GOALS:

[G1]: Users can be uniquely identified, thanks to the completion of the Registration Process.

[G2]: Authority can be uniquely identified, thanks to the completion of Registration Process.

[G3]: Allows users to notify authorities when traffic violations occur.

[G4]: Allows authorities to increase the security of the city.

[G5]: Allows end users to mine information on traffic violations that has been received and build some statistics.

[G6]: Allows authorities to mine information on traffic violations that has been received and build some statistics.

[G7]: Allows to cross information analysis to improve reliability of the service and suggest to municipality possible interventions.

[G8]: Allows municipality(in particular local police) to retrieve traffic violations in order to generate relative traffic tickets.

[G9]: Build statistics using information related to emitted traffic tickets.

REQUIREMENTS:

**[G1]:**

[R1] - Visitors must be able to begin the Registration Process into the login page.

[R2] – During the Registration Process the system must ask to the Visitor for his private data (name, surname, address, gender, age, email, and fiscal code) through a specific form.

[R3] – The system must accept the signup by a Visitor if the provided fiscal code is not associated to another existing account.

[R4] – The system must verify the coherence between the fiscal code inserted in the registration process form, and the personal data of the user with an algorithm.

[R5] – The signup must include a completion process in order to verify the correctness of the user’s registration and enable the user to access to the software.

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**[G2]: Authority can be uniquely identified, thanks to the completion of Registration Process.**

[R1]:

[R3]:

[R4]:

[R5]:

[R6]: During the Registration Process the system must ask to the Visitor for his private data (name, surname, address, gender, age, email, and fiscal code) and the unique code through a specific form.

[D1]: Each authority member must have an uniquely identifiable code.

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**[G3]: Allows users to notify authorities when traffic violations occur.**

[R7] – Users must provide their credentials, into the form of login page, to access their personal view.

[R8] – If the credentials does not match with the stored ones, the system has to reject the request of login prompting an error.

[R9] – The mobile application must provide a section where the users can fill a form and upload images about the occurred traffic violations.

[R10] – The mobile application must provide a section where users can find all his past notifications.

[D2]: Devices used by end users must have a camera.

[R11]: Should allow end users to share the traffic violation’s position.

[D3]: Device used by end users must have and enabled GPS.

[D4]: Sent position is assumed to be reliable and precise.

[R12]: Data and time are directly taken from end users’ device.

[D5]: System is supposed to be well integrated with reading plate algorithm that has been already designed and is correctly working.

[D6]: Each already uploaded notification of violation is every time correctly received and stored by the software system.

**[G4]: Allows authorities to receive the notifications about traffic violations in order to increase the local security.**

[R13]: Software system dispatches traffic notifications to the nearest available authority member.

[R14]: Software permits to each authorities to specify their availability status.

[D7]: Authorities specify correctly its availability status.

[D6]: The internet connection works properly without failure.

[R15]: Authorities must provide their credentials, into the form of login page, to access their personal view.

[R16]: System has to be able to recognize licence plate from images.

**[R X]: System has to be able to recognize any possible kind of altered information contained in a traffic violation sent by a user.**

[D5]: System is supposed to be well integrated with reading plate algorithm that has been already designed and is correctly working.

[D8]: The authority knows the local traffic laws and the related fines.

[D9]: The authority must check the correctness of traffic violations notified.

**[G5]: Allows end users to mine information on traffic violations that has been received and build some statistics.**

[R7] – Users must provide their credentials, into the form of login page, to access their personal view.

[R17]: Software system is able to show statistics related to unsafe areas thanks to the highest number of traffic violations in that zone.

[R18]: Statistics must be updated each month.

[R19]: Software system is able to show statistics related to vehicles that commit the most violations.

**[G6]: Allows authorities to mine information on traffic violations that has been received and build some statistics.**

[R20]: Software system show which kind of traffic violations occurs more frequently for each area.

[R17]: Software system is able to show statistics related to unsafe areas thanks to the highest number of traffic violations in that zone.

[R18]: Statistics must be updated each month.

[R19]: Software system is able to show statistics related to vehicles that commit the most violations.

[R15]: Authorities must provide their credentials, into the form of login page, to access their personal view.

**[G7]: Allows to cross information analysis to improve reliability of the service and suggest to municipality possible interventions.**

[R22]: Software system must be able to retrieve information from municipality service and generate their relative statistics.

[D11]: Municipality service is well integrated with SafeStreets.

[R23]: SafeStreets provides an algorithm able to cross information which derives from its own statistics and municipality’s statistics.

[R21]: Permits to suggest to municipality how to improve the security.

[R24]: SafeStreets is able to communicate suggestion through e-mail.

[D12]: Municipality has an active mail system and it is periodically checked by its own employee.

[D10]: Municipality can fulfill the improvements suggested by the software.

**[G8]: Allows municipality (in particular local police) to retrieve traffic violations in order to generate relative traffic tickets.**

**[R X]: System has to be able to avoid any possible kind of altered information contained in a traffic violation sent by a user.**

[R16]: System has to be able to recognize licence plate from images.

[R25]: Provides personal data of the vehicle’s owner that committed an infraction to authorities, retrieved by an external service(FindOwnerPlate).

[D13]: External service(FindOwnerPlate) is well integrated with SafeStreets that permits to retrieve personal data of the vehicle’s owner.

[D5]: System is supposed to be well integrated with reading plate algorithm that has been already designed and is correctly working.

[D8]: The authority knows the local traffic laws and the related fines.

[R26]: SafeStreets is able to send all informations related to traffic violations to the nearest local police through e-mail(or in general electronic communicating system).

[R27]: SafeStreets stores position of all local police centers in the city where SafeStreets works.

Oppure

[R27]: SafeStreets is able to retrieve position and all informations of the nearest local police center by mean of a search engine service. (Ex: Google search) e quindi anche [D6]: The internet connection works properly without failure.

[D12]: Local Police has an active mail system and it is periodically checked by its own employee.

**[G9]: Build statistics using information related to emitted traffic tickets.**

[R25]: Provides personal data of the vehicle’s owner, who committed an infraction, to authorities retrieved by an external service.

[D13]: External service(Gli possiamo dare un nome?) is well integrated with SafeStreets that permits to retrieve personal data of the vehicle’s owner.

[R28]: SafeStreets is able to store all infractions sent to local police and generate their relative statistics by mean of an algorithm.

[R29]: SafeStreets provides to local police a ranking of the most offenders in their relative area.

[R30]: SafeStreets provides to users statistics concering the improvement brought by SafeStreets initiative.

Authority come istituzione che si registra e fornisce la lista dei dipendenti, che sono automaticamente registrati fornendo solamente un codice per attivarli. Il comune viene lasciato sempre esterno nell advanced functionality 1, mentre, nel advanced funzionality 2 manda le traffic violations solamente ai dipendenti che appartengono alla local police piu vicina e pertinente.