1. Student Login

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -01 | | | |
| **Use Case Name:** | Student Login | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Student | | |
| **Description:** | | The student tries to log in to this System | | |
| **Preconditions:** | | * Application Must have a stable Internet Connection * Students must be registered * Students have exams Scheduled | | |
| **Postconditions:** | | * The student will be authenticated and redirected to the dashboard. | | |
| **Normal Flow:** | | * The Student opens the application and fills in the credentials and presses login. * The client app will forward the credentials to the backend server. * The backend server will validate the user credentials and respond with the authentication token and user details. * Face Verification will be performed. * The client app can further use this token with every request to prove its identity. | | |
| **Exceptions:** | | * In case of wrong credentials, the server will respond with an error and the client application will show the wrong credentials error. * In case of wrong face verification, the Client Application will stop and passes the error and Notifies the Server. | | |

1. Teacher Login

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| **Use Case ID:** | UC -02 | | | |
| **Use Case Name:** | Teacher Login | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Teacher | | |
| **Description:** | | The Teacher tries to log in to this System | | |
| **Preconditions:** | | * Application Must have a stable Internet Connection * Teachers must be registered | | |
| **Postconditions:** | | * The student will be authenticated and redirected to the dashboard. | | |
| **Normal Flow:** | | * The Teacher opens the Web App and fills in the credentials and presses login. * The client app will forward the credentials to the backend server. * The backend server will validate the user credentials and respond with the authentication token and user details. * The client app can further use this token with every request to prove its identity. | | |
| **Exceptions:** | | * In case of wrong credentials, the server will respond with an error and the client application will show the wrong credentials error. | | |

1. Authentication User

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| **Use Case ID:** | UC -03 | | | |
| **Use Case Name:** | Authentication User | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Student, System | | |
| **Description:** | | The student verifies their Identity | | |
| **Preconditions:** | | * Application Must have a stable Internet Connection * Students must be registered * Students have exams Scheduled * The Front Camera should be available * Camera Permissions are Granted | | |
| **Postconditions:** | | * The student will be authenticated and redirected to the dashboard. | | |
| **Normal Flow:** | | * The Student opens the application and fills in the credentials and presses login. * The client app will forward the credentials to the backend server. * The backend server will validate the user credentials and respond with the authentication token and user details. * Face Verification will be performed. | | |
| **Exceptions:** | | * In case of wrong credentials, the server will respond with an error and the client application will show the wrong credentials error. * In case of wrong face verification, the Client Application will stop and passes the error and Notifies the Server. | | |
| **Frequency of Use:** | | * The Verification will be Preformed after every 5-10 Minutes to verify the user | | |
| **Special**  **Requirements:** | | * Client Permissions should be granted. | | |

4. View Dashboard

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| **Use Case ID:** | UC -04 | | | |
| **Use Case Name:** | Dashboard | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Student | | |
| **Description:** | | The student verifies their Identity | | |
| **Preconditions:** | | * Students must be logged in to the system | | |
| **Postconditions:** | | * Students can access the information required. | | |
| **Normal Flow:** | | * Students can view the result. * Students can give the exam. | | |

1. View Result

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -05 | | | |
| **Use Case Name:** | View Result | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Student, System | | |
| **Description:** | | The student can view their results | | |
| **Preconditions:** | | * The Students must be logged in to the System. * The students have given the exam before. | | |
| **Postconditions:** | | * The student can view the results. | | |
| **Normal Flow:** | | * The Student will watch their previous results | | |
| **Exceptions:** | | * In case there is no past exam given by the student it will give the error. | | |
| **Includes** | | * Publish Result | | |

1. Conduct Exam

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| **Use Case ID:** | UC -06 | | | |
| **Use Case Name:** | Conduct Exam | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Student, System, Admin | | |
| **Description:** | | The Exam will be conducted. | | |
| **Preconditions:** | | * Stable internet connection * The Students must be logged in to the System. * The Exam must be Scheduled. * Authentication must be performed. | | |
| **Postconditions:** | | * The students will give their exams. | | |
| **Normal Flow:** | | * The Dashboard will redirect to the Exam page. * The Questions will be loaded. * The Timer will be started. * Authentication will be Started. | | |
| **Exceptions:** | | * In case the verification fails it will perform twice if fails again the Message will be sent and the video recording will be started. | | |
| **Includes** | | * Timer * Authentication * Decryption | | |

7. View Profile

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -04 | | | |
| **Use Case Name:** | View Profile | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Student, Teacher | | |
| **Description:** | | The student and teacher verify their Identity | | |
| **Preconditions:** | | * Students must be logged in to the system * Teachers must be logged in to the System | | |
| **Postconditions:** | | * Students can access the information required. * Teacher can access the information required. | | |
| **Normal Flow:** | | * Students can view the result and profile. * Teacher can view their profile. | | |

1. Add Question

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -08 | | | |
| **Use Case Name:** | Add Question | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Teacher, System, | | |
| **Description:** | | The Exams Question will be added | | |
| **Preconditions:** | | * Stable internet connection * The Teacher must be logged in to the System | | |
| **Postconditions:** | | * The Data will be Added to the Datbase of the ETS. | | |
| **Normal Flow:** | | * The Teacher Add the Question * The Question will be checked if exists in the database. * The Question will be answerd. * The Question will be added to the database | | |
| **Exceptions:** | | * In case the the Question is already in the Database the Systems prmpts the error then the Teacher have to chabge the contex of the Question. | | |
| **Includes** | | * Verification | | |

1. View Question

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -09 | | | |
| **Use Case Name:** | View Question | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Teacher, System, | | |
| **Description:** | | The Exams Question will be viewed | | |
| **Preconditions:** | | * Stable internet connection * The Teacher must be logged in to the System | | |
| **Postconditions:** | | * The Teacher will view the Questions. | | |
| **Normal Flow:** | | * The Teacher will view their Previous Question. | | |
| **Exceptions:** | | * In case there is no question it will prompt the error. | | |

1. Add Student

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -10 | | | |
| **Use Case Name:** | Add Student | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Admin | | |
| **Description:** | | The Student will be Added | | |
| **Preconditions:** | | * The Student Data should be available. * The Student Pictures are in jpg format. | | |
| **Postconditions:** | | * The Student will be added | | |
| **Normal Flow:** | | * The Admin feeds the Student Data in the Database * The Database will generate the Id and Pass of the Student for login | | |
| **Exceptions:** | | * In case there is no data the System will not add the student | | |

1. Add Teacher

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -11 | | | |
| **Use Case Name:** | Add Teacher | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Admin | | |
| **Description:** | | The Teacher will be Added | | |
| **Preconditions:** | | * The Data should be available. | | |
| **Postconditions:** | | * The Teacher will be added | | |
| **Normal Flow:** | | * The Admin feeds the Teacher Data in the Database * The Database will generate the Id and Pass of the Teacher for login | | |
| **Exceptions:** | | * In case there is no data the System will not add the Teacher | | |

1. Manage Teacher/Student

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -12 | | | |
| **Use Case Name:** | Add Teacher | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Admin | | |
| **Description:** | | The Admin can manage the students and Teachers | | |
| **Preconditions:** | | * The Admin should know which student/teacher data will be changed | | |
| **Postconditions:** | | * The Teacher/ Student will be managed | | |
| **Normal Flow:** | | * The Admin updates the Teacher/student Data in the Database | | |
| **Exceptions:** | | * In case there is no data the System will generate the error. | | |

1. Mange Exam

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -13 | | | |
| **Use Case Name:** | Mange Exam | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | Admin | | |
| **Description:** | | The Admin can manage the Exam | | |
| **Preconditions:** | | * The Admin should know which students are going to give the Exam | | |
| **Postconditions:** | | * The Students for the Exam will be listed | | |
| **Normal Flow:** | | * The Admin uploads the list of Students who are going to give the Exam. | | |
| **Exceptions:** | | * In case there is no data in the list the System prompts the Error. * In case the student doesn’t exist in the student database the System will generate the error. | | |

1. Encryption

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -14 | | | |
| **Use Case Name:** | Encryption | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | System | | |
| **Description:** | | The Data Encryption will be performed here | | |
| **Preconditions:** | | * The encryption key should be known. | | |
| **Postconditions:** | | * The Data will be Secured and Encrypted with 256-bit Encryption. | | |
| **Normal Flow:** | | * The Exam will be created * The Exam will be Encrypted * The Exam will be sent to Student. | | |
| **Exceptions:** | | * In case there is no data in the list the System prompts the Error. * In case the student doesn’t exist in the student database the System will generate the error. * In case the student has the wrong Encryption key the data will not be Decrypted on the student side. | | |

1. Generate Exam

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -15 | | | |
| **Use Case Name:** | Generate Exam | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | System | | |
| **Description:** | | The Exams will be generated | | |
| **Preconditions:** | | * The Exam should be listed. * The Student Data should be available. | | |
| **Postconditions:** | | * The Exam will be generated. | | |
| **Normal Flow:** | | * The Exams listed by the admin will be generated automatically. * The system calculates the Students in the Examination center and creates the different papers for every student present in the examination center. * The data will be stored in the database in Jason format. | | |
| **Exceptions:** | | * In case there is no data in the list the System prompts the Error. * In case the student doesn’t exist in the student database the System will generate the error. * In case the student has the wrong Encryption key the data will not be Decrypted on the student side. | | |

1. Get Answers

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -16 | | | |
| **Use Case Name:** | Get Answers | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | System | | |
| **Description:** | | The System will retrieve the answers | | |
| **Preconditions:** | | * The Exam should be listed. * The Student Data should be available. | | |
| **Postconditions:** | | * The Exam will be generated. | | |
| **Normal Flow:** | | * The Exams listed by the admin will be generated automatically. * The system calculates the Students in the Examination center and creates the different papers for every student present in the examination center. * The data will be stored in the database in Jason format. | | |
| **Exceptions:** | | * In case there is no data in the list the System prompts the Error. * In case the student doesn’t exist in the student database the System will generate the error. * In case the student has the wrong Encryption key the data will not be Decrypted on the student side. | | |

1. Get Answers

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| --- | --- | --- | --- | --- |
| **Use Case ID:** | UC -17 | | | |
| **Use Case Name:** | Get Answers | | | |
| **Created By:** | Zaeem Asghar | | **Last Updated By:** |  |
| **Date Created:** |  | | **Last Revision Date:** |  |
| **Actors:** | | System | | |
| **Description:** | | The | | |
| **Preconditions:** | | * The Exam should be listed. * The Student Data should be available. | | |
| **Postconditions:** | | * The Exam will be generated. | | |
| **Normal Flow:** | | * The Exams listed by the admin will be generated automatically. * The system calculates the Students in the Examination center and creates the different papers for every student present in the examination center. * The data will be stored in the database in Jason format. | | |
| **Exceptions:** | | * In case there is no data in the list the System prompts the Error. * In case the student doesn’t exist in the student database the System will generate the error. * In case the student has the wrong Encryption key the data will not be Decrypted on the student side. | | |