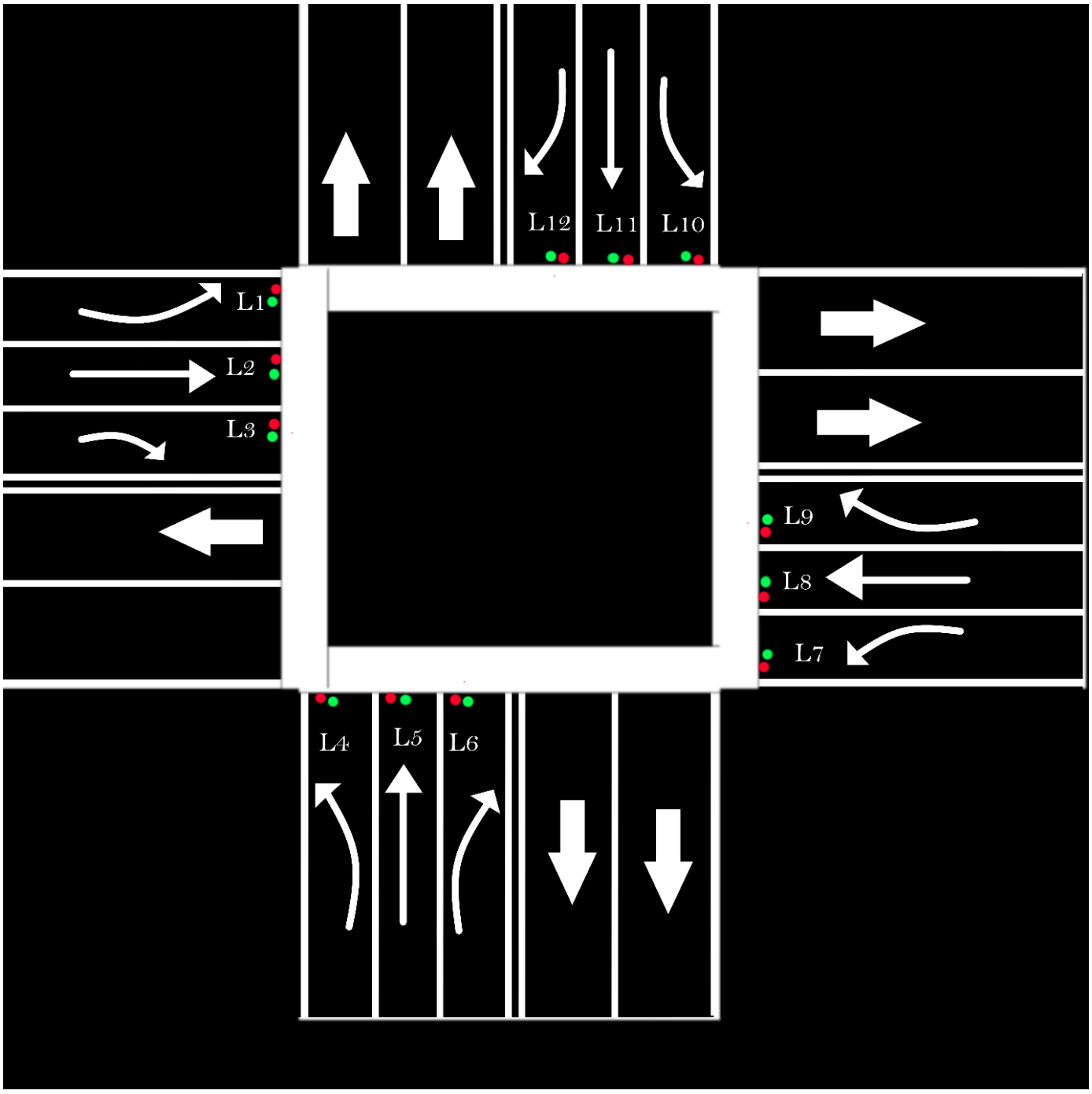
VISUALIZATION OF ROAD:



Basic Operation table:

IF GREEN	MUST RED	SHOULD GREEN
LIGHT(L2)	L11, L12, L13	L8
LIGHT(L3)	L5, L6, L7	L9
LIGHT(L5)	L8, L2, L3	L11
LIGHT(L6)	L3, L11, L8, L9	L12
LIGHT(L8)	L3, L11, L6, L5	L2
LIGHT(L9)	L2, L6, L11, L12	L3
LIGHT(L11)	L2, L6, L8, L9	L5
LIGHT(L12)	L5, L2, L3	L6

1. There are 12 traffic-lights in minimum required for this operation.
2. The L1, L4, L7, L10 are generally green.
3. The operation of the light is controlled by software. The priority is given according to the following points:
    1. If a lane contains less than 5 vehicles, then it is first marked as non-busy lane. The program checks whether other lanes are not busy and mark them non-busy.
    2. The highest priority goes to the non-busy lanes and among the list of non-busy lanes random lane is picked up and is given the green signal. Time is determined by giving 6 seconds for the passage of each vehicles.
    3. If there is not any non-busy lanes, the priority goes to the lane containing maximum number of vehicles.

The whole operation is completed in called cycle and one a lane gets a priority then it can get priority only after all other lanes gets green signal i.e. after 8 cycles.

For example:

If L3 gets priority and time of operation is assigned, then it does not get priority until all other lights are marked green.

The 8 cycle is completed within 800 seconds.