

```

g++-11 -std=c++11 -Wno-deprecated-enum-enum-conversion -O2 `pkg-config --cflags opencv4` -
MMD -MP -c main.cpp -o main.o
g++-11 main.o matrix.o rotmat.o `pkg-config --libs opencv4` -o main
./main
Success: simple constructor    0 0 0 0; 0 0 0 0; 0 0 0 0; 0 0 0 0; 0 0 0 0; 0 0 0 0;
Success: at method          3 3
Success: () operator        3 3
Success: creation of mat3    0 1 2 3; 4 5 6 7; 8 9 10 11; 0 1 2 3; 4 5 6 7; 8 9 10 11;
Success: transpose()        0 4 8; 1 5 9; 2 6 10; 3 7 11; 0 4 8; 1 5 9; 2 6 10; 3 7 11;
Success: Creation of mat4    0 0 1; 1 1 2; 2 2 3; 3 3 4; 0 0 1; 1 1 2; 2 2 3; 3 3 4;
Success: add()              0 4 9; 2 6 11; 4 8 13; 6 10 15; 0 4 9; 2 6 11; 4 8 13; 6 10 15;
Success: + operator         0 4 9; 2 6 11; 4 8 13; 6 10 15; 0 4 9; 2 6 11; 4 8 13; 6 10 15;
Success: inner product      12; 12;
Success: outer product      4 4 4; 4 4 4; 4 4 4; 4 4 4; 4 4 4; 4 4 4;
Success: multiply() (matrix multiplication    28 52 82; 28 52 82; 40 80 130; 28 52 82; 28 52 82; 40 80
130;
Success: * operator (matrix multiplication)    9 22 35 48; 11 30 49 68; 13 38 63 88; 15 46 77 108; 9 22
35 48; 11 30 49 68; 13 38 63 88; 15 46 77 108;
Success: * operator (scalar multiplication)    4.5 11 17.5 24; 5.5 15 24.5 34; 6.5 19 31.5 44; 7.5 23
38.5 54; 4.5 11 17.5 24; 5.5 15 24.5 34; 6.5 19 31.5 44; 7.5 23 38.5 54;
Success: Identity          1 0; 0 1; 1 0; 0 1;
Success: ninety 6.12323e-17 -1; 1 6.12323e-17; 6.12323e-17 -1; 1 6.12323e-17;
Success: ninety trasposed 6.12323e-17 1; -1 6.12323e-17; 6.12323e-17 1; -1 6.12323e-17;
Success: thirty 0.866025 -0.5; 0.5 0.866025; 0.866025 -0.5; 0.5 0.866025;
Success: sixty 0.5 -0.866025; 0.866025 0.5; 0.5 -0.866025; 0.866025 0.5;
Success: thirty*sixty 2.22045e-16 0
Success: thirty*sixty -1 -1
Success: thirty*sixty 1 1
Success: thirty*sixty 2.22045e-16 0
Success: thirty*sixty* ninety (ninety is transposed) 1 1
Success: thirty*sixty* ninety (ninety is transposed) 1.60812e-16 0
Success: thirty*sixty* ninety (ninety is transposed) -1.60812e-16 0
Success: thirty*sixty* ninety (ninety is transposed) 1 1
Success: Rotation of vector using rotation matrix 0.232051; 3.59808; 0.232051; 3.59808;

```