

```

1.  __global__ void spmv_CSR(int num_rows, float *data, int *col_index,
    int *row_ptr, float *x, float *y) {

2.      int row = blockIdx.x * blockDim.x + threadIdx.x;

3.      if (row < num_rows) {
4.          float dot = 0;
5.          int row_start = row_ptr[row];
6.          int row_end = row_ptr[row+1];
7.          for (int elem = row_start; elem < row_end; elem++) {
8.              dot += data[elem] * x[col_index[elem]];
9.          }
10.         y[row] = dot;
11.     }
12. }

```