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| **Client** | ICESI University |
| **User** | ICESI University |
| **Functional requirements** | 1. Generate a list with the available mini-rooms. 2. Rent a mini-room. 3. Cancel the rental for a mini-room or for all the mini-rooms of a company. 4. Show a map of the datacenter in which you can see which mini-rooms are on and which are off. 5. Simulate turning on all mini-rooms. 6. Simulate turning off the mini-rooms. |
| **Context of the problem** | A new single floor building will be built on the campus that will be divided into 8 corridors, in each corridor there will be 50 mini-rooms. Each mini-room will be assigned to a research project or rented to a company. |
| **Non-functional requirements** | Usar GitHub como repositorio de código fuente y documentación utilizando la estructura de carpetas aprendida en clase. |

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| **Name or identifier** | ***R1***: Generate a list with the available mini-rooms. |
| **Summary** | A list with the general information of each available room is desired. |
| **Inputs** | |  |  |  | | --- | --- | --- | | **Input name** | **Type** | **Selection or repeat condition** | | Menu choice | String |  | |
| **General activities necessary to obtain the results** | 1. *User*: choose option one from the menu. |
| **Result or postcondition** | General information about the room available |
| **Outputs** | |  |  |  | | --- | --- | --- | | **Output name** | **Type** | **Selection or repeat condition** | | roomHall | Int |  | | withWindow | Boolean |  | | Column | Int |  | | Price | Double |  | |

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| **Name or identifier** | ***R2***: Rent a mini-room. |
| **Summary** | Each mini-room could be rented to a research project or rented to a company. |
| **Inputs** | |  |  |  | | --- | --- | --- | | **Input name** | **Type** | **Selection or repeat condition** | | Rental date | String |  | | Number of servers | Int |  | | Tenant type   * Investigation project * company | String |  | | Mini-room chosen (number) | int |  | |
| **General activities necessary to obtain the results** | 1. *User*: choose option two from the menu. 2. *System*: check if there are rooms available 3. *User*: complete all the necessary information. 4. *System*: check if the information is correct |
| **Result or postcondition** | The room is rented to the client. |
| **Outputs** | |  |  |  | | --- | --- | --- | | **Output name** | **Type** | **Selection or repeat condition** | | Monthly rent value | Double |  | | Successful action message | String |  | |

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| **Name or identifier** | ***R3***: Cancel the rental for a mini-room or for all the mini-rooms of a company. |
| **Summary** | It wants to cancel the rent to a company. |
| **Inputs** | |  |  |  | | --- | --- | --- | | **Input name** | **Type** | **Selection or repeat condition** | | Company name | String |  | | Room number | int |  | |
| **General activities necessary to obtain the results** | 1. *User*: choose option three from the menu. 2. *User*: write the company name. 3. *System*: shows a list of all the rooms that are rented to that company. 4. *User*: choose the mini-room to cancel the rent |
| **Result or postcondition** | Room availability changes to available. |
| **Outputs** | |  |  |  | | --- | --- | --- | | **Output name** | **Type** | **Selection or repeat condition** | | Successful action message | String |  | |

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| **Name or identifier** | ***R4***: Show a map of the datacenter in which you can see which mini-rooms are on and which are off. |
| **Summary** | Only the mini rooms that are rented can be turned on (the others are turned off due to power consumption) |
| **Inputs** | |  |  |  | | --- | --- | --- | | **Input name** | **Type** | **Selection or repeat condition** | |  |  |  | |
| **General activities necessary to obtain the results** | 1. *User*: choose option four from the menu. |
| **Result or postcondition** | Shows the mini rooms that are on and off |
| **Outputs** | |  |  |  | | --- | --- | --- | | **Output name** | **Type** | **Selection or repeat condition** | | Map | Int[][] |  | |

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| **Name or identifier** | ***R5:*** Simulate turning on all mini-rooms |
| **Summary** | Turn on all mini rooms (regardless of state) to test power-on protocols. |
| **Inputs** | |  |  |  | | --- | --- | --- | | **Input name** | **Type** | **Selection or repeat condition** | |  |  |  | |
| **General activities necessary to obtain the results** | 1. *User*: choose option five from the menu. |
| **Result or postcondition** | The map is displayed with all mini rooms turned on. |
| **Outputs** | |  |  |  | | --- | --- | --- | | **Output name** | **Type** | **Selection or repeat condition** | | Map | Int[][] |  | |

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| **Name or identifier** | ***R6:*** Simulate turning off some mini rooms |
| **Summary** | Simulate the switching off the mini rooms according to the letter entered. |
| **Inputs** | |  |  |  | | --- | --- | --- | | **Input name** | **Type** | **Selection or repeat condition** | | Letter | String |  | |
| **General activities necessary to obtain the results** | 1. *User*: choose option five from the menu. |
| **Result or postcondition** | The map is displayed with some mini rooms turned off. |
| **Outputs** | |  |  |  | | --- | --- | --- | | **Output name** | **Type** | **Selection or repeat condition** | | Map | Int[][] |  | |