* 1. Functional Requirements

1. **[G1] Allow a Guest to create a registered Travlendar+ account.**
   * [R1] The system must ask the user to provide credentials to perform registration process.
   * [R2] The system must require a valid email address and password or a link with an existing Facebook / Google account for the registration.
   * [R3] The system must check that the provided email/account for the registration is not already in use from a different Travlendar+ account.
   * [D1] Data used for the registration must be formally correct.
2. **[G2] Allow an User to log in into his Travlendar+ account.**
   * [R5] The user must be already registered to perform login process.
   * [R6] The user must be able to insert his credentials to log into the system.
   * [R7] The system must be able to check the correctness of the credentials provided by user for the login.
   * [R8] The system must let the user log in only if data provided are correct.
3. **[G3] Allow an User to create a new appointment in his calendar.**
   * [R9] The user must be logged into the system to access application features.
   * [R10] The system must be able to provide the user with an overview of his calendar and the user must be able to view all appointments fixed in a certain period.
   * [R11] The user must be able to pick a chosen day from the overview of his calendar.
   * [R12] The user must be able to choose the option of creating a new appointment.
   * [R13] The system must ask the user to provide all information needed for the creation of a new appointment, such as place and time of start and overall duration.
   * [R14] The system must check if an appointment overlaps with other events and must eventually notify it to the user.
   * [R15] The user must confirm the creation of the new appointment.
   * [R16] The system must save the user modifications in memory and the calendar must be updated.
   * [D2] All information provided by the user in the process of appointment creation or modification must be formally corrected.
4. **[G4] Allow an User to delete an existing appointment from his calendar.**
   * [R17] The appointment intended to be modified must have been previously successfully created and not already deleted.
   * [R9] The user must be logged into the system to access application features.
   * [R10] The system must be able to provide the user with an overview of his calendar and the user must be able to view all appointments fixed in a certain period.
   * [R11] The user must be able to pick a chosen day from the overview of his calendar.
   * [R18] The user must be able to choose the option of deleting the appointment.
   * [R19] The user must confirm the deletion.
   * [R20] The system must remove a deleted appointment from the memory and cancel every alert related to it.
   * [R16] The system must save the user modifications in memory and the calendar must be updated.
   * [R21] Deleting process is not reversible.
5. **[G5] Allow an User to edit an existing appointment in his calendar.**
   * [R17] The appointment intended to be modified must have been previously successfully created and not already deleted.
   * [R9] The user must be logged into the system to access application features.
   * [R10] The system must be able to provide the user with an overview of his calendar and the user must be able to view all appointments fixed in a certain period.
   * [R22] The user must be able to select a specific appointment in his calendar.
   * [R23] The system must give the user access to all details of a selected appointment and the user must be allowed to edit the information needed.
   * [R14] The system must check if an appointment overlaps with other events and must eventually notify it to the user.
   * [R24] The user must confirm the modifications.
   * [R16] The system must save the user modifications in memory and the calendar must be updated.
   * [D2] All information provided by the user in the process of appointment creation or modification must be formally corrected.
6. **[G6] Allow an User to view his appointments.**
   * [R9] The user must be logged into the system to access application features.
   * [R10] The system must be able to provide the user with an overview of his calendar and the user must be able to view all appointments fixed in a certain period.
   * [R25] The user must be able to switch between different possible calendar, such as daily calendar, weekly calendar and monthly calendar.
7. **[G7] Allow an User to view his Daily Schedule**
   * [R9] The user must be logged into the system to access application features.
   * [R26] The user must be able to select a specific day from his calendar.
   * [R27] The system must be able to provide detailed information about the scheduled travels for a chosen day, showing the trace route and the estimated time required from each movement.
   * [R28] The system must be able to choose a route between the possible travel alternatives according to the preferences expressed in the user profile settings and the information about external weather.
   * [D3] Travel data are provided by an external agent.
   * [D4] Information about weather are provided by an external agent.
   * [D5] If the system displays a travel alternative, it means that it’s actually possible to successfully perform that travel in the way and in the time displayed.
8. **[G8] Allow an User to navigate and choose between different travel alternatives.**
   * [R9] The user must be logged into the system to access application features.
   * [R26] The user must be able to select a specific day from his calendar.
   * [R27] The user must be able to select a specific travel in the chosen day.
   * [R28] The system must be able to provide the user with an overview of the possible travel alternatives for the chosen travel, specifying all details for each one.
   * [R29] The user must be able to filter the travel alternatives furnished by the system according to defined parameters, such as time of travelling or overall cost.
   * [R30] The user must be able to choose a favourite travel option different from the displayed default one.
   * [R31] The system must update the daily schedule according to the travel option chosen by the user and the user must be able to see the new updated schedule.
   * [D5] If the system displays a travel alternative, it means that it’s actually possible to successfully perform the travel in the way and in the time displayed.
9. **[G9] Allow an User to manage alerts for each appointment.**
   * [R32] The system must give the user the possibility of adding an alert to an appointment while it is being created or modified.
   * [R33] The user must be able to choose a desired interval of time for the warning alert.
   * [R34] The user must confirm the alert creation and the system must save the insertion in the memory.
   * [R35] The user must be able to modify or remove the inserted alert when needed.
   * [R36] In case of any alert modification made by the user, the user must confirm the modification and the system must save all changes.
   * [D6] If a user creates a new alert, he must receive the notification after the specified amount of time.
10. **[G10] Allow an User to manage his travel preferences.**
    * [R9] The user must be logged into the system to access application features.
    * [R39] The user must be able to access the preferences panel of his account.
    * [R40] The system must give the user the possibility of setting various preferences, such as owned and preferred travel means, address of Home and other general travel preferences.
    * [R41] The user must be able to edit the provided preferences when needed.
11. **[G11] Allow an User to buy public transportation tickets.**
    * [R9] The user must be already logged into the system to access his calendar.
    * [R26] The user must be able to select a specific day from his calendar.
    * [R27] The user must be able to select a specific travel in the chosen day.
    * [R37] The system must give to the user the possibility of buying the ticket for the selected travel.
    * [R38] The system must save a copy of the bought tickets and the user must be able to view them when needed.
    * [D7] The payment process and ticket acquisition is made by an external public transport service.