#ifdef CNN\_TEST

#include <stdio.h>

#endif

#include <math.h>

static float w\_3 [3][3][1][4] = { -5.1794827e-02,1.5314537e-01,1.2613699e-01,-1.20393336e-01,3.0795383e-01,-1.7754848e-01,1.4102387e-01,-9.378889e-02,-1.6208617e-01,-2.7332368e-01,-1.5156354e-01,3.308316e-01,8.145702e-02,3.2497323e-01,2.4473315e-01,-1.3246612e-01,2.2199601e-01,-1.7412484e-01,-1.6006826e-01,-2.5587106e-01,4.5744896e-02,1.0902676e-01,5.414799e-02,-1.7715342e-01,4.5184404e-02,-3.099287e-01,2.3988259e-01,2.2794187e-02,2.2709304e-01,1.2083489e-01,2.188701e-01,-2.1570912e-01,-2.8561622e-01,5.840671e-02,2.4931723e-01,-3.3826578e-01 };

static float b\_3 [4] = { 0.e+00,0.e+00,0.e+00,0.e+00 };

static float w\_2 [3][3][4][8] = { 2.0701125e-02,6.486438e-02,7.247792e-02,1.721959e-01,-2.1340293e-01,3.1337038e-02,-1.1780286e-01,-2.2107624e-01,2.1565728e-01,2.2844695e-01,-6.612441e-02,-1.754565e-01,-1.8535015e-01,-2.1694349e-01,2.4434552e-02,1.447099e-01,2.9806599e-02,-1.3719817e-01,-1.4548367e-01,-2.2253738e-01,7.238446e-02,-1.1921942e-02,-1.1227375e-01,2.026188e-01,2.2326519e-01,7.47806e-02,2.1550037e-01,-6.698246e-02,-1.8189883e-01,1.498584e-01,-1.0702804e-01,-8.5011885e-02,2.1037914e-01,-1.931377e-01,-6.2177956e-02,-1.2904182e-02,2.208523e-01,-1.10117465e-01,1.8641968e-01,1.494018e-01,-4.861617e-02,-3.188719e-02,-2.3137772e-01,-6.454863e-02,2.1028118e-01,2.1005102e-01,1.2222062e-01,-1.10782206e-01,2.610132e-03,8.069311e-02,6.940384e-02,1.3599159e-01,9.80774e-02,-1.3759327e-01,6.415437e-02,-1.6446325e-01,-5.9759006e-02,1.2281756e-01,3.3660993e-02,1.6936783e-01,1.3891771e-02,-6.74689e-02,2.0064463e-01,-1.7409834e-01,7.8477755e-02,2.5985047e-02,-5.658923e-02,-1.1101834e-01,-1.5512833e-01,-3.5667196e-02,-7.36859e-02,-1.6121726e-01,-9.652285e-02,4.8324183e-02,1.6978629e-01,-2.386956e-02,-1.6415405e-01,-9.765267e-02,-1.286333e-01,2.4294958e-02,1.4956175e-01,1.2603949e-01,-3.8270578e-02,-1.4833578e-01,-9.102033e-02,-2.2554836e-01,-8.344126e-02,-7.82381e-02,-7.3751196e-02,-1.3671404e-01,-1.6117899e-01,9.8496184e-02,1.5615478e-02,-6.665498e-03,-8.024794e-02,-2.6384205e-02,-9.2113346e-02,3.99469e-02,-2.0705375e-01,-1.4071861e-01,8.841738e-03,1.3504699e-02,-2.081811e-01,9.03943e-02,-1.3171773e-01,1.0321291e-01,8.7946653e-04,-2.2355896e-01,1.6616748e-01,1.5488736e-01,1.4778033e-02,9.410545e-03,-4.7117367e-02,-2.8873399e-02,-6.596291e-02,-1.9396368e-01,1.3840695e-01,1.953562e-01,-1.06695e-02,1.3818918e-01,9.1259345e-02,1.3296865e-01,1.5956531e-01,5.042313e-02,-2.0633462e-01,-6.5999776e-03,3.5397708e-03,6.2494442e-02,1.9321983e-01,1.870353e-01,-4.881859e-02,2.1771207e-02,1.8802585e-01,2.2730918e-01,-2.047893e-01,-2.7520373e-02,-2.0814523e-02,-8.548005e-02,1.0753572e-03,-1.00225374e-01,1.3160484e-01,3.7074223e-02,8.9335576e-02,4.9563497e-03,-1.9394518e-01,1.00629315e-01,-1.6968265e-02,9.017308e-02,4.9782917e-02,-2.2745985e-01,-9.5848516e-02,-1.4273122e-02,-2.2995567e-01,-5.098234e-02,2.0968603e-01,-3.0959845e-02,-2.2274777e-02,4.2665884e-02,1.5047054e-01,1.8249051e-01,5.138977e-02,1.3743262e-01,-2.7545884e-02,-9.233841e-02,4.5784414e-03,-7.1398556e-02,2.2980468e-01,-9.9192545e-02,-2.2944008e-01,-1.9820629e-01,-9.491217e-02,-1.8332267e-01,7.1304366e-02,2.1648408e-01,1.775934e-01,7.9086825e-02,-1.6072993e-01,2.215666e-01,5.9271738e-02,8.45754e-02,2.2297223e-01,1.10615596e-01,-2.2955596e-01,-1.50253475e-02,-2.1100764e-01,-9.5926e-02,1.7509599e-01,-2.3037373e-01,-1.2459817e-01,-2.175127e-01,-1.0439117e-01,-1.1947407e-01,-1.8171434e-01,1.4770897e-01,1.513464e-01,-1.9061092e-01,3.2026872e-02,-1.9611788e-01,1.8889864e-01,7.180934e-02,-6.72566e-02,1.757297e-01,-1.4850633e-01,8.45653e-02,2.6668504e-02,-3.7087485e-02,3.016068e-02,-3.634356e-02,1.0084684e-01,-2.1479821e-01,1.7084669e-01,-7.811558e-02,1.1360471e-01,1.4300212e-02,-2.1887071e-01,1.9577391e-01,8.1689194e-02,1.4747755e-01,1.2406409e-03,2.2918303e-01,1.891569e-01,-1.07396185e-01,-1.4202893e-01,-7.6707304e-03,-1.1753497e-01,-1.8980828e-01,-1.5792379e-01,7.810058e-02,-1.1783361e-02,-2.2114952e-01,-2.5544703e-02,1.9986604e-01,-1.0342376e-01,6.2291905e-02,3.8969144e-02,1.980059e-01,2.3289569e-01,-1.0086517e-01,-1.3815507e-01,2.6529148e-02,1.8463899e-01,7.2385654e-02,1.11066386e-01,-4.3126166e-02,-6.66064e-02,2.0283772e-01,8.1586406e-02,-4.6133995e-05,-1.7889893e-01,-1.0109574e-02,-2.4291128e-03,-1.4353165e-01,-9.108682e-02,2.3239665e-01,8.432679e-02,-6.181757e-02,2.1768959e-01,-1.939444e-01,1.8615015e-01,-9.358168e-03,1.9185515e-01,1.6606404e-01,-1.664564e-02,2.1195836e-01,1.3213341e-01,6.306411e-02,-1.6174123e-01,1.7231019e-01,2.2460319e-01,-1.7352155e-01,2.8704658e-02,1.304739e-01,9.446372e-02,7.0609406e-02,1.8335178e-02,2.3345043e-01,-1.2856998e-01,1.4357343e-02,-1.9748715e-01,2.2353335e-01,1.9805439e-01,-2.2399926e-01,1.7052828e-01,7.4582264e-02,2.054741e-01,1.5357064e-01,2.1623076e-01,1.0751362e-01 };

static float b\_2 [8] = { 0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00 };

static float w\_1 [3][3][8][16] = { -6.631136e-03,1.0098331e-01,-1.9423962e-02,2.9726818e-02,1.2909998e-01,-1.1161089e-01,3.040488e-02,1.0350998e-01,-1.1442304e-01,-4.7648117e-02,1.4874272e-01,-1.07554436e-01,-1.3967697e-01,1.5167479e-01,1.1294629e-01,1.2968425e-01,1.4535703e-01,-5.4200143e-03,9.49917e-02,-1.2234485e-01,1.0273938e-01,1.0463595e-02,1.1816025e-03,2.830474e-02,1.3043447e-01,1.19642064e-01,1.0783248e-01,-1.458646e-01,1.02845386e-01,5.995965e-02,-9.450035e-02,6.4350724e-02,1.5583114e-01,1.0630186e-01,-1.10247694e-01,-5.7275295e-02,1.1526759e-01,-8.469026e-02,1.2618078e-01,-1.5059587e-01,1.279334e-01,-1.510917e-01,5.032587e-02,-1.9099668e-02,2.6870847e-02,1.5627994e-01,9.8681256e-02,1.197765e-01,9.8272115e-03,1.11450866e-01,-2.8024152e-02,1.24109104e-01,1.0538657e-01,7.235682e-02,-1.443212e-01,3.0941725e-02,-8.384311e-02,-8.938162e-02,-3.2417133e-02,1.2688638e-01,-9.496236e-02,-1.695025e-02,1.3705303e-01,1.2090553e-01,-4.3191075e-02,-1.5479033e-01,-1.2354505e-01,2.3335025e-02,1.5816168e-01,-1.3563149e-01,1.0559751e-01,1.4913528e-01,8.419879e-02,4.55056e-02,-1.0132909e-01,6.099792e-02,9.390429e-03,-4.2168975e-02,1.4302246e-01,4.007049e-02,-1.7492339e-02,4.738657e-02,3.2144263e-02,-1.0408211e-01,5.966468e-02,8.399844e-03,1.5630431e-01,1.1181398e-01,-6.49248e-02,-1.2708037e-01,-5.3412467e-03,1.483398e-01,-1.2862086e-02,1.2258962e-02,-7.4124694e-02,-1.3006608e-01,1.5642092e-02,6.0723945e-02,-1.315943e-01,4.063995e-02,-1.029129e-01,1.0236554e-01,9.1655925e-02,4.0471867e-02,6.918721e-02,-1.0013612e-01,-8.555734e-02,-5.1108003e-02,1.560613e-01,1.2760265e-01,-1.2799597e-01,4.2250156e-02,-5.4548234e-03,1.0602887e-01,5.916965e-02,-6.91764e-02,4.404004e-02,5.7975054e-02,-1.3789988e-01,6.1775044e-02,2.8636009e-03,-8.41587e-02,-1.3238835e-01,7.7122286e-02,1.1147411e-01,1.93934e-02,1.2583883e-01,-5.701518e-02,1.6356604e-01,1.07714966e-01,-4.109256e-02,1.8698722e-03,-1.5045409e-01,-8.636447e-02,-1.0241306e-01,-8.052977e-02,4.7786593e-02,1.4459695e-01,8.167148e-02,-9.423375e-03,-1.3282892e-01,-3.988175e-02,6.2742874e-02,1.196067e-02,-2.2810534e-02,1.05110094e-01,8.97789e-03,6.1897114e-02,-1.0329163e-01,1.3948281e-01,-1.00089036e-01,1.2567475e-02,3.1929538e-02,1.0866396e-01,8.825953e-02,2.7221158e-02,5.720453e-02,8.844137e-04,1.3284294e-01,1.2830834e-01,1.0598376e-02,1.252441e-01,-1.2944834e-01,-1.025939e-01,-5.159025e-02,-1.0627198e-01,-1.2727377e-01,3.865555e-03,-7.020073e-02,-2.0608902e-03,-1.4414907e-01,1.5413716e-02,7.2895646e-02,-1.4424518e-02,-6.873326e-02,-2.33002e-03,-2.5322914e-02,-1.5118754e-01,-1.8251374e-02,1.1404589e-02,-1.5315318e-01,3.5648346e-02,2.5947407e-02,-7.239302e-02,6.381273e-04,-1.5478429e-01,-2.7478293e-02,-5.9379302e-02,-1.543744e-01,-1.322814e-01,-2.4260923e-02,1.81849e-02,-1.0204872e-01,1.507378e-01,1.2386657e-01,-1.5384226e-01,1.5843214e-01,1.1585669e-01,2.0822093e-02,2.7182415e-02,1.1890574e-01,-1.5042047e-01,-3.787589e-02,4.5443654e-02,-3.2761812e-02,6.6196606e-02,1.5468349e-01,6.1133385e-02,1.6536982e-01,-3.2160565e-02,-1.5948853e-01,3.97809e-02,-2.8550074e-02,-5.2013397e-03,-1.5643072e-01,-7.7229224e-02,1.1028613e-01,-1.5948956e-01,1.6010897e-01,3.74095e-02,1.4181654e-01,4.5041993e-02,1.625833e-01,-3.4225866e-02,-1.8548086e-02,-5.811187e-02,1.566494e-01,-4.2915627e-02,-1.612396e-01,7.578209e-03,7.17361e-02,1.1266257e-01,1.5996702e-01,-1.00393616e-01,-1.045274e-01,-1.6159013e-02,-9.38743e-02,1.1076112e-01,5.8403373e-02,3.4668162e-02,-3.279583e-02,5.035281e-02,-1.3100621e-01,-1.2578118e-01,1.40275955e-02,-7.265687e-03,-5.290544e-02,-4.9413048e-02,-7.8018114e-02,-4.2461157e-03,-1.1358635e-01,-3.246148e-02,-1.2955317e-01,-6.413631e-02,6.402235e-02,1.3510443e-01,1.4538456e-01,-4.0519238e-03,-3.8579777e-02,5.122292e-02,-5.925127e-02,9.362295e-03,1.2012644e-01,-1.2964988e-01,1.49866e-01,1.1513452e-01,1.1678852e-01,-6.2051818e-02,4.632637e-03,-7.8396164e-02,-1.1100229e-01,-1.480062e-01,-9.42146e-02,1.417207e-01,-1.05726205e-01,1.4204364e-01,-1.2138872e-01,-3.3351928e-03,4.5645118e-02,-3.0266806e-02,-1.165913e-01,-1.5646482e-01,6.78356e-03,-1.3124701e-01,-1.11067615e-01,9.156184e-02,-5.034443e-02,3.4889176e-02,5.9160754e-02,-7.530825e-02,1.4260106e-01,9.658654e-02,-2.2846416e-02,-1.07971154e-01,1.3806419e-01,-1.3257341e-01,-1.3397221e-01,-1.9979164e-02,1.411958e-02,-6.2687844e-03,-1.6538596e-01,1.1602278e-01,1.361609e-01,-1.150234e-02,1.3249584e-01,6.3930556e-02,1.4696643e-02,1.9236043e-02,1.2568955e-01,-4.4547997e-02,8.139436e-02,1.5063061e-01,8.293903e-02,-9.5332265e-02,5.1022023e-03,8.045316e-02,-2.8072312e-02,8.8426426e-02,-6.3267075e-02,1.5756921e-01,-7.524526e-02,-1.2889764e-01,6.6449836e-02,-1.465188e-01,-1.20491505e-01,-8.038208e-03,8.809842e-02,-7.24382e-02,1.560766e-01,-1.460211e-01,-9.9507414e-02,-3.9573625e-02,2.526939e-02,6.3799456e-02,-1.6468129e-01,1.6341741e-01,-1.0408175e-01,5.8022067e-02,3.697431e-02,-1.10939145e-01,-1.2324464e-01,6.3875914e-03,-1.5548265e-01,-6.342161e-02,2.2230864e-02,9.953107e-02,1.12841055e-01,3.4855172e-02,1.3291039e-01,1.6382374e-01,-1.08610556e-01,1.6162045e-01,-1.0976597e-01,1.1802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};

static float b\_1 [16] = { 0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00,0.e+00 };

static float w\_0 [288][2] = { 1.8968463e-02,6.4835295e-02,6.1271653e-02,-8.3844915e-02,1.2063877e-01,-4.7752075e-02,1.09828785e-01,-1.1725721e-01,9.2349604e-02,4.7494292e-02,-4.8192374e-02,6.400597e-02,-6.952348e-02,-1.18213154e-01,-1.2324928e-01,-1.4220008e-01,-1.3250785e-01,-8.127034e-03,7.239854e-02,-1.0021085e-01,-2.4156444e-02,1.19028494e-01,-4.5288607e-02,-8.74337e-02,1.2712528e-01,-4.461971e-02,-1.4209731e-01,1.3563783e-01,1.360421e-01,2.1849662e-02,-6.157361e-02,2.4563e-02,-7.004883e-02,-1.209293e-01,1.3996683e-01,7.222958e-02,1.0945727e-01,1.0284884e-01,-7.818166e-02,-2.9154263e-02,-8.903818e-02,-5.751878e-03,9.406264e-02,6.4633146e-02,-1.13553576e-01,-1.3160899e-02,-1.18542716e-01,1.400501e-01,-1.4218137e-02,5.6485534e-03,8.772281e-02,1.1629473e-01,-1.2235269e-02,-7.085042e-02,-1.256223e-02,-1.1559842e-01,3.0497313e-02,1.4067665e-02,2.5646642e-02,1.4635712e-02,2.5870726e-02,-4.5403667e-02,-1.0493994e-02,-1.4245585e-01,1.2712298e-01,8.639337e-02,-5.497022e-02,1.2214868e-01,1.1510338e-01,-6.1552376e-03,-5.794227e-03,-1.9812882e-02,1.1817603e-01,1.071627e-01,5.5019945e-02,-7.5159684e-02,1.1932597e-02,-7.218009e-02,1.03464484e-01,1.319799e-01,1.23187676e-01,-8.639169e-02,-9.755335e-02,-9.783487e-02,7.802686e-02,-1.3992736e-01,-1.1908785e-01,4.6460778e-02,5.9811413e-02,-8.439763e-02,-1.0058202e-01,1.2714182e-01,1.4992908e-02,-1.00166306e-01,7.835494e-02,1.4058813e-02,-4.8492998e-02,1.22384086e-01,-2.2818916e-02,-1.1733029e-01,5.477467e-02,5.928555e-02,-8.045647e-02,-1.1520973e-01,1.3223557e-01,-1.5422404e-02,-6.801246e-02,-1.2241563e-01,5.734606e-02,3.496355e-02,-8.059442e-04,-6.0652852e-02,-1.02818765e-01,-6.620034e-02,4.0436745e-02,-1.3163231e-01,-1.2858576e-01,9.981853e-02,1.03163004e-01,1.0724664e-02,1.1483893e-02,-8.948839e-02,1.2794335e-01,-2.432891e-02,4.3476626e-02,-8.127061e-02,-6.416397e-02,2.1861807e-02,1.1964999e-01,2.0291597e-02,-8.873962e-02,-1.9737571e-02,9.078117e-02,-6.8591885e-02,-1.9577727e-02,2.4647355e-02,-1.47431195e-02,-8.986257e-02,4.6379402e-02,8.039704e-02,-3.440261e-03,3.483233e-02,9.4821155e-02,-6.0930394e-02,4.7758177e-02,1.3773315e-01,2.5342599e-02,9.00684e-02,6.566504e-02,2.6117608e-02,-8.942131e-02,2.446115e-03,1.6883224e-02,2.4530008e-02,-8.713281e-02,4.8088804e-02,-3.8477674e-02,-7.811283e-02,-7.409115e-02,1.191269e-01,3.3413917e-03,6.851037e-02,-6.2574744e-03,-1.1795664e-01,-2.0860389e-02,-1.2151942e-02,9.103313e-03,-4.0754855e-02,1.3607602e-01,-1.06485814e-01,-8.193715e-02,-7.0265085e-03,6.285991e-02,-3.283132e-02,1.1104138e-01,-7.880838e-02,1.3560973e-01,-1.3075516e-01,1.3331734e-01,-4.4112124e-02,9.257209e-02,1.0578944e-01,-8.35053e-02,6.623131e-02,1.3511647e-01,-9.074122e-03,-2.9446855e-02,-3.3511475e-02,-1.2521207e-02,6.94038e-02,7.528485e-02,6.4098686e-03,-1.1032854e-01,1.2654205e-01,9.286548e-02,-7.172745e-02,-1.3221541e-01,9.5694765e-02,7.620071e-02,9.010294e-02,-6.9550425e-03,-8.879932e-02,9.23084e-02,4.0546358e-03,1.293733e-01,-9.8193996e-02,-7.1013995e-02,-3.84537e-02,-1.0794584e-01,4.172431e-02,1.0964717e-01,-9.168323e-02,1.2281309e-01,3.218907e-02,-6.067069e-02,9.7386e-02,7.393457e-02,-4.676815e-02,-5.1306844e-02,-1.2419492e-02,3.4227222e-02,-1.420245e-01,6.609492e-02,-1.1807502e-01,1.4302407e-01,-4.9649693e-02,-1.0347873e-02,1.1596842e-01,4.5473516e-02,3.0448511e-02,-1.0009367e-01,4.512468e-02,1.8199772e-02,-5.3635024e-02,-1.19210005e-01,-3.264747e-02,-3.2162964e-02,-7.770374e-02,-5.044668e-02,-6.5641105e-02,1.3542782e-01,-4.7950774e-02,-8.97041e-02,1.2648106e-02,-1.1716795e-01,-1.2871517e-01,1.3728787e-01,-1.2452999e-01,9.022118e-02,-7.074346e-02,1.13629684e-01,-2.8652169e-02,-9.109969e-02,4.947658e-02,-1.4113492e-01,-3.1147972e-02,-1.6371489e-02,6.625511e-02,8.368792e-02,9.5893905e-02,1.2557657e-01,-1.07676595e-01,1.2778018e-01,-8.916074e-02,-1.1491312e-01,-6.2789224e-02,4.0281832e-02,-1.13912664e-01,6.31312e-02,-3.0506127e-02,-1.3925862e-01,-1.353864e-01,-5.4702163e-03,3.8418382e-02,1.17661655e-02,-4.175497e-02,-8.589099e-02,-1.05376914e-01,2.3228824e-02,1.1090271e-01,-6.720391e-02,-2.4642043e-02,-6.8790756e-02,1.09700486e-01,5.2155375e-02,7.188657e-02,-1.0266289e-02,9.910604e-02,1.3080682e-01,-4.008849e-02,1.16634056e-01,-3.1240433e-03,1.2960766e-01,-5.5465184e-02,6.726536e-02,-6.579368e-02,4.3284506e-02,-5.850266e-02,3.863588e-03,1.5168324e-02,-2.3471184e-02,1.07921705e-01,4.8939124e-02,-1.0654463e-01,1.6976267e-02,-5.834817e-02,-1.1893864e-01,9.037468e-02,6.69118e-02,-4.965727e-02,1.22007534e-01,-8.1792496e-02,1.1798814e-02,-1.4212981e-01,-9.2677176e-02,2.800484e-02,2.3859724e-02,9.999195e-02,-1.2052319e-01,7.284059e-02,-9.413192e-02,-5.5651158e-02,-1.0387162e-01,-7.716814e-02,-5.8401287e-02,-6.6529796e-02,1.322182e-01,1.0815905e-01,4.7989458e-02,-6.384424e-02,9.109849e-02,4.6783417e-02,2.1092907e-02,1.4140661e-01,-3.63734e-02,2.362129e-02,-9.230272e-02,-1.740086e-02,-1.3500616e-02,-1.4183389e-01,6.0055315e-02,3.6753714e-03,-4.2383783e-02,7.010366e-02,4.6024323e-02,-6.571652e-02,1.3045724e-01,-1.3514222e-01,4.8635527e-02,8.027406e-02,-1.8288553e-02,6.716359e-02,1.0012367e-01,-7.3410124e-03,1.0372612e-01,-6.9363296e-02,5.942218e-02,4.9289063e-02,-7.1658105e-02,-7.6460384e-02,-1.0565518e-01,-1.1745979e-01,8.2551524e-02,7.992451e-02,1.2175183e-01,-6.42189e-02,9.783529e-02,-4.53906e-02,-6.408975e-02,-6.5865666e-02,1.4082044e-03,1.2324609e-01,2.4099648e-02,-3.803727e-02,-7.9165176e-02,1.15963325e-01,-1.2516703e-01,1.16614565e-01,-2.0300128e-02,1.21101364e-01,-5.438126e-02,9.088157e-02,-8.673599e-02,1.8533751e-02,-9.438652e-02,-1.379881e-01,5.3205937e-02,-3.903886e-02,1.3921802e-01,-6.688371e-02,-1.4050631e-01,9.10373e-02,8.7136716e-02,9.382571e-02,1.170115e-01,9.812206e-03,-8.165851e-02,3.4918204e-02,-9.665337e-02,1.0505757e-01,-3.3280842e-02,-7.4729055e-02,-1.1072436e-01,-1.1692017e-02,9.7094774e-02,-9.559888e-02,-6.449871e-02,-1.3640243e-01,-5.2620612e-02,6.7917496e-02,1.0646205e-01,-1.3710113e-01,-1.645805e-02,1.5937388e-03,9.63449e-02,-9.297978e-02,-9.468463e-02,9.872158e-02,-5.5829108e-02,-8.616126e-02,-1.3560273e-01,-2.25043e-02,7.094902e-02,3.28912e-02,-8.312906e-02,7.381046e-02,6.094089e-02,5.8728173e-02,-8.092404e-02,1.0403788e-01,-4.697618e-02,4.6021983e-02,7.428962e-02,7.554868e-02,-2.6517816e-02,-5.534471e-02,7.246092e-03,8.509037e-02,5.5789188e-02,1.01211414e-01,1.6765386e-02,-4.333204e-02,-5.831501e-02,-1.1827618e-02,6.813109e-02,7.355188e-02,-1.9685857e-02,4.421583e-02,-1.268897e-01,1.3389327e-01,5.287181e-02,-1.08697906e-01,2.4380624e-02,1.1472727e-01,-1.5761748e-02,-9.828446e-02,5.4444775e-02,3.2954678e-02,5.490324e-02,-1.9007355e-02,7.5608596e-02,-3.6408037e-02,-3.0217305e-02,9.586781e-02,-6.13352e-02,-1.1901429e-01,-4.4040486e-02,-1.02571785e-01,4.8356786e-02,1.0313325e-01,4.786536e-03,-1.1532177e-01,3.3047915e-02,1.10015795e-01,4.9730107e-02,7.3302537e-03,-1.4084023e-01,9.029789e-02,1.2936507e-01,-4.0421657e-02,-1.4157654e-01,-3.3181258e-02,-1.4022733e-01,-8.750737e-02,1.0808496e-01,-1.2894316e-01,-5.88075e-02,-2.0275094e-02,-2.5965892e-02,-1.06476486e-01,1.1619972e-01,1.5986234e-02,-1.2832165e-01,-8.032218e-02,1.24205634e-01,4.2030662e-02,-5.357874e-02,-6.014943e-03,1.2031697e-01,3.4976512e-02,1.12973794e-01,-5.0164722e-02,1.258894e-01,1.23285964e-01,-7.5429164e-02,-1.1779772e-01,7.877566e-02,-6.8921246e-02,5.213767e-04,-8.149599e-02,1.2133692e-01,-3.2074384e-02,-4.907438e-02,9.4682306e-02,7.113667e-02,-1.0976583e-02,-2.6120454e-02,-9.112555e-02,-6.167444e-02,-5.186803e-02,1.2213908e-01,1.3839065e-01,4.5484707e-02,2.8177291e-02,5.0586358e-02,4.6533987e-02,-9.980038e-03,-1.3226505e-01,-7.246919e-02,-1.1576447e-01,1.02895245e-01,6.477837e-02,3.3505157e-02,-1.15106165e-01,-6.01992e-04,-7.531174e-02,-7.812206e-02,1.16595075e-01,-1.1550428e-01,1.297719e-01,-1.0886669e-02,1.12658545e-01,3.4698144e-02,4.1118547e-02,8.879401e-02,3.663005e-02,9.917933e-02,8.621511e-02,-2.0445295e-02,1.0532036e-02,-4.366836e-02,-1.0100856e-02,-9.983266e-02,-1.0947798e-01,-7.70632e-02,6.209083e-02,2.0507157e-02,1.061286e-02,1.1566828e-01,1.288762e-01,-1.8273115e-02,4.080756e-02,9.455806e-02,-6.873534e-02,1.2409866e-02,2.1886155e-02,8.3428934e-02,5.2505285e-02,-7.258815e-02,3.3828795e-02,-6.7565195e-02,-7.87424e-02,-8.8317975e-02,5.7032928e-02,-1.3949615e-01,7.74643e-02 };

static float b\_0 [2] = { 0.e+00,0.e+00 };

void cnn(float x\_0[101][101][1], float \*x\_11)

{

static float x\_1 [102][102][1] = { 0 };

static float x\_2 [34][34][4] = { 0 };

static float x\_3 [34][34][4] = { 0 };

static float x\_4 [17][17][4] = { 0 };

static float x\_5 [8][5][8] = { 0 };

static float x\_6 [8][5][8] = { 0 };

static float x\_7 [6][3][16] = { 0 };

static float x\_8 [6][3][16] = { 0 };

static float x\_10 [2] = { 0 };

static float sum\_0 = { 0 };

float \*x\_9 ;

float \*flat\_x\_0 ;

for (int i\_48 = 0; i\_48 < 101; i\_48 += 1) {

for (int i\_47 = 0; i\_47 < 101; i\_47 += 1) {

for (int i\_46 = 0; i\_46 < 1; i\_46 += 1) {

x\_1[i\_48 + 0][i\_47 + 0][i\_46 + 0] = x\_0[i\_48 + 0][i\_47 + 0][i\_46 + 0] - 0;

}

}

}

#ifdef CNN\_TEST

{

FILE \*f = fopen("x\_1", "wb");

for (int i = 0; i < 10404; i++)

fprintf(f, "%8.8e\n", ((float\*)x\_1)[i]);

fclose(f);

}

#endif

for (int i\_37 = 0; i\_37 < 34; i\_37 += 1) {

for (int i\_38 = 0; i\_38 < 34; i\_38 += 1) {

for (int i\_39 = 0; i\_39 < 4; i\_39 += 1) {

x\_2[i\_37 + 0][i\_38 + 0][i\_39 + 0] = b\_3[i\_39 + 0];

}

}

}

for (int i\_40 = 0; i\_40 < 102; i\_40 += 3) {

for (int i\_41 = 0; i\_41 < 102; i\_41 += 3) {

for (int i\_42 = 0; i\_42 < 3; i\_42 += 1) {

for (int i\_43 = 0; i\_43 < 3; i\_43 += 1) {

for (int i\_44 = 0; i\_44 < 1; i\_44 += 1) {

for (int i\_45 = 0; i\_45 < 4; i\_45 += 1) {

x\_2[i\_40 / 3 + 0][i\_41 / 3 + 0][i\_45 + 0] += w\_3[i\_42][i\_43][i\_44][i\_45] \* x\_1[i\_40 + i\_42][i\_41 + i\_43][i\_44];

}

}

}

}

}

}

for (int i\_34 = 0; i\_34 < 34; i\_34 += 1) {

for (int i\_35 = 0; i\_35 < 34; i\_35 += 1) {

for (int i\_36 = 0; i\_36 < 4; i\_36 += 1) {

x\_3[i\_34 + 0][i\_35 + 0][i\_36 + 0] = x\_2[i\_34 + 0][i\_35 + 0][i\_36 + 0] < 0 ? 0 : x\_2[i\_34 + 0][i\_35 + 0][i\_36 + 0];

}

}

}

#ifdef CNN\_TEST

{

FILE \*f = fopen("x\_3", "wb");

for (int i = 0; i < 4624; i++)

fprintf(f, "%8.8e\n", ((float\*)x\_3)[i]);

fclose(f);

}

#endif

for (int i\_29 = 0; i\_29 < 33; i\_29 += 2) {

for (int i\_30 = 0; i\_30 < 33; i\_30 += 2) {

for (int i\_31 = 0; i\_31 < 4; i\_31 += 1) {

x\_4[i\_29 / 2 + 0][i\_30 / 2 + 0][i\_31 + 0] = x\_3[i\_29][i\_30][i\_31];

for (int i\_32 = 0; i\_32 < 2; i\_32 += 1) {

for (int i\_33 = 0; i\_33 < 2; i\_33 += 1) {

x\_4[i\_29 / 2 + 0][i\_30 / 2 + 0][i\_31 + 0] = x\_3[i\_29 + i\_32][i\_30 + i\_33][i\_31] > x\_4[i\_29 / 2 + 0][i\_30 / 2 + 0][i\_31 + 0] ? x\_3[i\_29 + i\_32][i\_30 + i\_33][i\_31] : x\_4[i\_29 / 2 + 0][i\_30 / 2 + 0][i\_31 + 0];

}

}

}

}

}

#ifdef CNN\_TEST

{

FILE \*f = fopen("x\_4", "wb");

for (int i = 0; i < 1156; i++)

fprintf(f, "%8.8e\n", ((float\*)x\_4)[i]);

fclose(f);

}

#endif

for (int i\_20 = 0; i\_20 < 8; i\_20 += 1) {

for (int i\_21 = 0; i\_21 < 5; i\_21 += 1) {

for (int i\_22 = 0; i\_22 < 8; i\_22 += 1) {

x\_5[i\_20 + 0][i\_21 + 0][i\_22 + 0] = b\_2[i\_22 + 0];

}

}

}

for (int i\_23 = 0; i\_23 < 16; i\_23 += 2) {

for (int i\_24 = 0; i\_24 < 15; i\_24 += 3) {

for (int i\_25 = 0; i\_25 < 3; i\_25 += 1) {

for (int i\_26 = 0; i\_26 < 3; i\_26 += 1) {

for (int i\_27 = 0; i\_27 < 4; i\_27 += 1) {

for (int i\_28 = 0; i\_28 < 8; i\_28 += 1) {

x\_5[i\_23 / 2 + 0][i\_24 / 3 + 0][i\_28 + 0] += w\_2[i\_25][i\_26][i\_27][i\_28] \* x\_4[i\_23 + i\_25][i\_24 + i\_26][i\_27];

}

}

}

}

}

}

for (int i\_17 = 0; i\_17 < 8; i\_17 += 1) {

for (int i\_18 = 0; i\_18 < 5; i\_18 += 1) {

for (int i\_19 = 0; i\_19 < 8; i\_19 += 1) {

x\_6[i\_17 + 0][i\_18 + 0][i\_19 + 0] = x\_5[i\_17 + 0][i\_18 + 0][i\_19 + 0] < 0 ? 0 : x\_5[i\_17 + 0][i\_18 + 0][i\_19 + 0];

}

}

}

#ifdef CNN\_TEST

{

FILE \*f = fopen("x\_6", "wb");

for (int i = 0; i < 320; i++)

fprintf(f, "%8.8e\n", ((float\*)x\_6)[i]);

fclose(f);

}

#endif

for (int i\_8 = 0; i\_8 < 6; i\_8 += 1) {

for (int i\_9 = 0; i\_9 < 3; i\_9 += 1) {

for (int i\_10 = 0; i\_10 < 16; i\_10 += 1) {

x\_7[i\_8 + 0][i\_9 + 0][i\_10 + 0] = b\_1[i\_10 + 0];

}

}

}

for (int i\_11 = 0; i\_11 < 6; i\_11 += 1) {

for (int i\_12 = 0; i\_12 < 3; i\_12 += 1) {

for (int i\_13 = 0; i\_13 < 3; i\_13 += 1) {

for (int i\_14 = 0; i\_14 < 3; i\_14 += 1) {

for (int i\_15 = 0; i\_15 < 8; i\_15 += 1) {

for (int i\_16 = 0; i\_16 < 16; i\_16 += 1) {

x\_7[i\_11 / 1 + 0][i\_12 / 1 + 0][i\_16 + 0] += w\_1[i\_13][i\_14][i\_15][i\_16] \* x\_6[i\_11 + i\_13][i\_12 + i\_14][i\_15];

}

}

}

}

}

}

for (int i\_5 = 0; i\_5 < 6; i\_5 += 1) {

for (int i\_6 = 0; i\_6 < 3; i\_6 += 1) {

for (int i\_7 = 0; i\_7 < 16; i\_7 += 1) {

x\_8[i\_5 + 0][i\_6 + 0][i\_7 + 0] = x\_7[i\_5 + 0][i\_6 + 0][i\_7 + 0] < 0 ? 0 : x\_7[i\_5 + 0][i\_6 + 0][i\_7 + 0];

}

}

}

#ifdef CNN\_TEST

{

FILE \*f = fopen("x\_8", "wb");

for (int i = 0; i < 288; i++)

fprintf(f, "%8.8e\n", ((float\*)x\_8)[i]);

fclose(f);

}

#endif

x\_9 = (float\*)x\_8;

for (int i\_2 = 0; i\_2 < 2; i\_2 += 1) {

x\_10[i\_2 + 0] = b\_0[i\_2 + 0];

}

for (int i\_3 = 0; i\_3 < 288; i\_3 += 1) {

for (int i\_4 = 0; i\_4 < 2; i\_4 += 1) {

x\_10[i\_4 + 0] += x\_9[i\_3] \* w\_0[i\_3][i\_4];

}

}

flat\_x\_0 = x\_10;

for (int i\_0 = 0; i\_0 < 2; i\_0 += 1) {

sum\_0 += expf(flat\_x\_0[i\_0 + 0]);

}

for (int i\_1 = 0; i\_1 < 2; i\_1 += 1) {

x\_11[i\_1 + 0] = expf(x\_10[i\_1 + 0]) / sum\_0;

}

#ifdef CNN\_TEST

{

FILE \*f = fopen("x\_11", "wb");

for (int i = 0; i < 2; i++)

fprintf(f, "%8.8e\n", ((float\*)x\_11)[i]);

fclose(f);

}

#endif

return;

}

#ifdef CNN\_TEST

#include <stdio.h>

#ifdef TIMING

#include <ctime>

#endif

int main()

{

int i, j, k, width, height, max\_colour;

unsigned char byte;

float x[101][101][1];

float scores[2];

FILE \*f = fopen("img.bin", "rb");

fread((float\*)x, sizeof(float), 101 \* 101 \* 1, f);

fclose(f);

cnn(x, scores);

FILE \*w = fopen("result.txt", "w");

for (int i = 0; i < 2; i++)

fprintf(w, "%f ", scores[i]);

fclose(w);

}

#endif