

```

1  int main(int argc, char *argv[])
2  {
3      pgm_t opgm;
4      pgm_t ipgm;
5
6      int img_size = 0;
7      unsigned char *v_sub = NULL;
8      unsigned char max_val = 255;
9      VectorBlox_MXP_Initialize("mxp0", "cma");
10
11     readPGM(&ipgm, "input_lena.pgm");           //Reading input image
12     img_size = (ipgm.width * ipgm.height);
13
14     opgm.width = ipgm.width;                     //Allocate buffer for output image
15     opgm.height = ipgm.height;
16     opgm.buf = (unsigned char*)vbx_shared_malloc(img_size * sizeof(unsigned
17     char));
18
19     //Allocate vector on scratchpad
20     v_sub = (unsigned char *)vbx_sp_malloc(img_size * sizeof(unsigned char ));
21
22     //Transfer input bytes from memory to scratchpad
23     vbx_dma_to_vector(v_sub, ipgm.buf, img_size);
24     vbx_set_vl(img_size);
25
26     vbx(SVBU, VSUB, v_sub, max_val, v_sub);
27     //Writing result from scratchpad to memory
28     vbx_dma_to_host(opgm.buf, v_sub, img_size);
29     vbx_sync();
30
31     writePGM(&opgm, "out_lena_negative.pgm");    //Writing output image
32
33     vbx_sp_free();                               //Free the allocated pointers
34     vbx_shared_free(ipgm.buf);
35     vbx_shared_free(opgm.buf);
36 }

```