#include <stdio.h>

#include <stdlib.h>

#include <emmintrin.h>

#include <opencv/cv.h>

#include <opencv/highgui.h>

int main(int argc, char\*\* argv) {

IplImage\* Img1 = cvLoadImage(argv[1], CV\_LOAD\_IMAGE\_UNCHANGED);

IplImage\* ImgA = cvCreateImage(cvSize(Img1->width, Img1->height), 8, 4);

// a visualization window is created with title 'image'

cvNamedWindow("original", CV\_WINDOW\_AUTOSIZE);

cvShowImage("original", Img1);

cvWaitKey(0);

cvNamedWindow("alfa", CV\_WINDOW\_AUTOSIZE);

\_\_m128i mask\_B=\_mm\_set1\_epi32(0x000000FF);

\_\_m128i valor\_B;

for (int fila = 0; fila < Img1->height; fila++) {

\_\_m128i \*pOriginal=(\_\_m128i \*) (Img1->imageData + fila \* Img1->widthStep);

\_\_m128i \*pAlfa=(\_\_m128i \*) (ImgA->imageData + fila \* ImgA->widthStep);

for (int columna = 0; columna < Img1->widthStep; columna = columna + 16) {

valor\_B = \_mm\_and\_si128 (\*pOriginal, mask\_B);

\*pAlfa = valor\_B;

pOriginal++;

pAlfa++;

}

}

cvShowImage("alfa",ImgA);

cvWaitKey(0);

// memory release for img before exiting the application (funcion liberar memoria)

cvReleaseImage(&Img1);

// Self-explanatory (funcion distruir ventana)

cvDestroyWindow("original");

return EXIT\_SUCCESS;

}