***Smart Virtual Classroom***

**Project Specification**

**Version *<1.0>***

***<14/02/2021>***

**Outsiders :**

**Students List**

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1. **Overall description**
   1. **Project purpose**

**The Purpose of this project is to centralise course resources for professors/universities to maintain and keep up to date and to make it easy for students to consult and stay in touch with their professors.**

* 1. **Project description**

**This Project is a software solution for universities to expand their classroom limits and to make the interaction between the students and the professors much easier.**

* 1. **Project scope**
  2. **Assumptions / Constraints / Standards**

1. **Business features specification**

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| --- | --- | --- | --- |
| **Module** | **Submodules** | **System features** | **Description** |
| User Management | Student Management 1.1 | Create Student 1.1.1 | Create new student account through a register page. |
| View Student Profile 1.1.2 | Consult student details through a profile page. |
| Update Student Profile 1.1.3 | Update student details through a profile page. |
| Delete Student Account 1.1.4 | Delete student account through a profile page. |
| Professor  Management 1.2 | Create Professor 1.2.1 | Create new student account through a register page.(requires school administration confirmation) |
| View Professor Profile 1.2.2 | Consult professor details through a profile page. |
| Update Professor Profile 1.2.3 | Update professor details through a profile page. |
| Delete Professor Account 1.2.4 | Delete professor account through a profile page. |
| Course Management | Course Management 2.1 | Create Course 2.1.1 | Create new course (requires a professor account). |
|  |  | View Course 2.1.2 | The ability to view and download a course. |
|  |  | Update Course 2.1.3 | Add/Remove files or ressources to the course(needs to be the same professor that created it) |
|  |  | Delete Course 2.1.4 | Delete course (needs to be the same professor that created it). |
|  |  | Add/Remove Students from course 2.1.5 | Add/Remove students from course(needs to be the same professor that created it). |
|  |  | Start/Record RealTime (Video+Chat) Communication 2.1.6 | Start a video conference and keep a copy of the whole thing when it ends.(needs to be the same professor that created it) |
|  | Quizz Management 2.2 | Add and link Quizz to course 2.2.1 | Add a set of questions and the maximum number of marks to be had and link it to a course (needs a professor account) |
|  |  | View Quizz 2.2.2 | View quizz, answer questions and get a mark |
|  |  | Update Quizz 2.2.3 | Update Quizz (needs to be the same professor that created it). |
|  |  | Delete Quizz | Delete Quizz (needs to be the same professor that created it). |

1. **Technical specification**
   1. **Technical architecture**

**Rest MVC**

* 1. **Languages and frameworks**

**MERN Stack:**

**-Backend: NodeJs**

**-Frontend: ReactJs**

**-Database: MongoDB**

**-Routing: Express**

* 1. **Software tools**

**Npm or yarn to install dependencies and build our (nodeJs/ReactJs) code.**

**Mongo compass to view the mongo DB graphically.**

* 1. **Material tools**

1. **Other requirements**

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| * 1. Safety requirements |  |
| * 1. Security requirements | JWT Authentication |
| * 1. Software quality attributes |  |
| **...** |  |