A novel approach to safeguard online exam

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ABSTRACT

Online Examination is turning into a significant developing segment all through the world because of the current pandemic situation. A significant test in the online examination is to improve security and the awareness of techniques without affecting candidate experience to satisfy the quickly developing need for online examination. Aside from this problem, increasing corona virus cases is likewise a major worry in the horticultural segment. The reason for this examination work is to propose a smart technical strategy dependent on the Exam Security to manage unfavourable circumstances. Online examination assists with decreasing chances, of cheating, and subsequently increment the security aspects. This paper suggest a methods which help you to avoid the hacks, and proctoring system which monitors the examination process, and also capture the candidate's illegal movements for future use.

Keywords: Secure Browser, Smart Proctoring, Data Encryption.

1. INTRODUCTION

Exams are always been the most important segment of an every education system. Exams And test shows the exact access what the student have studied the entire year in a particular subject. Exams shows the exact interests of the students in the particular subject. The fear of exams makes students study there best for good grades.

Test environment makes one stressed which allows the teachers to observe their students individually working skills which is great advantage for learner to keep in mind for future class activities. Ones strengths and weaknesses can consider through out exams.

The Covid-19 lockdown has made us shift from live classrooms to virtual learning classrooms. Virtual Classroom have forced us to look at the student-teacher dynamics and examination system and analyse their shortcomings. Early old- school teaching allows academics personnel to understand each student's performance, understanding and capability of each student. On the grounds of virus it's now impossible to conduct regular exams. Writing exams had a humongous syllabus have now been turned ineffective. The entire system has come under the microscope where marks are useless and it is the knowingness of the curriculum that has taken precedence The coronavirus pandemic has resulted in lockdowns across the globe. Educational institutions , like several other bodies , are moving their activities such as admittance, regular tutoring, assessments and examinations online. Since the educational establishment are closed, the demand for virtual Proctored test, especially, has skyrocketed. Virtual exams powered with remote proctoring are rapidly becoming the principle for educational institutions for admissions or facilities examinations not just result of social distancing measures, but also because they arrange secure, supervised finals that help curtail cheating.

Whether Virtual or manual, learner will always try and find new ingenuity and hacks to copy the answers. With manual examinations, the 'means to copy' were either to carry copy sheet or write test notes on desks or hands, etc. In the virtual examination, simply the question is typed in into the information retrieval and the answers were there! There are some cases when the candidates go out of the protocol to cheat and get at least passing grades . Students have found various means for passing the examination. Online exams are a kind disadvantage for examinee who sincerely study and score good marks and it's very easy for the students who can easily copy or take help of various means for scoring good marks. Online exams have its advantage and also has a many disadvantages. Students should give their exams sincerely so that it would be helpful in future endeavours.
It is convenient to conduct online exam. As a private learning centre or educational institutions, you don't need to worry about local constraints as students can do the exam everywhere. Security is one of the key element of online assessment which still needs some

betterment . Students should switch on their camera and give the exam sincerely. Teachers should keep watch them continuously if they copy then immediately separated from the exam hall and give zero marks for the paper. Teachers should check paper strictly. Teachers should create questions that require high order thinking and use varied question types. Different types versions for same test.

2. BENEFITS OF ONLINE EXAMINATION
In this portion, a couple of benefits looked by online examination have been extended.

- **Security:** Another advantage of a web determination tool is that the safety it offers. It maintains the private nature of assessment , thus there's no space for malpractices. All the queries square measure brought on the information that is comparable to a security locker that's accessible solely by approved along with personnel, the questioning gets hold on in an exceedingly programmed encode format, thus there are not any probabilities for questionnaire issues. The interconnected system even has the choice to shuffle queries in several order for various set of scholars.
- **Immediate appraisement for faster results:** This is purposeful in all the most reasons why candidates like digital examination database. Candidates don't have to be compelled to pass the time too long for their results because the complete method is machine-driven. Results are unit issued at the bit of a command , that reduces the school and admin's employment considerably. The duration and power exhausted on these might be channelled to raised enactment . In the academics the web analysis offers higher knowledge for higher choices.
- **Knowledgeable Proctoring:** The AI-infused resourceful cheating check system helps to prevent suspecting activity during exams. Online assessment system also come with preprogrammed observation innovation with web cameras connected to the database that act proctor taking picture of an examinee in the course of exam. This benefits in reassuring that the correct student uses up the check and within the right manner.

3. DRAWBACK OF ONLINE QUESTIONNAIRE
In this portion, a couple of issues looked by online examination have been extended.

- **Infrastructural Barriers:** One another most important disadvantages of web-based examination model surfaces in remote locations wherever access to electricity, stable net association and different basic system necessities square measure troublesome to fulfil. Such barriers impede on-line exams. Therefore, whereas shifting to the net mode, establishments should consider whether or not all students will seem for the take a look towards and all that arrangements may be created to confirm identical.
- **Challenges in Technology Adoption:** Implementing a brand-new system could produce a minor disruption and need a quantity of intelligence by the users. Any transition from ancient methodology to the web mode would require some investment from academic establishments to upgrade the systems. However, familiarising each students and academics with the transition is since the ideal manner forward. Such coaching would educate students and academics concerning the new options and edges of an internet examination system.
- **Susceptible to Cheating:** Another foremost disadvantages of a web-based examination system is cheating. particularly in high-stakes exams, students typically resort to impersonation, creating universities suspect test-takers' identity. Students might also get external facilitate via smartphones or smartwatches. The systems employed by candidates additionally supply multiple cheating opportunities, like connecting storage device devices, screen sharing, etc.
- **Techniques to avoid malpractice in online examination:** Among the main considerations of institutes whereas conducting web-based assessment is that the apparent risk of malpractices that comes with it because of lack of human oversight. One of the bitter truths about education and examinations today is that students return up with creative techniques to cheat in an exam, whether it an online or an offline exam.
- **Secure Browser:** Security is a vital side of the communicating. A feature throughout the net examination method prevents the gap of another window or search-engine. Secure Browser Technology prevents users from gap the other window whereas the net examination method goes on. The user is allowed to access solely the examination window. Access to keyboard shortcuts for copy, paste and screen capture is totally prevented. once a candidate tries to open a replacement window, AN alert is flashed that asks the candidate to revert to the communicating window.
- **Remote Proctoring:** Remote Proctoring is a proctoring process in that a visible invigilator is not mandatory to be in existence in the room where the online exam is being assisted . In a unattached proctored test, candidates are kept under observation for the period of the take a look at via digital camera, speaker unit and portal to the panel of the candidate's gadget. However remote proctoring requires a appropriate device such as a home computer, personal computer, cellular phone, handy tablet, access to the online network , a functional digital camera and mic.

4. CLASSIFICATION OF REMOTE OBSERVING

1. **Active on-screen proctoring** -: In this variety of remote proctoring, a proctor is assessing the candidate in real time via digital camera, speaker unit and access to the device's panel .

2. **Archival proctoring** -: In this procedure , there is no invigilator is evaluating the candidate in during examination. The audio-video is recorded for validity of the test .An Observer later goes all over this feed and highlights any unethical behavior.

3. **Self-activating Developed Proctoring** -: In this technique, there's no or basic want for work force. An automatic interconnected system is preprogrammed to watch the examinee and find a part of misbehavior and point out them.

4. **Programmed Proctoring -:** Auto Proctoring keeps track on operative incidents of candidate movement, running , and doubtful audio to watch communicating method.

- **Remote Applier Verification:** Candidate Verification is required in every of the foremost basic method of a web-based test. The ultimate step in a web examination is that the validation of a students identity for several institutes, a significant concern whereas shift over to web exams is certification of the applier's identity. Affectation is particular in every of the foremost major types of unethical behavior that happen in each virtual and manual examinations. "Eklavvya" platform answers these concerns with its candidate declaration manner.

- **Create questions that require higher order thinking:** Instead of having students answer questions which will be answered by an easy internet search or perhaps by finding the answers in their textbooks, produce questions that square measure on the analysis, synthesis, and analysis levels (Bloom, 1956). it'll be tougher to raise an exponent or "Google" the solution once the question needs students to elucidate, analyse, infer, create, compose, evaluate, and genuinely demonstrate their mastery after all content.

- **Dislocating the question sheet:** The easiest due to stop student from misconduct is to variety of the question set utilizing online communication exam software. The programmed webbing communication exam software permits academics to tangle the set of queries within the communication. academics will produce various tests quickly mistreatment this characteristic and conjointly make sure that the assessment of queries is completely different in every set. It in addition permits lecturers to dislocating the answer decisions for a selected question to stop cheating at intervals the MCQ-type communication. If the scholars conceive to copy the course of answers and forward it on to alternative students taking identical communication, answer choices for 2 totally different sets of queries won't match. Changing the set of questionnaire is that the best thanks to stop candidates from fraud ingenuity on a web communication. it's counselled to own many various versions of identical take a look at in order that within the event that students are taking the take a look at within the same physical house, it'll be less probably for learners to own all of identical questions.

- **Shutting of internet access:** At the time of examination candidate should not be allowed to access the internet. we can track the candidate's activity on the internet and check whether the examinee is trying to do misbehavior within the exam. Consequently, no students are going to be capable to accession the web to aries for the answers to queries on the check. Once the examination done then virtual reality operations can be revivified on the pc to give in the answers for analysis.

- **Prohibit backtracking:** Candidate must be allow to viewing one question at a time, answer it with a final answer, and then move to the another question. Once the candidate chooses the answer then they are not permit to change the selection. Prohibiting backtracking will cut back students from taking overtime at the tip of the check to execute to find the proper answer and force them to answer the question to the simplest of their already learned data. To avoid students quickly trying over all of the take a view at queries and having multiple tabs to get answers to queries, or maybe having family and friends accountable for an exact set of questions, select the take a look at setting that solely permits one question to seem on the screen at a time.

5. DATA ENCODING

Data encoding performs a vital function in intercepting uncertified portal to questionnaires. It additionally helps to abstain result alteration and restricted access while not valid credentials. it's a significant feature to make sure the safety of the assessment. The whole consultation between porter and examination consumer is additionally converted with a assured manner of communication. High-level coding algorithms square measure wont to write the info that cannot be ascertained simply Data encoding declares the secrecy of the question sheet being changed relating the porter and also the consumer. The cryptography is done solely by licensed personals. This convinces the safety of the assessment knowledge to its most.

Exam Time-lines for Single Question

Some educational establishments direct examinations that have restrictions a time length |for every portion or every question within an exam. The selected sequence to be followed. e.g. 30 seconds / 45 seconds/ 60 seconds to the strive. If the examinee is incapable to do the question at intervals the such moment ,the operation moves on to consecutive question.

6. CONCLUSION
From this report, we can know the advantages and disadvantages of online exams. It's quite unfair for the learners who study and want to score good marks. From this report, we can know various means of copying through online exams and various ways through which teachers can manage so that students can write the test sincerely and no unfair is done to anyone.

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