| INPUT | PROCESS | ОИТРИТ |
|-----------------------|---|---|
| Input.txt (Data file) | Read first line | |
| | Scan file and compile matching number plates | |
| | Identify checkpoints passed through for each number plate | |
| | If vehicle passes through checkpoint 1,2 and 3, Then minus timestamp at 1 from checkpoint 2 and minus timestamp at checkpoint 2 from checkpoint 3 | |
| | If vehicle passes through checkpoint 1 and 2 then minus timestamp at checkpoint 1 from checkpoint 2 | |
| | If vehicle passes through checkpoint 2 and 3, minus checkpoint 2 from checkpoint 3 | |
| | Calculate average speed of vehicle using times from above | |
| | If average speed > 110km/h then add number plate into speeding cars, with average speed and timestamp | Timestamp, checkpoint number, number plate and average speed of car which is speeding |
| | Loop from process 2 for number of times specified in line 1 of the input file | Complete list of speeding cars with; timestamp, checkpoint number, number plate and average speed |