

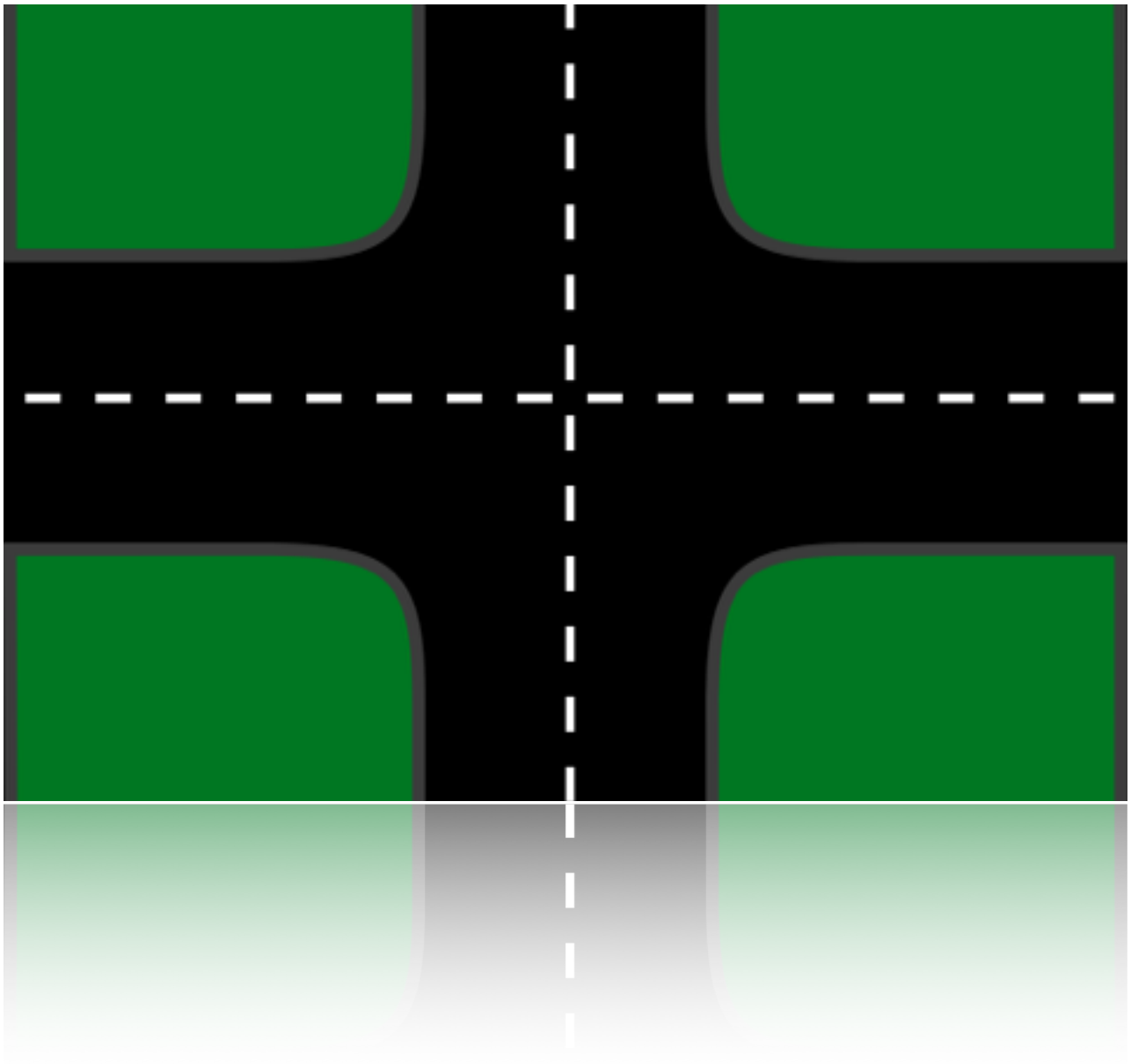
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# USER MANUAL

## Crossroad

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## 1. Installation

1. unzip the folder wherever you want ( but you have to remember the path)
2. open a terminal
3. enter the command `cd` and the path to the folder that you unzipped in part 1, then `OS-Project/`

Example :

`cd ./Documents/OS-Project/`

if you put the folder in the repertory Documents.

4. enter the command `make` in the terminal

## 2. Interactive mode

If you choose the interactive mode, you have to write in the terminal :

`./crossroad`

then, you will see :

you choose the interactive mode

press q if you want to exit

press :

- P if you want to create a car in the primary road
- S in the secondary one

CROSSROAD : the roadLight on the route 1 is red  
CROSSROAD : the roadLight on the route 0 is green

As it says, if you want to :

- generate a car in the primary road (road 0) : enter the character p or P  
you will see :

p

CARS : new car 1 has just been created on road 0 !  
CARS : the car 1 is on the crossroad  
CROSSROAD : 1 car(s) in the crossroad  
CROSSROAD : the roadLight on the route 0 is red  
CARS : the car 1 left the crossroad  
CROSSROAD : 0 car(s) in the crossroad

- generate a car in the secondary road (road 1) : enter the character s or S

you will see :

```
S
  CARS : new car 1 has just been created on road 1 !
  CARS : the car 1 is waiting the roadLights to turn to green
on the secondary road
  CARS : 1 car(s) are/is waiting in the secondary route
CROSSROAD : the roadLight on the route 0 is red
CROSSROAD : the roadLight on the route 1 is green
CROSSROAD : 1 cars are freed
  CARS : the car 1 is on the crossroad
CROSSROAD : 1 car(s) in the crossroad
  CARS : the car 1 left the crossroad
CROSSROAD : 0 car(s) in the crossroad
```

- exit : enter the character q or Q

END CROSSROAD

If you enter any other character, or several characters, this message will appear :

```
Error : you can only press :
- P if you want to create a car in the first route
- S in the second one
```

### 3. Automatic mode

In automatic mode we have 4 options :

- « -a » means that we are in the automatic mode, next to « -a » we can put the time maximum (in milliseconds) to wait before generating a new car. The default value is 1 second.
- « -n » means number maximum of cars created, you have to put the number maximum of cars that you choose after « -n ». The default value is 30.
- « -t » means the time during which the light is green on the secondary road, it's green 2time in the primary road, you have to put a value after « -t ». The default value is 1 second.
- « -f » means that you put your parameter in a file, you have to write the path to the file after « -f ». In the file you can put some commentaries, if you want you can also write what the numbers mean. But the two only things that you have to respect are the order of the parameters and you have to put the 3 parameter, not less.

The parameter 's order :

1. maximum time to wait before generating a new car (in ms)
2. maximum number of car that we have to create
3. the time to wait before the roadLight turn to red

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Some examples of « -f »'s parameters :

- ❖ *-a 400 -n 10 -t 1000 //this is an other one*
- ❖ *I want generate cars after 500 ms in maximum and I want generate 7 cars, the roadLight have to wait 300 ms before turning to red*
- ❖ *600 4 500*
- ❖ *a = 400 n = 12 t = 300*

Some examples of arguments in the automatic mode :

```
./crossroad -f ./test
./crossroad -f ./path/to/my/file
./crossroad -a
./crossroad -a 500
./crossroad -a 500 -n 5
./crossroad -a 500 -n 5 -t 200
./crossroad -n 5 -t 200
./crossroad -t 200
./crossroad -t 200 -a 636
```

You will find a file named « test » in the folder, put this command if you want to see how it works :

```
./crossroad -f ./test
```