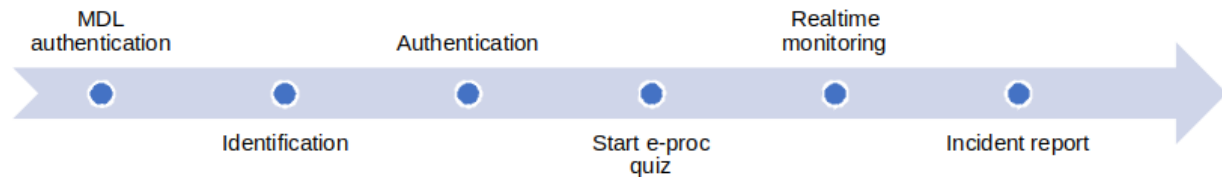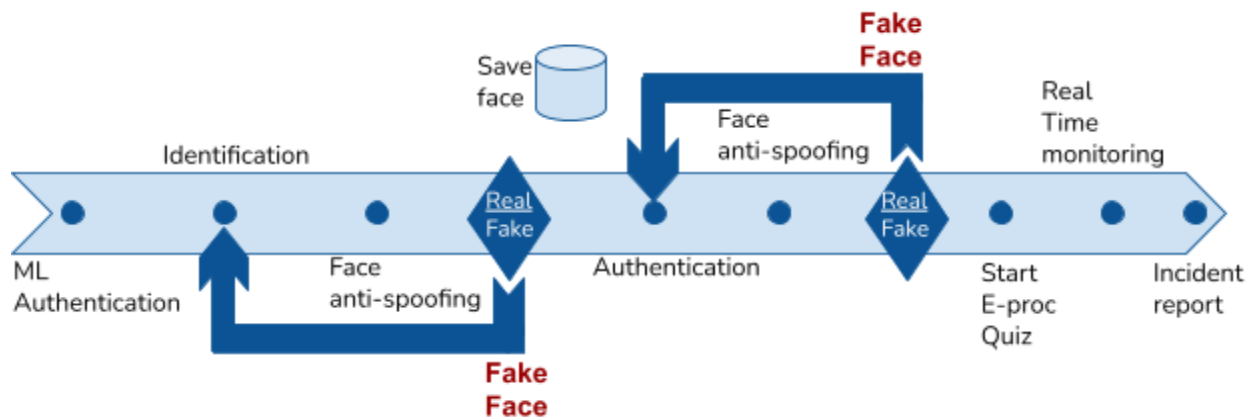# E-PROCTORING SERVICE

1. CURRENT FEATURES: Process to run E-proctoring quiz (1st phase)

The image above shown, the main step of an e-proctoring quiz. Because it is based on face recognition, for some reasons, a student can show a picture of his friend and log in as him. In that case we need a security measure to make sure that the presented face is real before storing the face data (Identification) or predict the face if it's Authentication.

While the students are taking the exam, the system will record when they do something weird in the browser (tab opening), multiple people appear, face mismatch, absent.

2. IMPROVEMENT FEATURES: Face anti-spoofing apply to the current process (2nd phase)

As we can see on the image above, the face anti-spoofing step, intervene to decide if the given face data is a real face or not when the student performs Identification or Authentication. The result from Face anti-spoofing is a binary result; if the output is Fake face, students can't go to the next step.

3. ADDITIONAL FEATURES: advanced features for teachers (2nd phase)

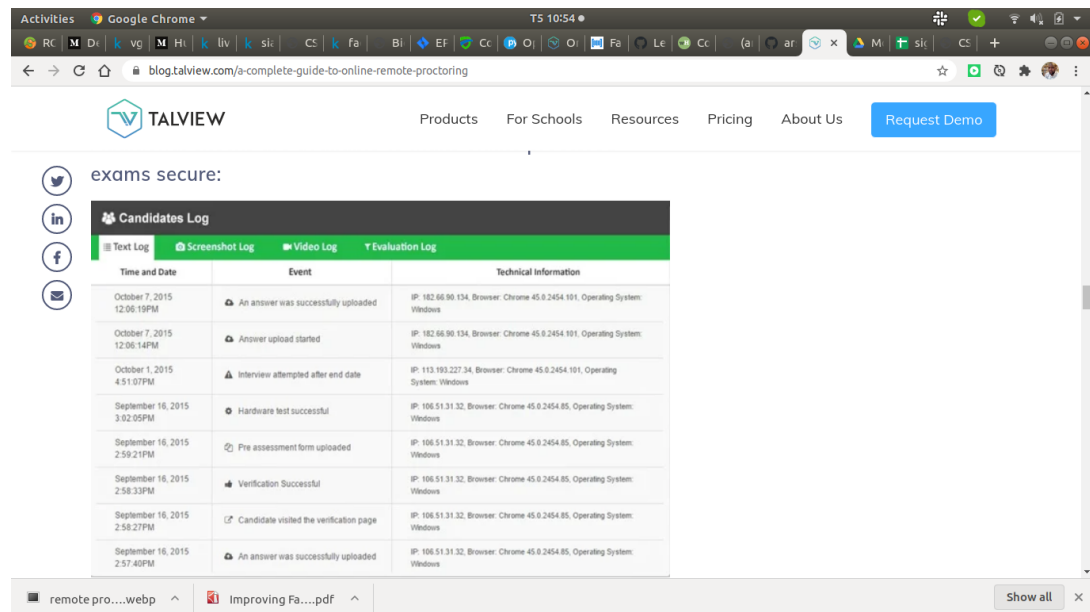a. **Means to watch stored video (and/or streaming all student's camera to teachers)**

The incident report lists all stranger behavior of students during the test that happened at x time, but if the teacher needs to know exactly about an incident he can watch the video of this student.

NB: During the test the student shares his camera then we can record the video and after submitting the quiz it can be sent to the server too.

b. **Display incidents with more details**

Because the incidents are categorized in fours type (text log, Screenshot log, Video log and Evaluation log), we need to allow a teacher to access and visualize all those categories in detail.

An example:

c. **Build an external customer UI**

Make a front site for customers to register a new account, they can get the information from e-proctoring to install into their Moodle instance. From this UI customer can register or change his parameter. All student video can also be accessed by this UI.

d. **Watch all student's screen:**

By this feature, teachers can monitor student's activities on their screen. This feature will be useful for some practicing examinations (coding, IT basic skill like MS Office testing) or prevent students using their computer to Google the answer with the oral testing.