

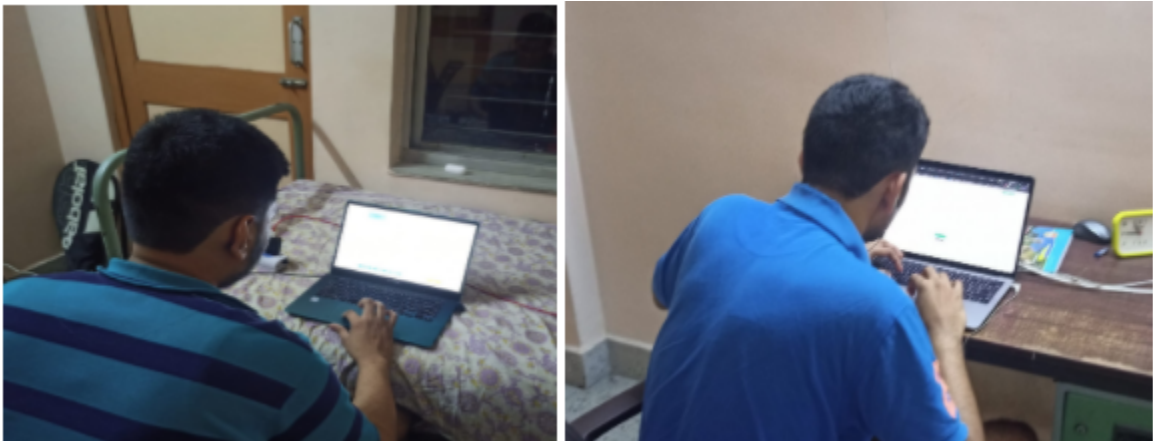
# PROTOTYPE AND EVALUATION REPORT

## GROUP 13

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## AUTOMATED LIVE CLASSROOM PERFORMANCE EVALUATION

### Cognitive Walkthrough



### Real time interviews

#### TASK - 1 : Creation of Exam by Professor

The first step is creation of an exam that will be attempted by the students. Due to covid situation the MidSem Examination needs to be online so the task now is to create the CS101 MidSem Exam consisting of only MCQs and Short Answer Questions.

#### Interface level Task

- 1) Select user type as Professor
- 2) Enter the proper login credentials.
- 3) Select course as CS101.
- 4) Create a new upcoming exam by tapping the create exam button.
- 5) Now add the details of the exam like name,date,duration,time,instruction.
- 6) Tick the checkbox if you want to randomize the questions.

- 7) Now create the question set by adding mcq and short answer questions.
- 8) More than one section can be added by using the corresponding button.
- 9) Also add answers to the created mcq or short answer question.
- 10) Submit the created question paper.

### **Questions for evaluator :-**

- 1) Are you able to locate the course and add the exam you want to create easily?
- 2) Was there a difficulty in adding MCQ questions?
- 3) Was there a difficulty in adding short answer questions?
- 4) Was it easy to randomise the questions?
- 5) Did you have any problems in adding multiple sections?
- 6) Was adding the details of the exam like adding instructions,time,duration easy?

### **Feedback :-**

Feedback is given by the following users

- 1) Ashish Rai
- 2) Deepak Kumar
- 3) Utkarsh Patel

#### **FeedBack given by Ashish Rai:**

- a. Yes, I located it easily.
- b. No, adding mcq questions and its answer was very easy.
- c. No, adding a short answer question was pretty easy.
- d. Yes randomising the question set is a great feature helping to minimise cheating and can be done very easily.
- e. No multiple sections can be added easily but the button is not well placed.
- f. Adding was not a problem but no option to review.

#### **FeedBack given by Deepak Kumar:**

- a. Yes it was easy to locate it.
- b. No adding mcqs was easy but the feature of evaluating partially correct answers is not present..
- c. adding a short answer question wasn't a problem..
- d. Yes, randomising the question set was very easy.
- e. No multiple sections can be added easily
- f. Adding wasn't a problem.

#### **FeedBack given by Utkarsh Patel:**

- a. Yes it was easy to locate .
- b. No adding MCQ was very easy.
- c. Adding Short answer questions was easy but no feature to handle casing issues in answer.
- d. Yes, randomising the question set was very easy.
- e. No multiple sections can be added easily.
- f. Adding details was very easy but no option to review everything again.

**Feedback Analysis:-**

- a) Features to add and evaluate partially correct answers must be added.
- b) Answers to short answer type questions must be handled in a correct way (like by converting all to lowercase) and instructions.
- c) Option to review the details of examination and questions must be added.

**Potential solution for problems identified:-**

- a) Partial marking feature must be implemented and added which will help the professors to add partially answerable MCQs and students can get partial marks in that question accordingly.
- b) Answer in short answer type questions must be checked case independently and students must be notified to not make spelling mistakes while typing the answer.
- c) A button must be added to review the details of examination and the questions

**TASK -2 : Attempt an mid sem exam.**

You are a 1st year student at IITG and you are taking the CS101 mid-sem exam. Due to covid situation your institute has decided to take it in online mode. You have to attempt the CS101 mid-sem exam on the portal made by your institute.

**Interface level Task:-**

- 1) Select usertype (Student/Professor).
- 2) Login with your credentials.
- 3) Select the course CS101 from the course list.
- 4) Select Mid-Sem exam from the listed exams in the selected course page.
- 5) Read the instructions and begin the exam.
- 6) Navigate through sections and attempt the given questions.
- 7) Review the attempt summary and submit the exam.
- 8) Confirm the final submission and enter feedback if any.

**Questions for evaluator :-**

- 1) Did you face any difficulty in filling the login credentials before starting the exam?
- 2) Are you able to locate the course and the exam you are looking for?
- 3) Did you find any difficulty in marking the questions for review and reviewing it again in between the exam ?
- 4) Did you find it easy to reset your response to attempted questions?

- 5) Are you able to easily find the questions you had left unattempted or marked for review questions just by one click in the attempt summary?
- 6) Did you face any difficulty in attempting and submitting the exam?

### **Feedback :-**

Feedback is given by the following users

- 1) Ashish Rai
- 2) Deepak Kumar
- 3) Utkarsh Patel

#### **FeedBack given by Ashish Rai:**

- a. No difficulties were faced.
- b. Sliding to different courses was easy and fast. Font size can be increased for better visibility.
- c. Review and reset buttons can be made of different colours to avoid confusion during exams.
- d. Yes, it was easy to reset.
- e. Colour codes of the attempt summary were quite easy to understand. Single click system was a very good feature to add.
- f. No difficulties were faced during submission and attempt.

#### **FeedBack given by Deepak Kumar:**

- a. No difficulties were faced.
- b. Sliding to different courses was easy and fast. Font size can be increased for better visibility.
- c. Review and reset buttons can be made of different colours to avoid confusion during exams.
- d. Yes, it was easy to reset.
- e. Colour codes of the attempt summary were quite easy to understand. Single click system was a very good feature to add.
- f. No difficulties were faced during submission and attempt.

#### **FeedBack given by Utkarsh Patel:**

- a. No it was all smooth.
- b. yes the page was quite simple to navigate, also the status of the exams is also a good feature
- c. Quite difficult to mark responses as the buttons for marking are not that clear
- d. It was easy but again the buttons were again a problem as mentioned above
- e. Yes that was working just fine, the color codes was a good implementation
- f. No difficulties and the confirmation feature is a good one.

### **Feedback Analysis:-**

- a) There is no difficulty in login.
- b) Font size of course title should be increased for better visibility.
- c) Buttons should be made broader and should have proper colour coding.

- d) Reset function works fine.
- e) There is no issue in this feature, everything is good.
- f) Confirmation feature is good.

**Potential solution for problems identified:-**

- a) We are going to increase the font size of course title by 5, so that it is clearly visible without any stress on the eye of the user.
  - b) We are going to make the following changes to “Mark for Review” button
    - i) Make it yellow in colour.
    - ii) Increase the font size by 2.
- Also increase the font size of remaining buttons in the bottom(reset,next question)

### **TASK - 3 :Analyze your exam performance with your peers**

As now you have attempted the CS101 exam and got your performance evaluated, now it is the time to analyze your performance by comparing with your peers and improving on your weak topics.You have to now analyze your CS101 mid-sem performance.

#### **Interface level Task**

- 1) Select the course CS101 from the course list.
- 2) Select Mid-Sem exam from the listed exams in the selected course page.
- 3) Tap the Your Responses button to navigate through your responses in the exam.
- 4) Navigate through sections and go through your responses to the given questions and their correct answers.
- 5) Tap the Analysis Report button to get the detailed analysis report.
- 6) Tap the Best Performers button to get the list of best performers in the given exam.

#### **Questions for evaluator :-**

- 1) Were you able to find the marks you scored in the exam easily?
- 2) Is it easy to find who performed best in this exam?
- 3) Is it easy to traverse through all the questions while going through your responses?
- 4) Are you able to differentiate between the correct response and your response clearly?
- 5) Is showing how many people attempted each question correctly helpful to you?
- 6) Are the factors (like mean marks , median marks) in the analysis report helpful for evaluating your performance correctly?

## **Feedback :-**

Feedback is given by the following users

- 1) Ashish Rai
- 2) Deepak Kumar
- 3) Utkarsh Patel

### **FeedBack given by Ashish Rai:**

- a. Yes, I located it easily.
- b. Yes, the button to show that was very helpful.
- c. Yes, navigation was pretty easy.
- d. Yes color coding was great to represent my answer and the correct answer.
- e. Not exactly as the detailed analysis report covers a lot of details and it's sufficient.
- f. Yes, all the techniques used, especially the idea of using graphs to analyze my performance was really great.

### **FeedBack given by Deepak Kumar:**

- a. Yes it was easy to locate it.
- b. Yes it was easy to get with a single click.
- c. Navigation was great.
- d. Color coding was great but some detailed explanation of the correct answer would be good.
- e. Yes it was helpful to get an idea of my question wise performance.
- f. Yes it was great but some features like (showing the possible rank if a particular question was attempted correctly) would have been really great.

### **FeedBack given by Utkarsh Patel:**

- a. Yes it was easy to locate on the side of each question.
- b. It can be mixed with the detailed analysis report to make it more feasible.
- c. Navigation was really good.
- d. Color coding was really helpful to know the correct but a detailed explanation with it could be helpful
- e. Yes it was helpful.
- f. Yes it was pretty great and all the techniques used gave a great idea of my performance.

## **Feedback Analysis:-**

- a) More features as pointed by Deepak can be added in the analysis report to make it more descriptive and helpful for the students.
- b) Detailed answers to each question can also be added to the question-wise analysis to help the students to know the answer directly.

## **Potential solution for problems identified:-**

- a) Adding the detailed answer to each and every question in the question wise analysis report for a better understanding of all the students.
- b) More heuristics will be added in the detailed analysis report like

- i) Getting probable rank if the question was attempted correctly.
- ii) Heuristics to rate the strength in a particular topic based on the current and previous exams.
- c) Increase the use of more visual methods of representing the data as it is more appealing to the user.