PROCTORING PRO PLUGIN USER MANUAL

About Brain Station 23

Brain Station 23 is a team of talented developers. We pride on being one of the top IT giants in the industry. By implementing the latest and the most innovative technologies we work on challenging projects to offer comprehensive solution meeting every last need of our clients.

We combine the finest technical craftsmanship with elegant and functional design to ship innovative digital experiences. We have a track record of building successful web and mobile applications for our clients. From 2006 the company started providing services in the local market alongside the offshore clients.

Empowered with 700+ professionals, Brain Station 23 carries a strong pull of globally recognized professionals certified by Microsoft, Oracle, PMP and other (AWS, CCNA, ZEND, etc.) large tech giants and software platform embodies. The result is a hub of enthusiastic individuals who encourage each other with continued excellency. Our talents include certified personnel like Microsoft MVP, Code Project MVP, MCP, MCTS, CEH, CHFI and so on.

▶ **Industries we worked with**

Our experienced team of skilled engineers & developers have served clients in different industries including -

Banking & Finance, Software Companies, Real Estate, Retail, Telecom, Pharma, Education, Healthcare, Furniture & Non-Profit

▶ **Awards & Recognitions**

BASIS National ICT Award 2017, 2018, 2019,2020.

▶ **Industry Standards**

BASIS National ICT Award 2018 (Won in 3 category- Fintech, Real-estate, Transportation)

ISO 9001:2015

ISO 27001:2013

The Daily Star ICT Award, Winner of 2017 best ICT solution provider on International Market Focus

Best Outsourcing Organization 2013, 2014 & 2015 by BASIS

HSBC Exporter of the Year 2013

Code Warrior Challenge 2014

Technical Expertise

- **PHP**

  Moodle
  Laravel
  Symfony
  Drupal
  WordPress
  CakePHP

- **Adobe**

  Adobe experience
  cloud
  Analytics
  Campaign

- **Mean Stack**

  Node.js
  Angular
  Express.js
  Jade
  React

- **Database**

  SQL Server
  PostgreSQL
  MongoDB
  MySQL
  PostgreSQL
  RavenDB
  Oracle

- **Server & Cloud**

  Weblogic
  Nginx
  Sun One
  AWS
  Azure
  Google

- **Microsoft**

  Microsoft ASP.net
  Web Form
  ASP.net
  Web API/MVC 4
  SharePoint
  2013/2010
  SignalR
  C#

- **BI, ML, AI**

  Microsoft Power BI
  SSIS (Data
  Warehouse)
  Hadoop
  Oracle BI
  Azure ML Studio
  Python pandas &
  scikit

- **Python**

  Django
  Flask
  Fast API
  Odoo

- **Mobile Platform**

  iOS – iPhone/iPad
  (Native)
  Android (Native)
  React Native
  Ionic
  Flutter
  Xamarin
  Unity 3D

- **Java**

  Spring.io
  Spring Batch
  Hibernate
  Jasper Report
  Maven
  Axis 2
  JSTL

- **JavaScript**

  MVC/MVVM
  Framework
  React
  Angular.js
  Node.js
  Express.js
  Jade
  Vue.js

- **AR/VR**

  Unity 3D
  Vuforia
  Unreal Engine
  AR core
  AR kit
  Open VR
  Maxst
  DeepAI

- **Sales force**

  SFMC
  Veeva CRM
  Veeva Vault
  IQVia Data
  Connector

- **Testing Automation**

  Selenium
  Cypress
  Appium
  Cucumber
  Katalon Studio
  Apache Jmeter
  Postman

- **Sitecore**

  Sitecore EXM
  Analytics
  Marketing
  Automation

- **Moodle**

  Custom plugin development
  Theme customization
  Website optimization
  Cloud Consultation
  Mobile app
  website maintenance
  Training

Proctoring Pro Plugin

1.1 Introduction:

Moodle proctoring pro plugin is a quizaccess plugin to capture a user's picture via webcam to identify who is attempting the Moodle quiz. It will capture the picture of the user's webcam automatically every 30 seconds and store it as a PNG image. Admins can analyze the image of students after exams for verification using AWS Face Rekognition / BS Face Matching API.

1.2 Features

- Capture user/student images via web camera
- Prevent users from accessing the quiz without enabling the camera
- Store images in Moodle data as a small PNG image that can be deleted individually or in bulk
- Generate a proctoring log report with search facilities
- Configure image size and capture interval for your specific needs
- Compatible with Face Recognition services like AWS to validate user images with admin-uploaded images
- Detect if webcam was enabled for the entire time of attempt
- Detect if user has moved to any other application/tab
- Detect if screen was resized
- Detect if copy and paste occurred
- Detect if F12 button was pressed
- Detailed admin report of every event log and webcam images
- Admin summary report
- Email Support

1.3 Installation

1.3.1 Install by downloading the ZIP file

- Download zip file.
- Unzip the zip file in /path/to/moodle/mod/quiz/accessrule/proctoring folder or upload the zip file in the install plugins options from site administration : *Site Administration -> Plugins -> Install Plugins -> Upload zip file*

1.4 Configuration

After installing the plugin, you can enable the plugin by configuring the quiz settings:

- Go to your quiz setting (Edit Quiz):
- Change the 'Extra restrictions on attempts' to 'must be acknowledged before starting an attempt'
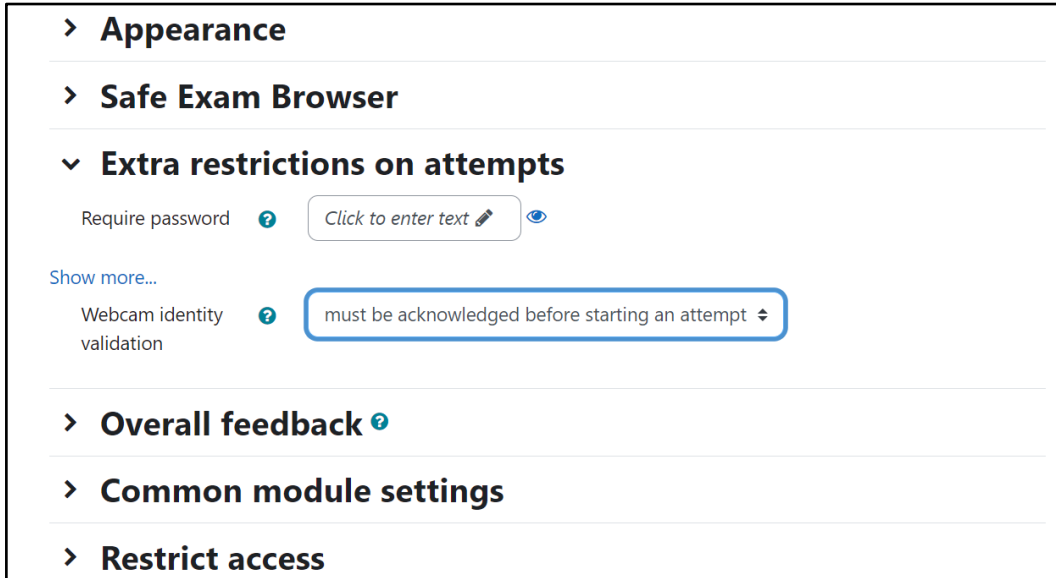
1.5 Settings Configuration

To update the plugin settings, navigate to plugin settings:

Site Administration->Plugins->Proctoring

- Go to Site Administrations plugins section.
- Select Proctoring from the activity module section to configure your plugin settings

1.5.1 Upload User Images

Use the 'Upload User Images' option to add images of users for verification by matching the face.
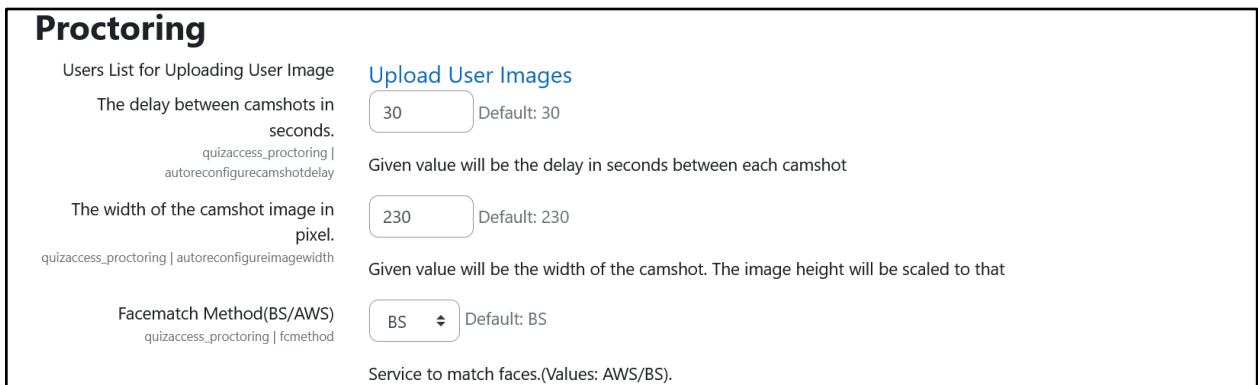
Admins can upload all the users images from the following table:

** **There must be a face in the uploaded image by the admin.**

1.5.2   Select Face Match Method
Select one of the face match method (BS/AWS) from the following settings:

1.5.3   BS Service API Settings
When using the BS face match method, the BS service API, BS API key has to be entered.

If you need the BS service API, BS API key, please contact here: **elearning@brainstation-23.com**.

1.5.4   AWS Rekognition Settings
For AWS facematch, only the AWS key and secret are needed.

AWS key		
quizaccess_proctoring | awskey	[blurred]	Default: Empty
	AWS Key for face recognition service.	
AWS secret		
quizaccess_proctoring | awssecret	[blurred]	Default: Empty
	AWS secret for face recognition service.	

If you need the AWS key and secret, you can refer to this official documentation here.

1.6   Additional Settings

1.6.1   Validate Face on Quiz Start

You can enable face validation before attempting the quiz. Users will not be able to attempt the quiz if the face doesn't match with the image uploaded by admin.

Face ID validate on quiz start	☑ Default: No
quizaccess_proctoring | fcheckstartchk	
	Face ID validate on quiz start[If "yes" user has to validate face id to start quiz].

Face validation modal will pop up before attempting the quiz

Start attempt   ✕

Allow your webcam to continue
This exam requires webcam access.
(Please allow webcam access).

Face Validated: Pending

[Validate Face Recognition]

[Start attempt]   [Cancel]

1.6.2   Face match Scheduler Task

Images of attempted quizzes can be analyzed by an automatic scheduled task. This can be enabled from the following settings.

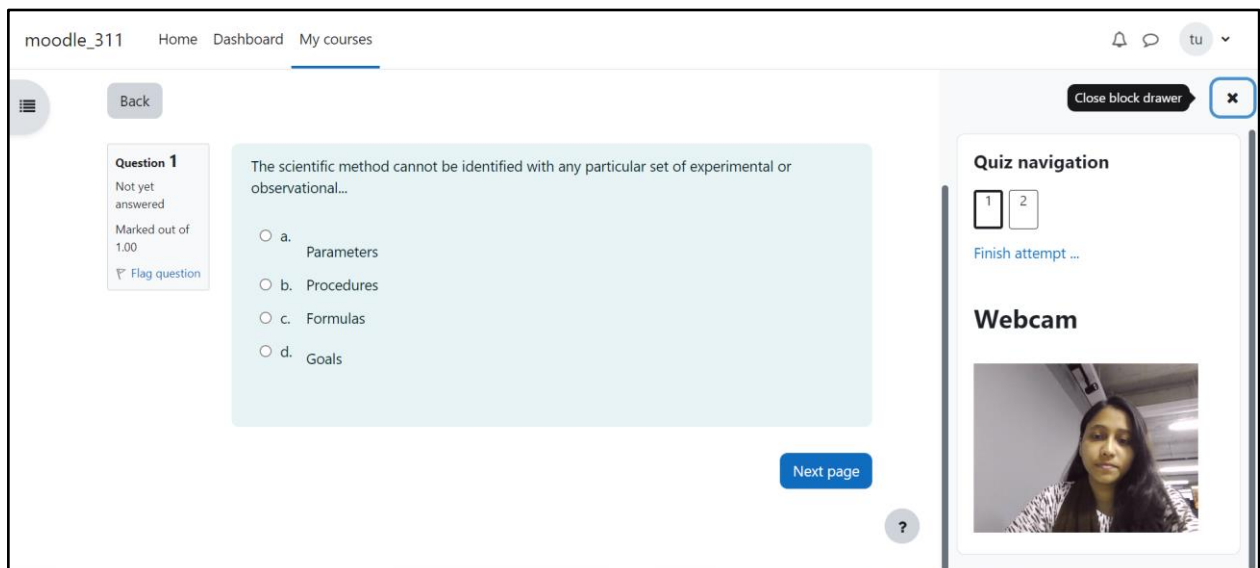| Number of facematch per quiz		
quizaccess_proctoring | awschecknumber	0	Default: Empty
	Number of facematch per quiz. (-1 for check all)	

1.7 Allowing webcam access before attempting the quiz

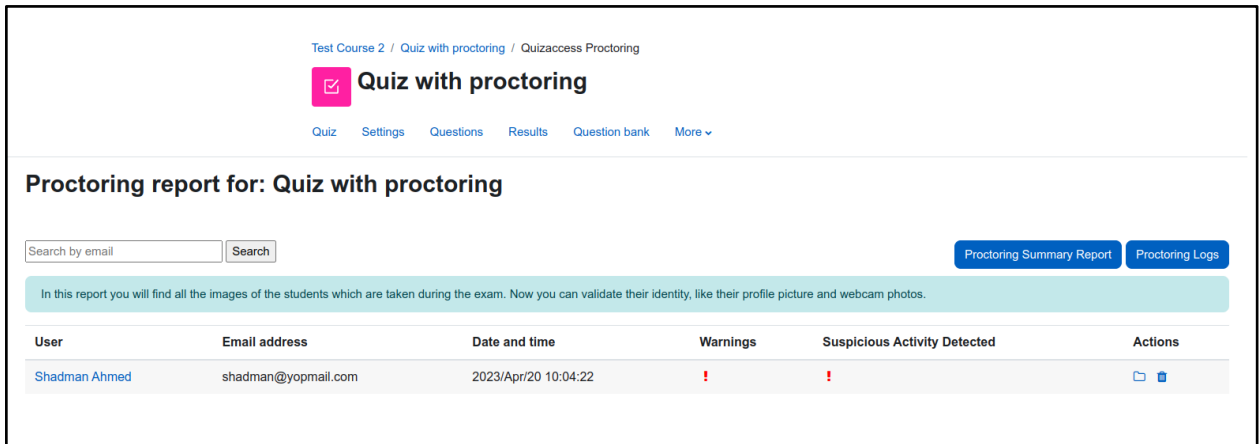Student will be asked to allow access to their webcam for the exam before attempting the quiz:
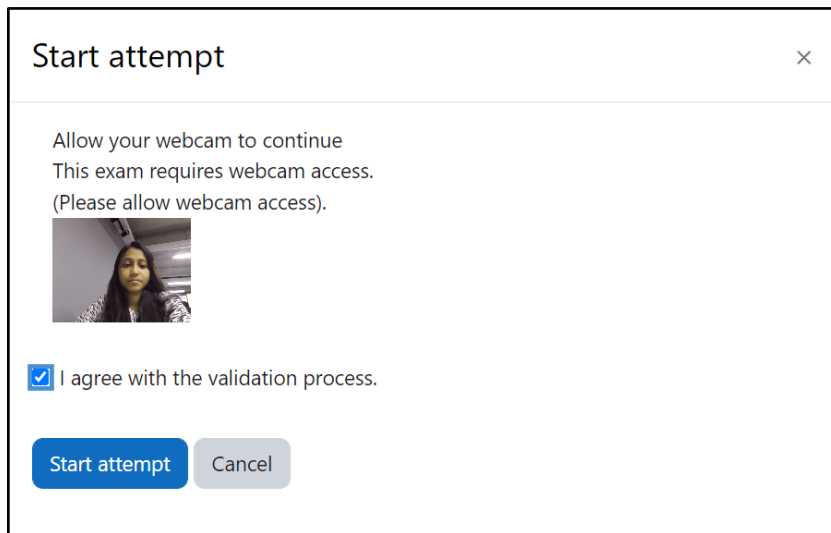
1.8 Attempting the quiz

During attempting the quiz, the quiz page will look like this:
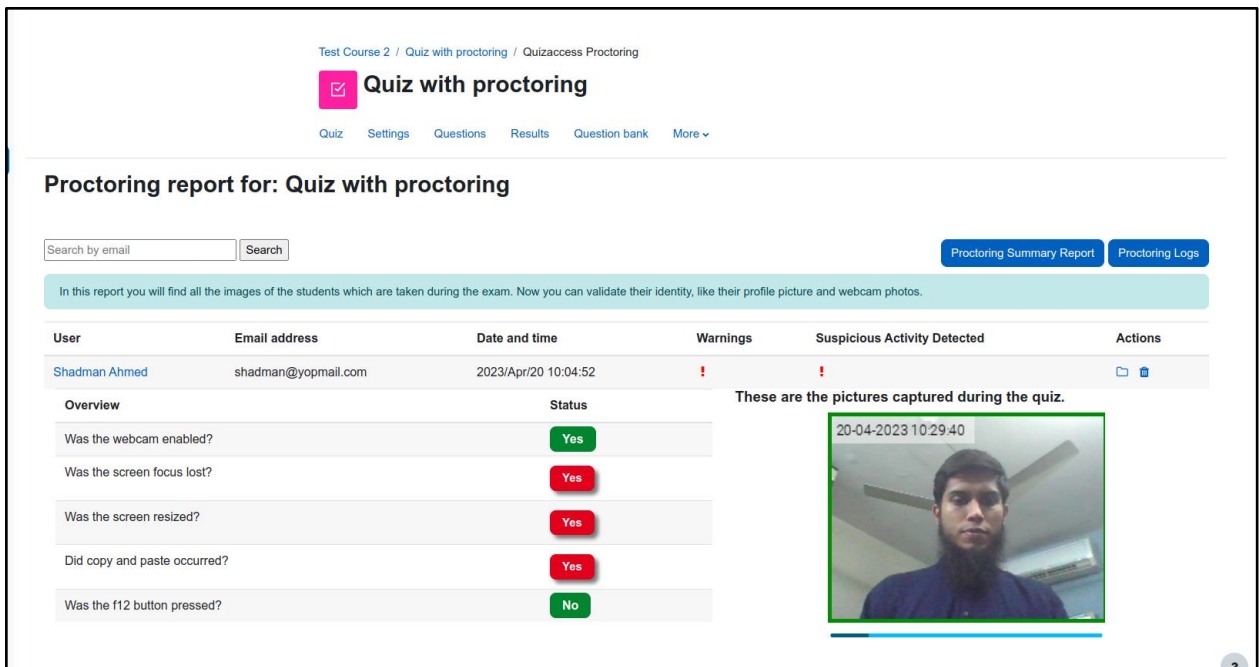
1.9 Proctoring Report

Admins can view the proctoring report:

Admins can view individual proctoring reports and analyze the images using AWS face rekognition service/ BS Face Matching API

1.10 Browser compatibility of proctoring pro plugin

Proctoring plugin uses the getUserMedia() API. So, the browser compatibility will be similar to the browser compatibility of getUserMedia() API.

	Chrome	Edge	Firefox	Internet Explorer	Opera	Safari	Chrome Android	Firefox for Android	Opera Android	Safari on iOS	Samsung Internet	WebView Android
getUserMedia	✓ 53 ✶	✓ 12	✓ 36 ✶	✘ No	✓ 40 ✶	✓ 11	✓ 53 ✶	✓ 36 ✶	✓ 41 ✶	✓ 11	✓ 6.0	✓ 53
Secure context required	✓ 53	✓ 79	✓ 68	✘ No	✓ 40	✓ 11	✓ 53	✓ 68	✓ 41	✓ 11	✓ 6.0	✓ 53

FAQ

1. How can I upload a user image?
   => From the settings of the proctoring pro plugin, there is an option for uploading user images.

2. Why does the analyze image button give a red mark for all the images?
   => Check whether the credentials for the face match methods are correct and the user's image is uploaded by the admin.

3. Can the students upload their own images?
   => No, only admins can access.

4. Where can I get the BS Service API credentials?
   => Please contact here: elearning@brainstation-23.com

5. Where can I get the AWS Secret and Key?
   => Please contact here: elearning@brainstation-23.com

6. Is the screenshot feature available?
   => No, it is removed because of browser limitation

7. Is there any documentation for AWS Face Rekongnition Service?
   => [AWS Documentation link](#)

8. How can I report an issue regarding this plugin?
   => Contact us at elearning23@brainstation-23.com.

9. Why is my moodle stuck while validating the face?
   => Please check whether the credentials for the face match methods are correct

10. Why can't I upload some of the user images?
    => Every user image needs to have a face. Otherwise, it can't be uploaded.

11. As a student, why can't I validate my face before starting a quiz?
    =>

    1. Student's image must be uploaded by an admin in the moodle to validate their face before an attempt.
    2. Please make sure there is proper lighting while validating the face