# Computación y Estructuras Discretas I

# Identificación del problema y análisis de requerimientos – Tarea Integradora II

| Cliente | An Airline |
| --- | --- |
| User | Airline worker |
| Requerimientos funcionales | **Register passengers' arrival to the airplane:** When a passenger arrives at the terminal door of the airplane it needs to be registered in order to give them their entry to the airplane and give, if applicable, a prioritization.  **Identify prioritization of passengers:** Passengers will have a specification within the flat file list where they are understood to be a priority and will have a notation to prove it.  **Organize passengers by priority:** The passengers need to be organized by priority characteristics, in economic class will be the arrival time and if the passenger has a disability or special condition. While in first class the passenger can be prioritized by the number of miles it has, the arrival time or a disability.  **Organize passengers by arrival:** Passengers are placed on the boarding list in order as they arrive at the boarding lounge.  **Print list of passenger entries:** When the passengers are complete and waiting in the boarding room, the system will print a list with the order of the passengers that are going to enter.  **Print list of passenger exits:** For passengers at deboarding time, the system will display a list of passengers with privileges and then by sections of the airplane. |
| Contexto del problema | An airline wants to improve the process of boarding and exiting airplanes. For that, it wants to reward passengers that arrive early at the terminal doors as well to prioritize the entry of special people. Also wants to reward passengers of first class depending on their accumulated miles and other information. |
| Requerimientos no funcionales | -Use of programming language “Java”.  -Requires the use of serialization in JSON format, the system will open an archive that will load all the information of passengers to be used in the system. |

| Nombre o identificador | **R1- Register passengers' arrival to the airplane:** When a passenger arrives at the terminal door of the airplane it needs to be registered in order to give them their entry to the airplane and give, if applicable, a prioritization. | | |
| --- | --- | --- | --- |
| Resumen | At the terminal door the passenger will be registered with their name, seat id, if they have any special condition or disability, class in which they are flying, amount of miles and the arrival time. With all that information the passenger is registered and is added to the list of the airplane. | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
| passengerName | String |  |
| seatId | String |  |
| class | Double |  |
| arrivalTime | String |  |
| hasSpecialCondition | boolean |  |
| amountOfMiles | int |  |
| hasADisability | boolean |  |
| Actividades generales necesarias para obtener los resultados | Each passenger needs to have all the information named above so it can be registered and organized in a list for the boarding. | | |
| Resultado o Postcondición | The passenger is registered and added to the list. | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| passengerAdded | String |  |

| Nombre o identificador | **R2- Identify prioritization of passengers:**Passengers will have a specification understood to be a priority and will have a notation to prove it. | | |
| --- | --- | --- | --- |
| Resumen | Passengers will have a specification within the flat file list where they are understood to be a priority and will have a notation to prove it | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
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| Actividades generales necesarias para obtener los resultados | The passenger must have been previously registered and added to the list. | | |
| Resultado o Postcondición | In the passenger list there will be a specification stating that they are priority boarding passengers. | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
|  |  |  |

| Nombre o identificador | **R3- Organize passengers by priority:** The passengers need to be organized by priority characteristics, in economic class will be the arrival time and if the passenger has a disability or special condition. While in first class the passenger can be prioritized by the number of miles it has, the arrival time or a disability. | | |
| --- | --- | --- | --- |
| Resumen | The system organizes the passengers under some characteristics that are going to be prioritized. Such as disabilities, special conditions and miles in the case of first class passengers. And everyone will be sorted with their arrival date if they don't have any of the other characteristics. | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
| hasSpecialCondition | Boolean |  |
| numberOfMiles | int |  |
| hasDisabilities | boolean |  |
|  | arrivalTime | date |  |
| Actividades generales necesarias para obtener los resultados | The system sorts the user with the information that it has about them, prioritizing disabilities, special conditions, miles in the case of first class and arrival time if the passenger does not have the others. | | |
| Resultado o Postcondición | The passengers are organized in a list under the conditions given. | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| passengerOrganized | String |  |

| Nombre o identificador | **R4- Organize passengers by arrival:** Passengers are placed on the boarding list in order as they arrive at the boarding lounge. | | |
| --- | --- | --- | --- |
| Resumen | Passengers are placed on the boarding list, in order as they arrive at the boarding lounge. In this way the passenger list will have an order in the aircraft sections at boarding time. | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
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| Actividades generales necesarias para obtener los resultados | The product must have been previously registered in order to appear in the list of products chosen by the user when entering a letter or word. | | |
| Resultado o Postcondición | * The product searched for by the user or the list of products closest to the one searched for will appear. Also, a report of all products will be gi | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| productFind | String |  |
| reportProduct | String |  |

| Nombre o identificador | **R5- Print list of passenger entries:** When the passengers are complete and waiting in the boarding room, the system will print a list with the order of the passengers that are going to enter. | | |
| --- | --- | --- | --- |
| Resumen | The system prints the boarding list of passengers, divided by sections. First will go first class passengers prioritizing miles, then passengers with disabilities, special conditions and then arrival order. They will be separated into sections to enter the airplane. | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
|  |  |  |
|  |  |  |
| Actividades generales necesarias para obtener los resultados | The system has to have the passengers organized to print a list of them. | | |
| Resultado o Postcondición | The list is printed with the passengers organized by order. | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| boardingList | String |  |

| Nombre o identificador | **R6- Print list of passenger exits:**For passengers at deboarding time, the system will display a list of passengers with privileges and then by sections of the airplane. | | |
| --- | --- | --- | --- |
| Resumen | The system prints the departure, divided by sections. Where, the first to leave are those who are in the first rows and for each row the order is established by proximity to the aisle or order of arrival as the last instance. | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
|  |  |  |
|  |  |  |
| Actividades generales necesarias para obtener los resultados | The system has to have the passengers organized to print a list of them. | | |
| Resultado o Postcondición | The list is printed with the passengers organized under the pre-established order. | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| departureList | String |  |