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Analysis of Smart Bank Coaching Mobile Application Based on System Usability Scale

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Abstract— In this paper focuses on the system quality be proved based on System Usability Scale which can measures the efficiency of Android App when operated by the user. It can be developed for students and other educated people who can join in a banking institute by conducting training exam on the basis of English skills, communicative skills, Aptitudes, General ideas and Reasoning skills. The admin can set time interval for the exam which helps to differentiate the starter and trained candidate. The candidate should finish each category within the time duration. The mark will store automatically once the time ends. The mark will be displayed to the candidate as per the section, therefore knowing the skill range on each section will become a simpler task. Finally, the quality of product can be analysed by System Usability Scale, to measure the usability of smart banking mobile App using statistical analysis.

Keywords— System Usability Scale (SUS), Android App, Measure Product Quality.

1. INTRODUCTION

The benefit of the application "Smart Bank Coaching Mobile Application for Student Interaction" The candidates can discuss about the questions or doubt through discussion chat room. The discussion can be carried out by connecting the mobile with server hotspot [1][2][3][4]. The mobile will get connected under the common hotspot which acts as server to receive message from various devices and display in the discussion page.

2. ORIGIN OF PROBLEM

In existing system, the candidates in institute will train by attending objective exams through webpage. The webpage will connect with the local server; therefore the candidates can't attend exams outside the institute. The candidate won't have any common discussion page to share his / her ideas in solving the questions. The overall results get updated in the database where the candidate can't view the result as per the category (general, aptitude, and reasoning).

In this research focus on educational environment, due to the lack of specialized skill level for graduate students' causes unemployment. According to the National Skills Development Council (NSDC), a new job created by 2022, will come from several sectors in India [11] such as construction [12] and plumbing, automotive and transportation, retail and healthcare, education etc.

3.SCOPE OF RESEARCH

In proposed system, the candidate can make use of the mobile application for attending objective exam. The candidate can use the application from anywhere to attend the exam. The exams are categorized into various sections such as general, aptitude, reasoning and bank awareness. After attending exam, the mark will be viewed to the candidate as per the section which helps to know the weak section in a simpler manner. The candidate also has a facility to store the mark in a pdf. A candidate can communicate with others by connecting the mobile with wifi hotspot. SUS score can be analyzed for scaling an effectiveness and efficiency of the quality of App by statistical manner.

4.DESIGNING A SYSTEM FOR MOBILE APP

System design concentrates on moving from problem domain to solution domain [5] [6] [7] [8]. This important phase is composed of several steps. It provides the understanding and procedural details necessary for implementing the system recommended in the feasibility study.

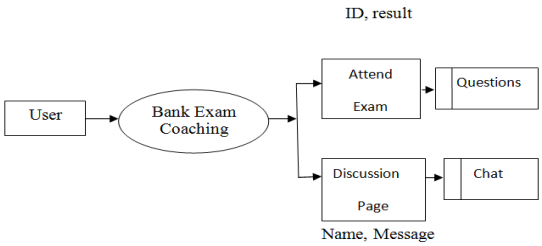


Figure1 Level 0 Diagrams

In figure 1 represents, the user logged into the App, after the user may attend the Exam and make discussion with other users.

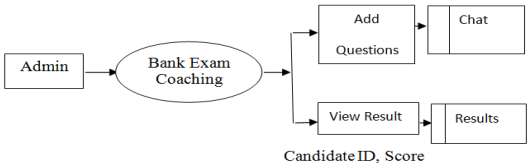


Figure 2 Admin Login

In figure 2 represents, the Admin logged into the App, after the admin can add the questions and view the result of the users.

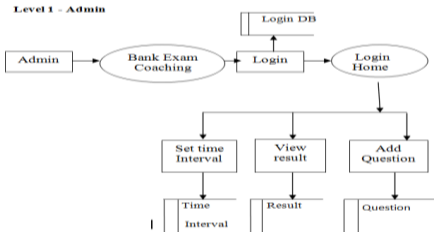


Figure 3 Admin Level 1

Figure 3 represents, Admin logged into the App, and the admin can add the questions and set the time interval and view the users result.

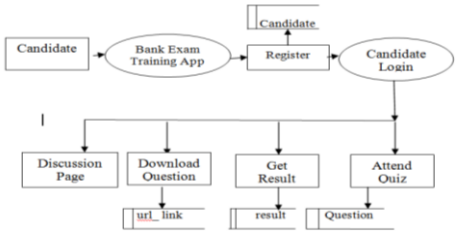


Figure 4 Admin Level 2

Figure 4 represents, the candidate can logged into the App, then he/she register into the App then he download the question paper and Get Result and attend the quiz.

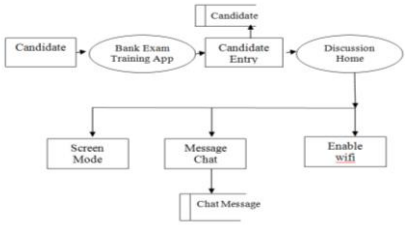


Figure 5 Admin Level 3

Figure 5 represents, the candidate can logged into the App by using their username and password and make discussion by using their wifi network.

5.IMPLEMENTATION OF SYSTEM DESIGN

Implementation is the stage of the project when the theoretical design is turned out into a working system. Thus it can be considered to be the most critical stage in achieving a successful new system and in giving the user, confidence that the new system will work and be effective.

The application was designed to fulfill the needs of both the admin and the candidates in the bank training institute. The admin can make use of the application to add questions as per the category, view result of the candidates, update question paper link and to reset candidates result. The candidate can register the details to attend for the training exam. The questions can be viewed as per the category and after attending exam, the marks of the candidate get updated in the database. The time interval differs as per the trained and fresher candidates, which help to attend all questions. The application also helps to share ideas and doubts with all candidates. Every candidate can join with the discussion page which helps to view all chat messages in a common discussion forum.

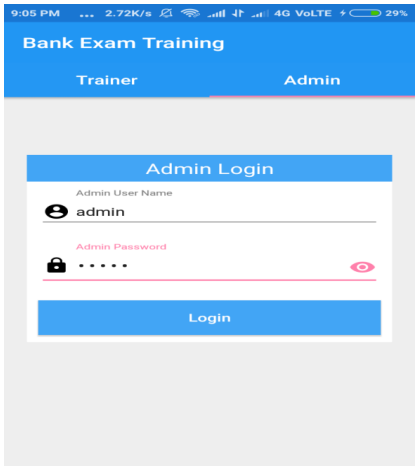


Figure 6 Login Page

Figure 6 shows, the login page of the application.

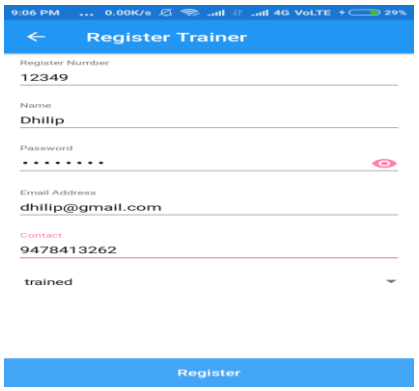


Figure 7 Candidate Page

Figure 7 shows, the registration page of the trainer.

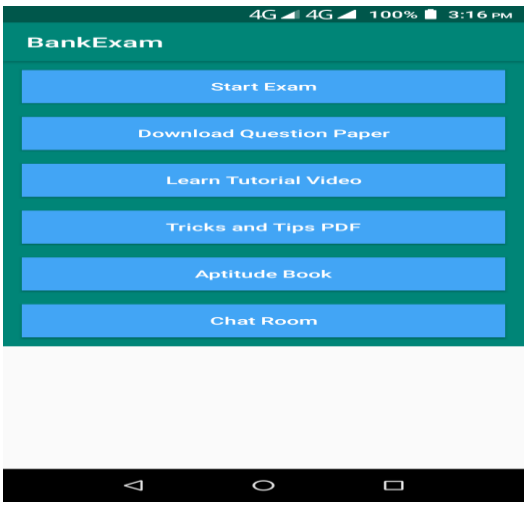


Figure 8 Register Trainer

Figure 8, shows the client side of the application.

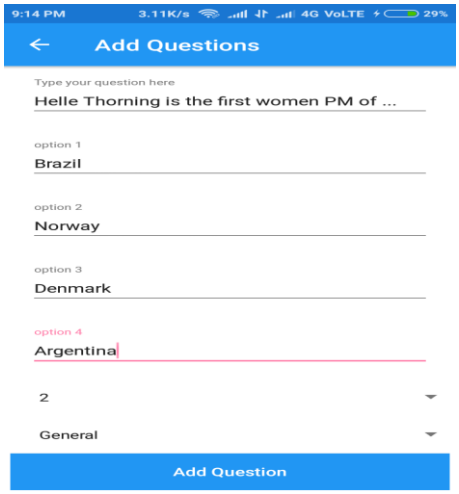


Figure 9 Add Questions

Figure 9 shows, the admin can add the questions

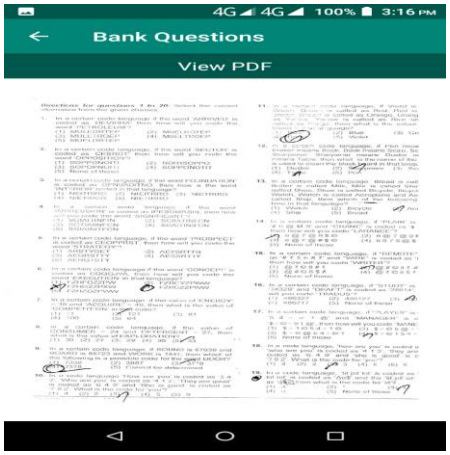


Figure 10 Reset Questions

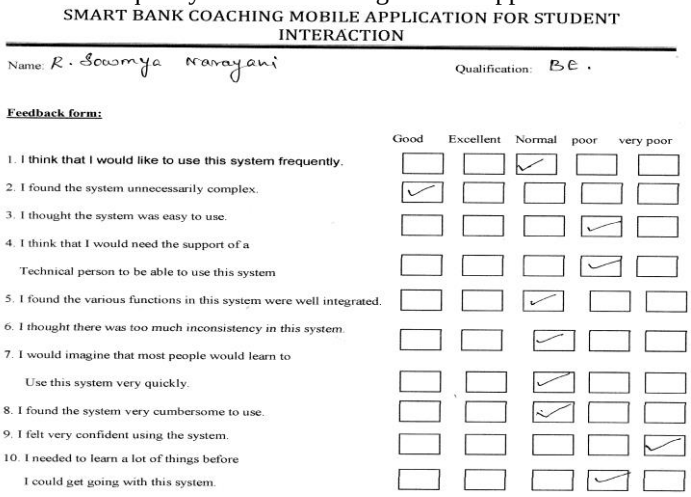
figure 10 shows, the admin can add PDF Questions

Figure 11 View in You tube

Figure11 shows, the online video clips for the trainee.

6. MEASURING SYSTEM USABIITY SCORE OF MOBILE APP

To measure the product usability with System Usability Scale (SUS) [9] contains 10 questions where participants are given 1–5 scale to fill, according to how they agree with every statement regarding product or feature on the test. 1 represents strongly disagree while 5 denotes they strongly agree with the statement. The sample copy of feedbacks is taken from candidates as shown in figure 12. SUS questionnaire has measure the quality of smart banking mobile App.



SMART BANK COACHING MOBILE APPLICATION FOR STUDENT INTERACTION

Name: R. Soumya Narayani Qualification: BE.

Feedback form:

	Good	Excellent	Normal	poor	very poor
1. I think that I would like to use this system frequently.			✓		
2. I found the system unnecessarily complex.	✓				
3. I thought the system was easy to use.				✓	
4. I think that I would need the support of a Technical person to be able to use this system				✓	
5. I found the various functions in this system were well integrated.			✓		
6. I thought there was too much inconsistency in this system.					
7. I would imagine that most people would learn to Use this system very quickly.			✓		
8. I found the system very cumbersome to use.			✓		
9. I felt very confident using the system.					✓
10. I needed to learn a lot of things before I could get going with this system.				✓	

Figure 12 Questions in System Usability Score customized

Before interpreting System Usability Scale (SUS) score, it need to first calculate the SUS score for each of the respondents. Below are the quickest and most simple steps do so:

Step 1: Convert the scale into number for each of the 10 questions

- Strongly Disagree- Very Poor: 1 point
- Disagree- Poor : 2 points
- Neutral – Normal : 3 points
- Agree- Excellent : 4 points
- Strongly Agree- Good : 5 points

Step 2: Calculate

- X = Sum of the points for all odd-numbered questions – 5
- Y = 25 – Sum of the points for all even-numbered questions
- SUS Score = (X + Y) x 2.5

The rationale behind the calculation is very intuitive. The **total score is 100** and each of the questions has a weight of 10 points.

SUS score will be able to tell the usability performance in the aspects of effectiveness, efficiency, and overall ease of use. Although each responses yield a score on a scale of 0 – 100, the interpretation of SUS score as shown in table 1.

Table1. SUS Score

SUS Score	Adjective Rating
> 80.3	Excellent
68 – 80.3	Good
68	Okay
51 – 68	Poor
< 51	Awful

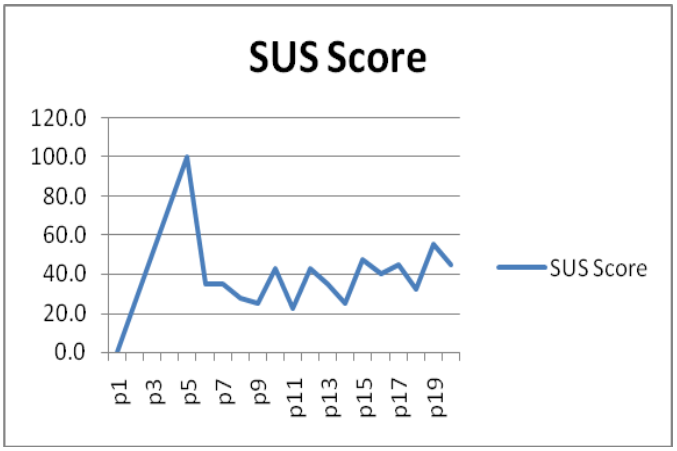


Figure 13 SUS Score From Bank Coaching Students

Figure 13 represents, the SUS score is produced according the feedback of 20 candidates. The feedback of score can be rated as Excellent or Strongly Agree by one candidate represent as 100% and another one candidate can rated as good which represent 75% and other candidates are rated 25% to 45% in a response which can be measure based on SUS score and analyzed in statistical manner.

7. CONCLUSION

In this chapter, the application developed for bank exam training will help the candidate to practice lot by attending many exams. Instead of spending money for computer hardware, a single application helps to fulfill the needs of both the candidate and the admin of the institute in an attractive manner. The application helps both the fresher and trained candidate to attend the exam as per the extension in time interval. The discussion page helps the candidate to share their ideas, which enrich the talent towards bank exam training. Finally, the software quality can be proved based on System Usability Score which can measures the efficiency and user satisfaction when operated by the user. The SUS score is produced according the feedback of 20 candidates. The feedback of score can be rated as Excellent or Strongly Agree by one candidate represent as 100% and another one candidate can rated as good which represent 75% and other candidates are rated 25% to 45% in a response which can be measure based on SUS score and analyzed the effectiveness and efficiency of the quality of App by statistical manner.

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