**CSE 310 Project Report**

**1. Project Title:**

Online Examination Platform

**2. Project Members:**

1. Md. Nahiyan Uddin  
   18201002
2. Md. Nahiyan Uddin  
   18201003

**3. Project Github Repository Link:**

<https://github.com/NahiyanUddin/djangoDemoProject-CSE-309-Fall-2020-Section-A.git>

**4. Objective:**

Our objective is to develop an online platform where teachers can take exams more efficiently and accurately regardless of his/her physical position.

**5. Motivation:**

We are learning to adapt to many new changes due to the covid-19 pandemic. As for the pandemic, educational institutions are taking the necessary steps to continue online classes. However, there come many difficulties. Both students and teachers are facing these difficulties such as taking an exam. Therefore, an online platform for the examination can resolve the problem.

**6. Critical Challenges:**

It is very different to develop an online examination platform to avoid any misconduct from students during examinations. The online examination platform must support live streaming, screen sharing, question randomization, etc. The platform needs to be updated according to the feedback from all stakeholders – teachers, students, and monitoring authorities.

**7. Conflicting requirement:**

Question randomization VS uniform question distribution.

**8. YouTube link of project demonstration:**

https://www.youtube.com/watch?v=YMPzDiraNnA&ab\_channel=Veritasium

**9. How Ks are addressed through the project:**

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| Ks | Attribute | How Ks are addressed through the project |
| K1 | **Science:** theory-based understanding of the natural science applicable to the discipline | To, conduct a fair online examination, we have to ensure that the students do not get the chance to share answers. Also, we have to ensure that teachers can upload questions, students can upload answer scripts at ease. |
| K3 | **Eng. fundamentals:** A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline | To ensure that the students are not sharing answers among themselves, a randomized question setup may work. To randomize the question, we will have a question bank. Then the system will assign random questions to the students using random number generators. Or we can also use random numbers as values inside a question to create a unique question for every student. |
| K5 | **Design:** Knowledge that supports engineering design in a practical area | To implement the project, we had to design a database. We had to design the relations between the entities so that our database could work functionally. |

**10. How Ps are addressed through the project and mapping among Ps, COs, and POs:**

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| Ps | Attribute | How Ps are addressed through the project |
| P1 | **Depth of Knowledge Required:** Cannot be resolved without in-depth engineering knowledge at the level of one or more of K3, K4, K5, K6 or K8 which allows a fundamentals-based, first principal analytical approach | The project requires rigorous study of all the existing online examination platforms (K8), survey stakeholders – teachers, students, and monitoring authority (K3, K4), web-based backend, and frontend design (K5, K6). |
| P3 | **Depth of Analysis Required:** Have no obvious solution and require abstract thinking, originality in analysis to formulate suitable models | Depth of analysis of requirements stakeholders – teachers, students, and monitoring authority is needed to ensure user satisfaction. |
| P6 | **Extend to stakeholders:** Involve diverse groups of stakeholders with widely varying needs | Diverse groups of stakeholders such as teachers, students, and monitoring authorities are involved in our project. Teachers need to upload randomized question materials to students where the students need to be able to upload their answer scripts efficiently. Monitoring authorities need to have access to monitor if any unfair means of conduct and take necessary actions within the platform. |
| P7 | **Interdependence:** Are high-level problems including many components parts or sub-problems | Our project involves interdependent components such as requirement analysis, designing back-end, front-end, software testing, etc. |

**11. How As are addressed through the project:**

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| As | Attribute | How As are addressed through the project |
| A3 | Innovation: Involve creative use of engineering principles and research-based knowledge in novel ways | The platform needs to be updated with innovative and creative ideas to meet the feedback from all stakeholders – teachers, students, and monitoring authorities. |