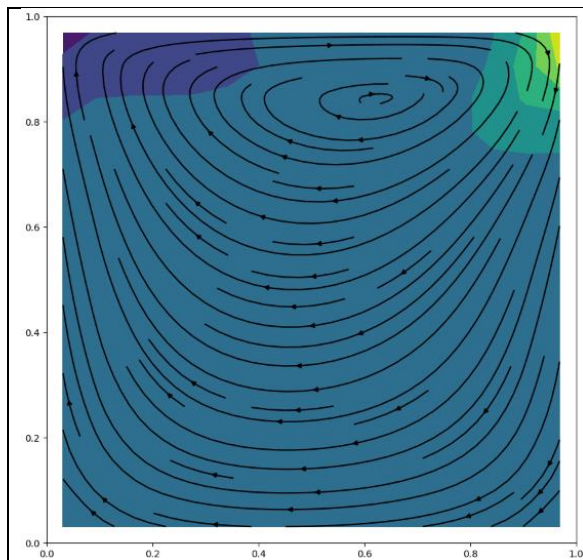
$t = 0$
 $T = 1$



$N = 16$
 $\nu = 0.00089$
 $\epsilon = 0.01$
 $\Delta t = 0.1$

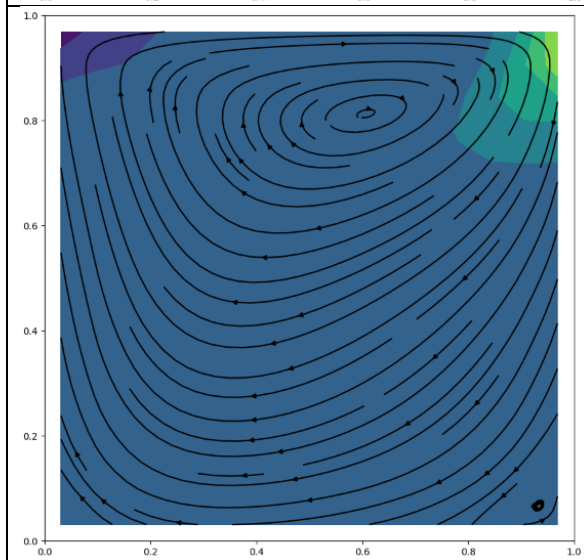
$t = 0$
 $T = 1$

Разные шаги по времени:



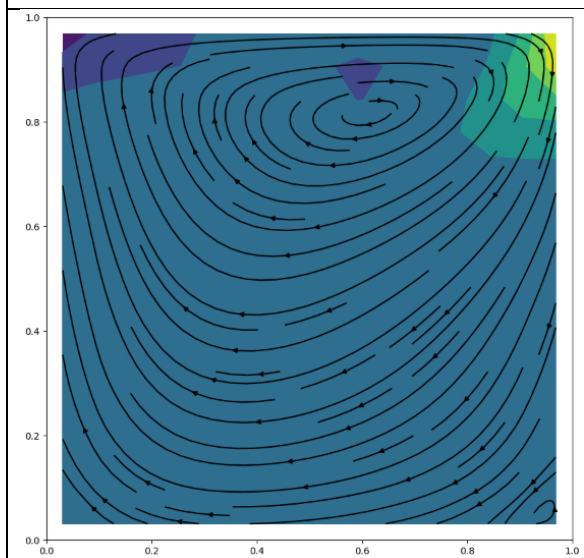
$N = 16$
 $\nu = 0.00089$
 $\epsilon = 0.01$
 $\Delta t = 0.1$

$t = 0$
 $T = 1$



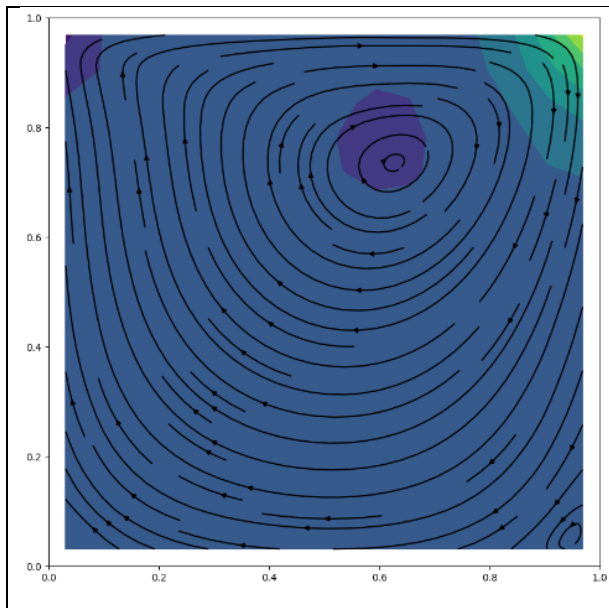
$N = 16$
 $\nu = 0.00089$
 $\epsilon = 0.01$
 $\Delta t = 0.1$

$t = 0$
 $T = 2$



$N = 16$
 $\nu = 0.00089$
 $\epsilon = 0.01$
 $\Delta t = 0.1$

$t = 0$
 $T = 3$



$N = 16$

$\nu = 0.00089$

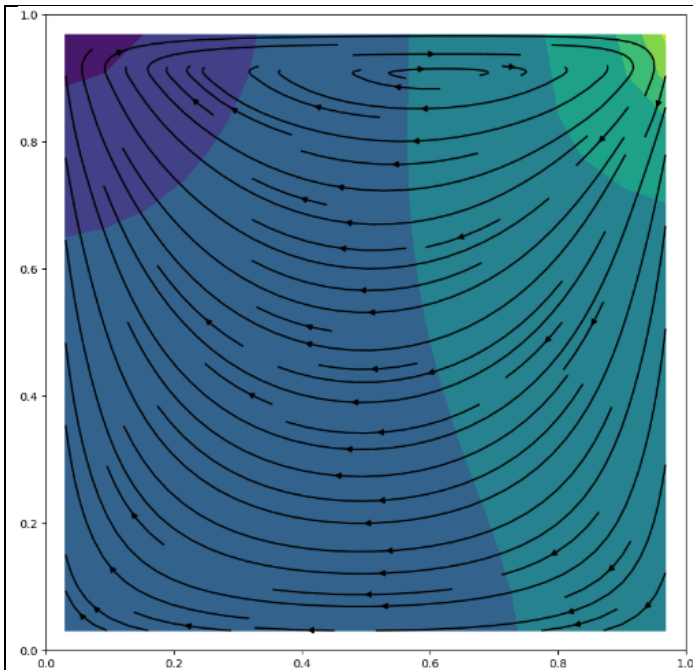
$\epsilon = 0.01$

$\Delta t = 0.01$

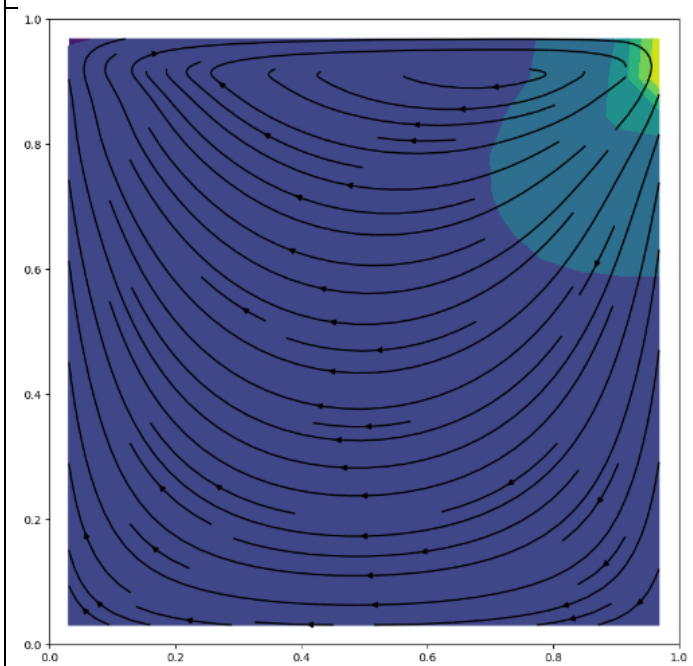
$t = 0$

$T = 25$

Изменение граничного условия

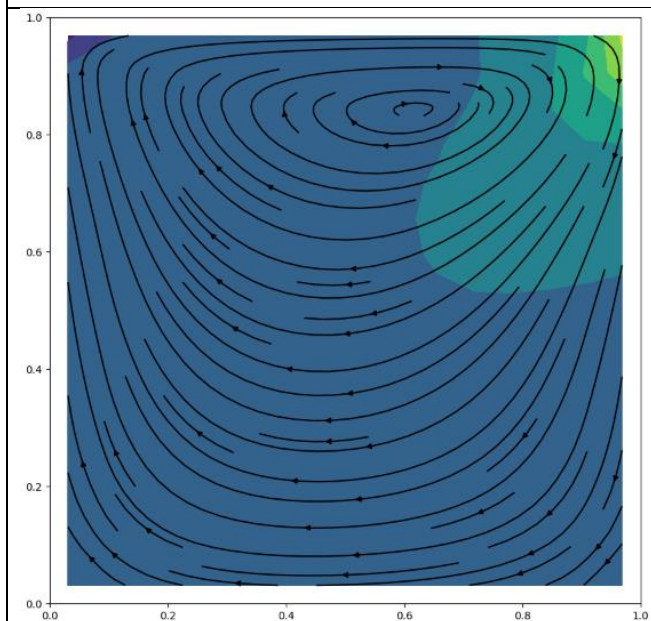
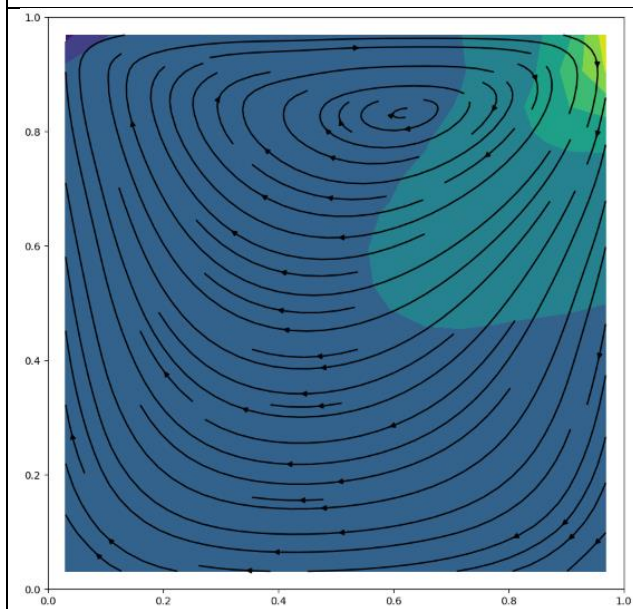
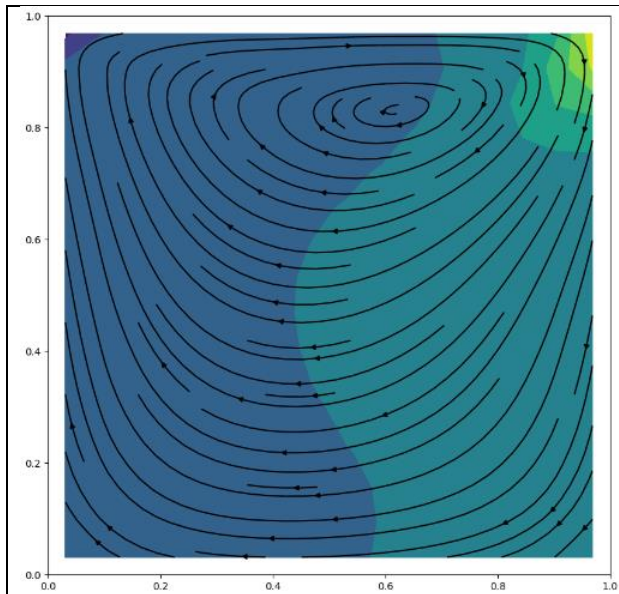


$Ux0 = 1$
 $L = 1$
 $N = 16$
 $\nu = 0.001$
 $\epsilon = 0.01$
 $dt = 0.1$
 $t = 0$
 $T = 1$



$Ux0 = 2$
 $L = 1$
 $N = 16$
 $\nu = 0.001$
 $\epsilon = 0.01$
 $dt = 0.1$
 $t = 0$
 $T = 1$

Использование релаксации:



-

$$p_{\text{new}} = p_{\text{new}} + 0.85 * p_{\text{differ}}$$

$$\begin{aligned} p_{\text{new}} &= p_{\text{new}} + 0.85 * p_{\text{differ}} \\ u_{\text{new}} &= a * u_{\text{new}} + (1 - a) * \\ &u_{\text{prev}} \\ v_{\text{new}} &= a * v_{\text{new}} + (1 - a) * \\ &v_{\text{prev}} \end{aligned}$$