

Development of a Color Tutoring System on Smart Phone for Children Enhanced Learning

Ihedioha Uchechi Michael¹, Onyedeke obinna Cyril², Taoufik Elmissaoui³, Mathew Daniel E.⁴, Modesta .E. Ezema⁵, Agubata Chidinmma⁶, Nnamdi Johnson Ezeora⁷, Ijeoma Faith Nnoje⁸

¹Department of Computer Science, University of Nigeria, Nsukka (UNN)

²Department of Computer Science University of Kairouan, Tunisia.

³University of Chartage & Higher institute of Applied Mathematics and computer science, University of Kairouan, Tunisia.

⁴Center for Atmospheric Research, National Space Research and Development Agency, Anyigba & Department of Computer Science, University of Nigeria, Nsukka (UNN),

⁵Department of Computer Science, University of Nigeria, Nsukka (UNN).

⁶Department of Computer Science University of Kairouan, Tunisia.

⁷Department of Computer Science, University of Nigeria, Nsukka (UNN).

⁸Department of Computer Science, University of Nigeria, Nsukka (UNN),



Abstract – In the meantime, smart phones are the most popular device in the globe, as it is still in evolvement and advancement. Almost everybody has a personal smart phone device in the recent. One of the potentials of these smart phones is to run a diversity of applications, making handlers to use it most of the time as well as for discharging their daily tasks. The aim of this study is to develop an expert system running on android smart phones. This paper is an expert system for color tutoring in nursery and primary schools. An application which emphasizes the use of color in teaching nursery grade to primary pupils developed in Java on Android using a service-oriented architecture. The system runs on mobile devices and offers smart features that evaluates and uses color and picture to select and describe different types of entities and real world vegetation and surroundings. Equations of life can be easily seen in pictures since colors are very noticeable and the eyes tend to float back and forth on paintings. The system will use a rule-based engine and scripting environment implemented in Java which reasons with the use of knowledge databases implemented as declarative rules.

Keywords – *Expert system, color Tutoring, Smart phone.*

I. INTRODUCTION

In years past, guardians would need to stack the whole family up in the vehicle and drive to a mentoring focus, at that point pause while the meeting was occurring. Presently, intelligent instructive assets are accessible at the snap of a

fasten and can be gotten to from anyplace, whenever. This implies students can receive the rewards of outside guidance without the burden of modifying plans or postponing dinner time. This goes about as an inspiration to urge understudies to get to the applications all the more regularly, as there isn't

almost the measure of preplanning and coordination included. Besides, families can take these applications anywhere their keen gadget can travel, implying that in a hurry learning is currently a reality. This implies a youngster can crush in a couple of pages of an eBook while holding up in the vehicle rider line for their kin. Thus, the course of events for learning is extended inconclusively. It's been deductively demonstrated that kids learn in various manners. Some are visual students; others gain information by perusing and still more require hands-on exercises to get their minds stirring. Truth be told, there are in excess of 71 discrete learning style plans. The magnificence of portable eLearning applications is that they aren't restricted to one configuration. Their intuitive nature makes them outwardly engaging while likewise lighting regions of the cerebrum related with play, rivalry, and prize. As they play math games, for example, understudies are fascinated with rich designs, straightforward content and difficulties that invigorate the "play" side of their mind. Rather than depending on course readings and educator bearing, these understudies needed to contemplate unfurling occasions, work together with companions and grown-ups, and utilize computerized devices to impart their thoughts. [1]. Therefore, social orders have started to look at how to get ready and instruct people in the future to work, succeed, and flourish in this changing worldwide society.

Shading likewise has any kind of effect in education particularly in the early improvement of a kid. Thusly sentence structure, understanding perception, and different viewpoints help tutees to recognize what ideas to center when guides put resources into shading pens or potentially shading pencils, and dry hued markers. This shows shading can make coaching fascinating and fun, in addition to having a decent look too. In any case, there are huge quantities of understudies who don't approach innovation in either home or school settings. The regularly types of student's work in extraordinary grade school are described into four gatherings [2]. These types of work can be seen as: frontal work - in an exceptional grade school it is strongly prescribed to utilize it with different types of instructing. Frontal structure is reasonable in acclimating understudies with the work area application. Following an analysis performed to acquaint simply content with all understudies simultaneously. The gathering work requests that all understudies cooperate on one yield, every understudy meets one section that he can deal with, the yield is normal. Singular work - this is the primary way to deal with understudies in exceptional grade schools. The instructor works with every understudy separately, during certain time unit, with a foreordained point. This shows it is an overwhelming test for a student's internal

inspiration, relaxation aptitudes and discretion capacity to be utilized irregularly in uncommon primary schools." [2].

II. THEORETICAL BACKGROUND

Color is a significant piece of kids' life, be it: garments, toys, rooms, study hall, etc. Hues can be utilized to depict sex documentations too. It is all around acknowledged that pink for example is for young ladies and blue is for young men. It is additionally imperative to take note of clinician's discoveries that shading play an imaginative capacity in the life of kids. Early examination discoveries show that youngsters more youthful than 2 years of age can play and get the hang of utilizing cell phones and even multi contact shading shows. Different scientists found that youngsters as youthful as two will normally collaborate with a shading contact screen, similarly they will utilize common impulses to play with another toy. Training is moving as we wrap up too many years of the 21st century. It is a solid feeling that most significant shading for perusing, composing and math tackling is white and follows with other splendid shading, for example, yellow, orange and red. This outcome fortifies by meet finished with educators of the three unique schools; white is touchy to the youngsters [3].

2.1. Review Of Related Literature

As per the current work done, Results show that youngsters as youthful as 2 years start to dependably ace shading words when hearing them in preparing introduced post-ostensibly, yet not pre-ostensibly, and that grown-ups tested with learning novel shading classifications are influenced by a similar requesting effects[4]. Hues can improve visual preparing, diminishes pressure, and difficulties mental health through visual incitement/connections and example chasing. Visual incitement really overhauls the cerebrum, making more grounded associations while cultivating visual reasoning, critical thinking, and innovativeness.

[5], States that shading is a piece of the electromagnetic range. It is a vitality having frequency and recurrence. Shading influences the temperament in grown-ups and all the more so in youngsters. Shading brain science and its effect on a youngster's learning capacities and conduct is a much explored subject. Shading can help interface the cell receptors in the mind. At the point when right shading is found for a child's difficult subject, at that point that subject really turns into a great deal casual for the youngster; the student really encounters savor the experience of learning. Youngsters wearing shaded goggles who were made to finish pegboard tests were found to understand the tests a lot quicker when wearing goggles of their preferred shading. Despite the fact

that it might astonish language specialists that the general request of words matters such a great amount in learning, these impacts are predictable with numerous models of creature learning. In these models, creatures don't learn "realities" about the world. Or maybe, they learn signs that foresee occasions; learning includes reinforcing portrayals of the estimations of these signals (this is valid for both "affiliated" and "data handling" models).

[6], Proposed a Mobile learning software. It's emerging discipline in the area of education. It confirms that mobile phones are the most frequently used device in these projects, followed by iPads and other handhelds, with personal listening devices (e.g. iPods) receiving a little less attention. M-Learning is the point at which mobile computing and electronic learning intersect to produce an anytime, anywhere learning experience. The field of M-Learning is approximately a decade old and has grown rapidly. The term "Mobile Devices" includes standard cell phones (those are without an operating system performing basic cellular voice communications), smart phones (those utilize an operating system providing voice services as well as additional data processing applications), and personal digital assistants (PDAs provide data processing without voice capabilities).

[7], Proposed an expert system that uses artificial intelligence (AI) techniques to perform or guide a given task which a human expert can do. The emphasis has been shifted from techniques and formalism to the knowledge that an expert system contains. The expert knowledge seems to be necessary and a nearly sufficient condition for developing an expert system. The study of expert system has shown the clarity that acquisition of this knowledge is a technique and can also be called an art and is relevant in the field of knowledge engineering process.

III. ANALYSIS OF THE PROPOSED SYSTEM

The proposed System permits students to accomplish shading learning without being genuinely present in class and in this manner dispensing with of dull hard paper duplicates. An understudy who needs to learn shading will have the option to do so intelligently with or without educators direct. The administrators can include/update the items data to the

framework with the goal that the educators/students fulfillment is met. The proposed framework is focused at the android working framework which creates educative substance dependent on its put away information. The application is to be utilized by kids in nursery and grade schools. . The children open the application and new educative substance is made with charming pictures and delineations to improve learning.

3.1. Design of proposed system

The system design specification is a document that presents the complete design for the new information system.

Objective of the proposed system:

1. To develop an expert system for color tutoring in nursery and primary schools that will:
2. Represent knowledge through pictorial maps, mind maps, colors, drawings and more graphical images that describe whatever knowledge been presented to nursery and primary school children.
3. To present color to each grade of student in accordance to the level of expectations. Which implies that the higher the level of study, the more the advanced colors are taught.
4. Also, have a progress report that shows the learning curve of this children based on questions they could be able to answer over time.

3.2. System Architecture

The architecture of the framework configuration is 3-level. The levels are introduction level, center level and information level. The introduction level is UI and it is structured utilizing XML layout motor. The center level is likewise called business rationale planned utilizing Java and the information level is the piece of the framework that is answerable for putting away information for example the database and the database the executives framework and for building up this framework is MySQL database.

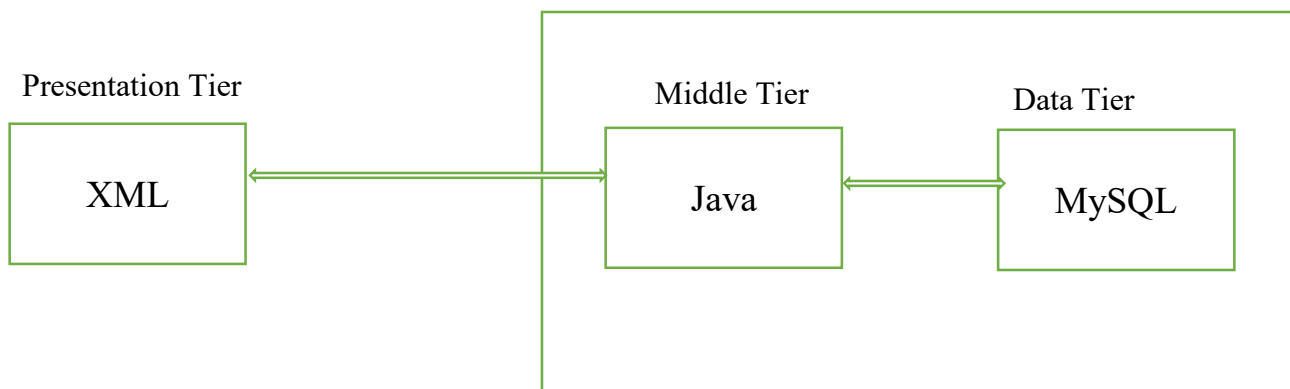


Figure 3: System Architecture

IV. SYSTEM IMPLEMENTATION

System implementation is the construct of the new system and delivering of that system into production. Here, the chapter considered the different development environments such as System Platform, Integration Development Environment and Programming language.

4.1. Implementation architecture

Here, implementation architecture focuses on how the system was built. It cod the connection of the link and nodes; how one link leads to another

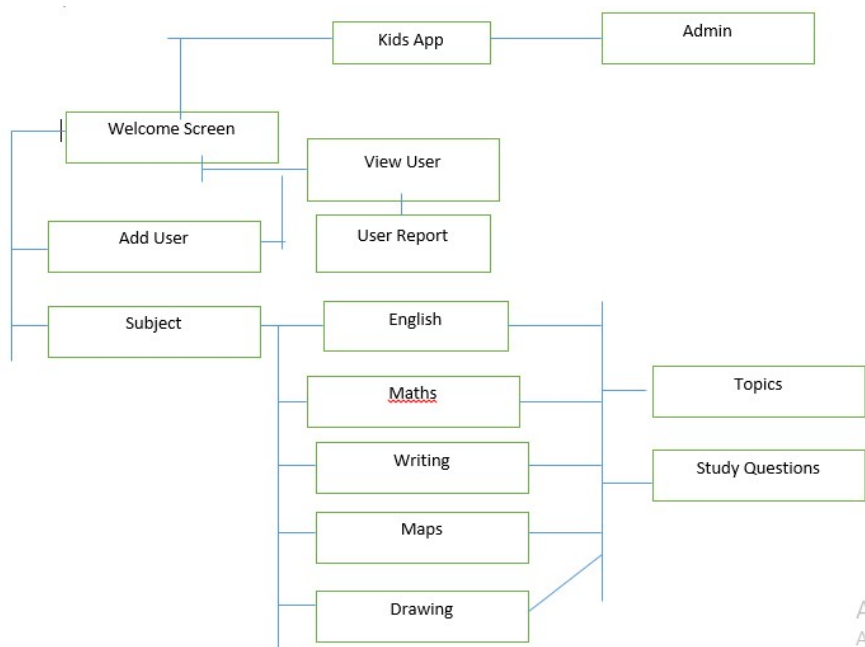


Fig 4: Implementation Architecture

This is screenshots of my application software, shown below:



Fig 5: Screenshot of Welcome screen

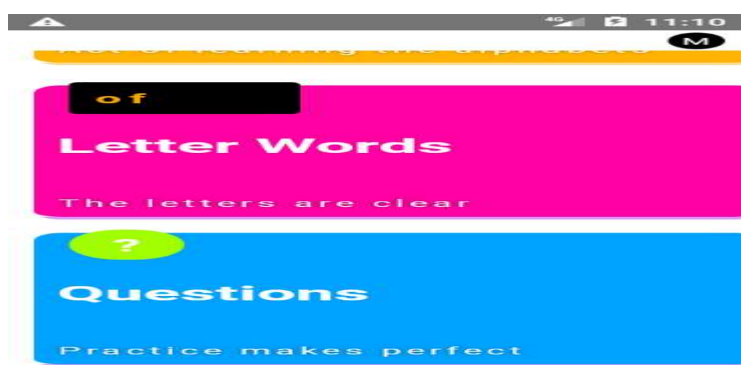


Fig 6: Screenshot of Home Screen

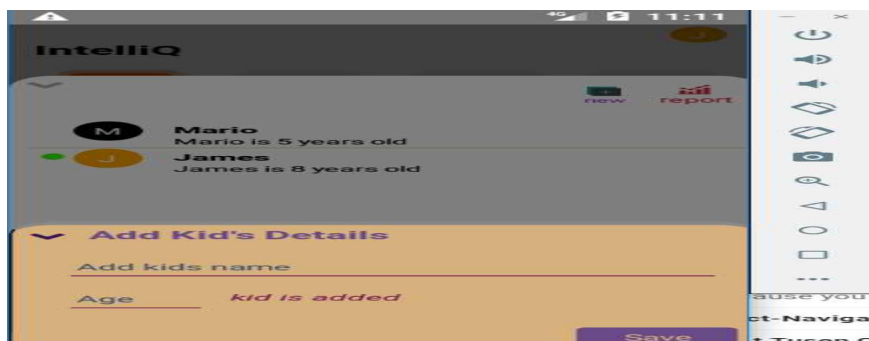


Fig 7: Screenshot of Add user screen

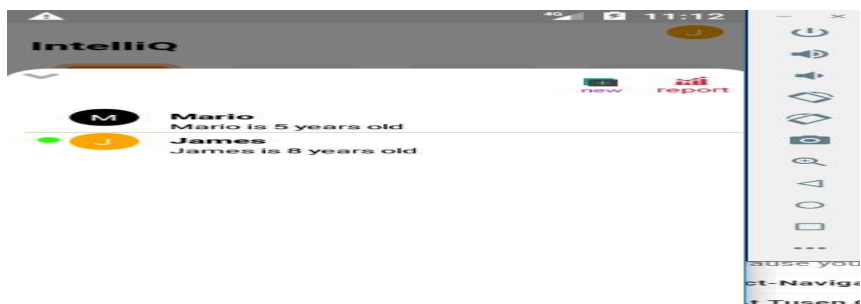


Fig 8: Screenshot of View Users

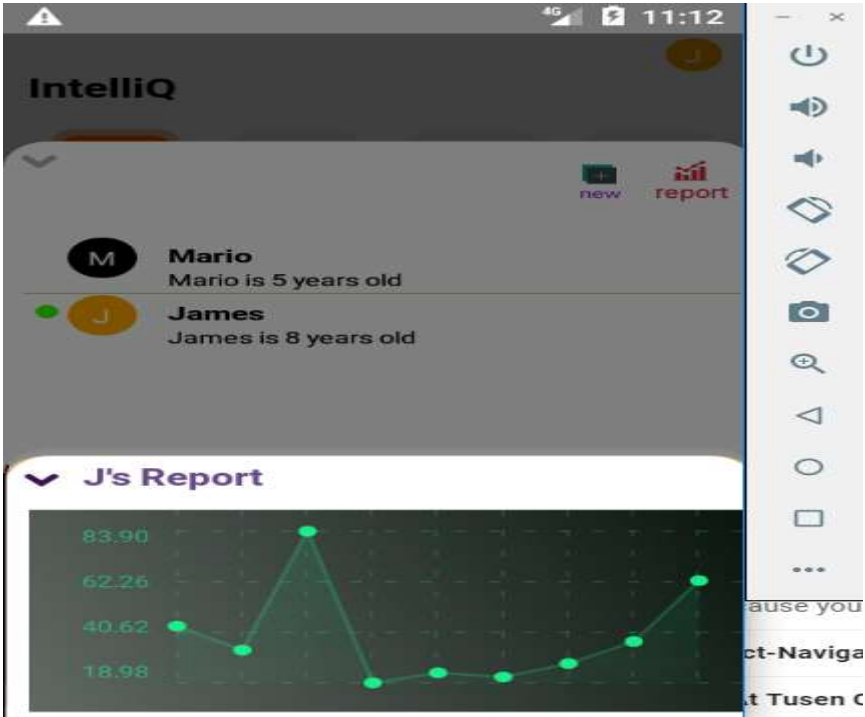


Fig 9 Screenshot of View Users Report



Fig 10 Subject: Screenshots of Maths Screen

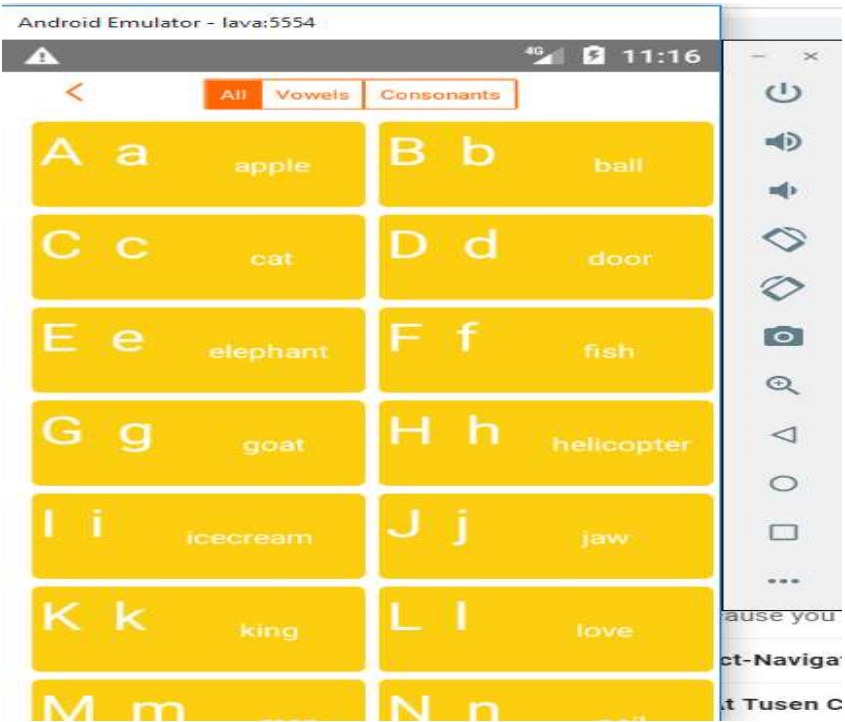


Fig 11 English: Screenshot of Lessons Screen



Fig 12Subject: Screenshot of Letter Words Lesson Screen

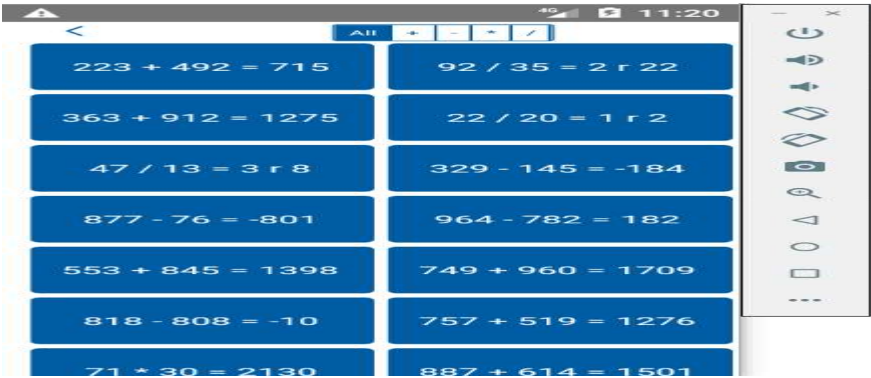


Fig 13 Screenshot of Arithmetic Lesson Screen

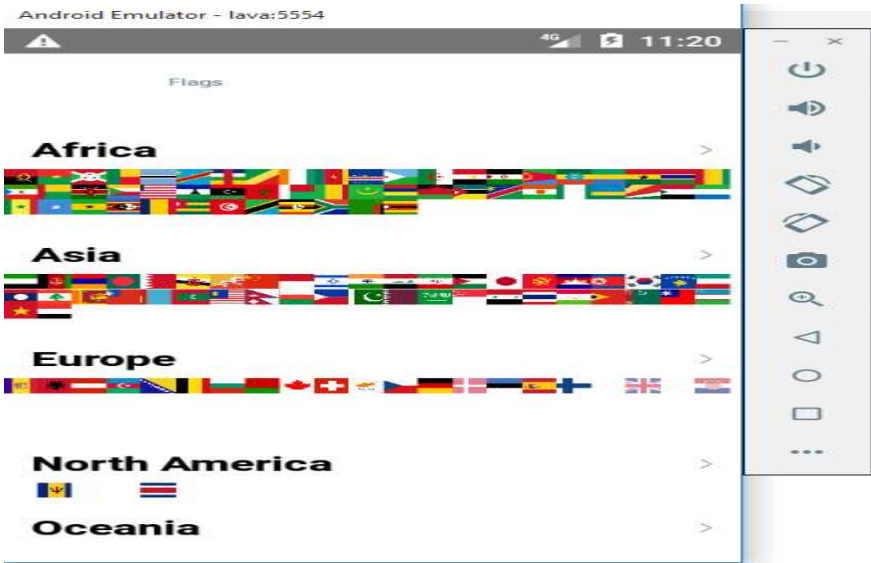


Fig 14. Screenshot of Flag Screen

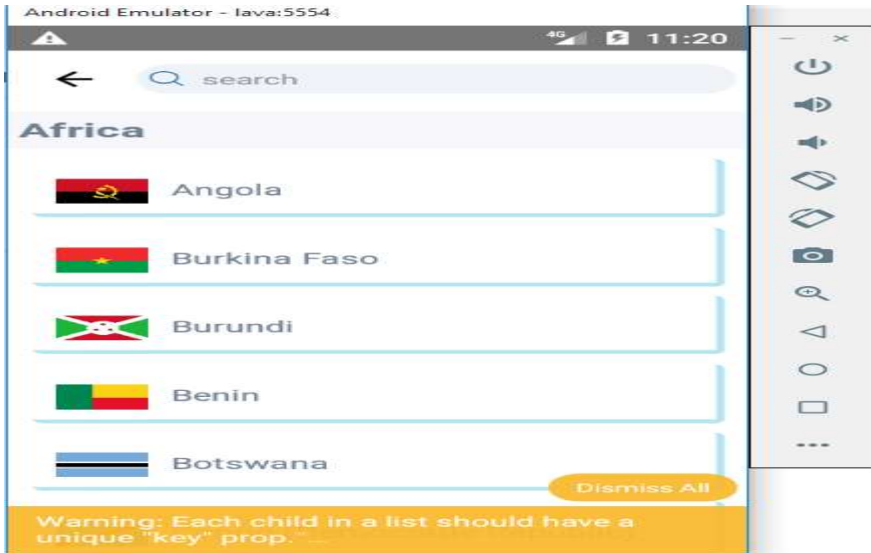


Fig 15. Screenshot of Flag Screen

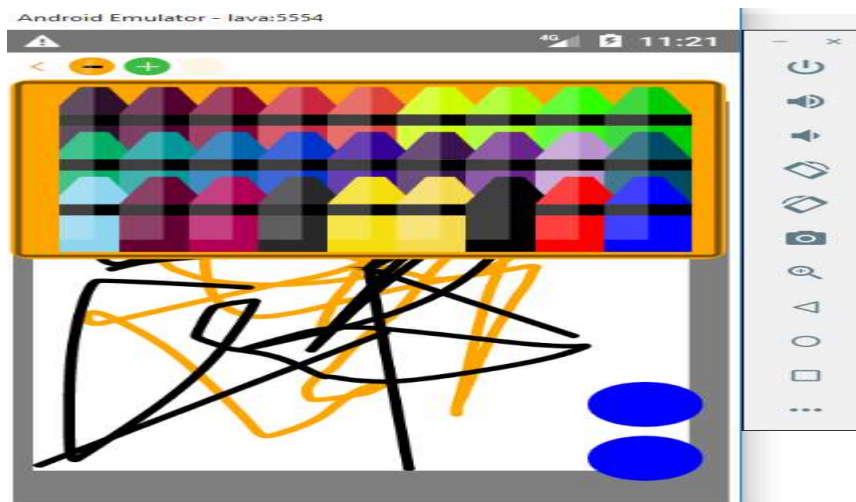


Fig 16. Screenshot of Coloring Screen.

4.2. Results And Documentation

Documentation is a set of documents provided on paper or online or other devices. Software documentation is written text that accompanies computer software. It either explains how it operates or how to use it. There are different type of documentation which includes the requirement, technical, marketing and end user. For the purpose of this project, the documentation is for the end users. A user guide explains how to use to use a software application in language that a non-technical person can understand. It is a part of the documentation suite that comes with application software. Some of the procedures for using my project software are:

1. Open the app, then add a user if there is none
2. Browse through all the subject contents
3. Answer questions in the Q/A Sections to update user report
4. Draw and color in the coloring section

V. CONCLUSION

This work has been able to improve the existing system by making most of the work automated thereby reducing heavy workload on the teachers and has also reduced stress on pupils, saving them from having a journey down to the market to buy cardboard paper often and on.

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