DOOR MANAGER API

**Assumptions:**

* Each door has one lock.
* Doors are automatically locked after opening by a user.
* Tailgating is monitored physically and not handled by the application.
* No IoT commands or events or device communication is covered as part of the API calls.
* RBAC Authorization is implemented only for ActivityLog feature.

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| **Technology** | **Reason** |
| .net6.0 | Opensource, Platform-independent, Long-term support from Microsoft |
| EF Core 6.0 | Optimal memory management, supports variety of database providers, Compact and easily readable queries. Helps to abstract the business logic to remain in code rather than in db. |
| MySql 8.0 | Opensource yet equivalently powerful RDBMS, on-demand scalability, a huge cost saver offering relational and transactional db management. |
| MediatR 11.0 | Powerful CQRS framework tool to create very much loosely coupled business layers not depending on each other and to make highly distributable, reusable, and maintainable application layers. |
| NUnit 3.13.3 | Opensource, Handy Annotations, Easier integration with third party unit testing framework tools. |
| Moq 4.17.2 | Typesafe, easy to use, interface mocks help to differentiate unit testing for different layers (highly distributable unit testing). |
| JWT 9.0 | Stateless, Can be consumed by mobile users as well. |

**Description**:

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| **Controller** | **Feature** |
| Access Delegation | Endpoint that helps a user to delegate a role lesser than or equal to his own role’s priority to a target user. |
| Access Provision | To provision door access to a group of users belonging to a role. |
| Activity Log | Helps the manager or higher supervisor to monitor the list of activities happened in an office. |
| Door | Endpoints related to the create and read operations of door. |
| Door Access | Main endpoint that user can use to unlock the door in 2 different modes.  SelfMode – Doors the user can unlock by default from the assigned role,  DelegatedMode – Doors the user can unlock from another user delegation. |
| Office | Endpoints related to the create and read operations of office. |
| User | Endpoints related to the create and read operations of user. |

**Github Repository:**

<https://github.com/vanest-github/Door-Manager-API.git>