Short Communication   **Open Access**

Eye on Mobile Application Development Usage

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Introduction of Application Developer

The below shown (Figure 1) box refers to viewer which is used to prepare the application. The function of this viewer is it shows the blocks in the mobile which is added by us.

The box which is shown (Figure 2) is the components box in which we can see the buttons which are added by the user, this component box is related to block editor the blocks which we fit is this will be appeared in the blocks editor.

Introduction of My Survey Application

As a part of assignment portfolio I had prepared a survey app which shows the statistical data of the diabetes patients by which we can calculate the average weight of persons attacked with diabetes and their average age and average height. The below box (Figure 3) shows the side labels like age average age height and average height which are created by me to complete the survey application.

The below viewer shows the remaining part average weight and total people.

The components box (Figure 4a and 4b) contains the buttons, labels and text boxes which are required to prepare the application in the block editor to make the app function.

In this way we can view the app in the mobile (Figure 5). Remaining part of the app can be viewed by scrolling it down and the remaining questions are shown in Figure 6.

Detail Explanation of Blocks which are used by me to Run the App

The block shown (Figure 7) is for the button enters data by which it makes the all functions which are kept in it. The enter data block holds

a bunch of blocks in it like set global age to set global number of people to and set average number label text to. The function of this button is when we click the button submitted it will calculate the average age of the data which are presented by the user.

As we need to find out the average of ages we need those blocks in the block editor so by taking the variable from definitions we need to create these blocks for functioning of the app and set the global age and


Figure 2: Components box with added buttons.
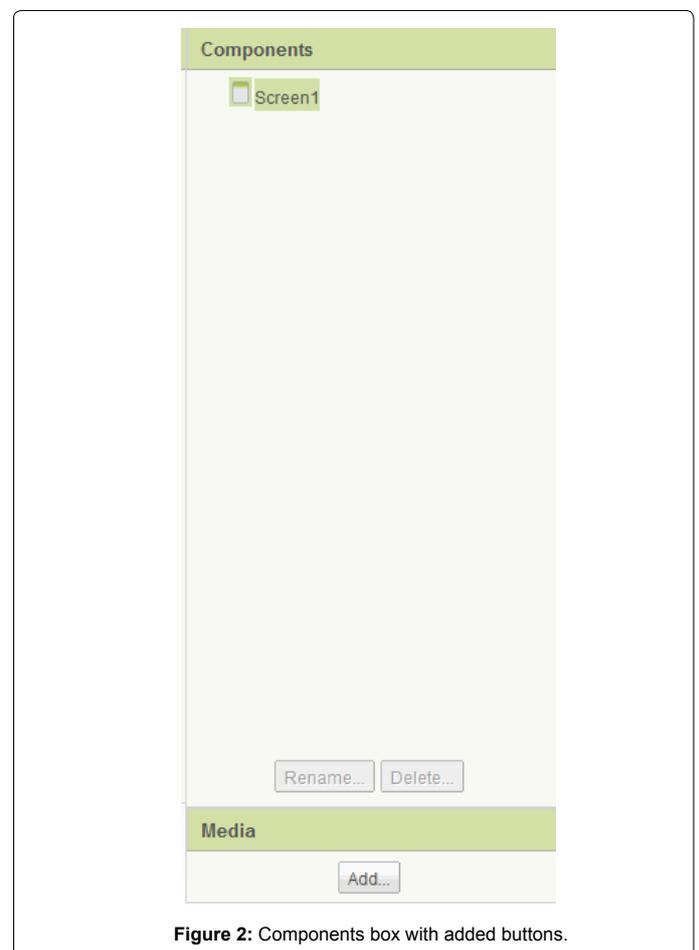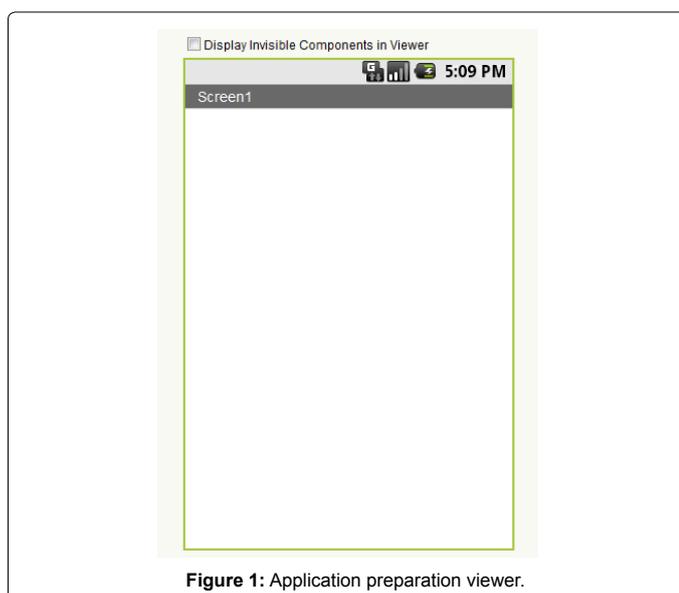
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Figure 1: Application preparation viewer.
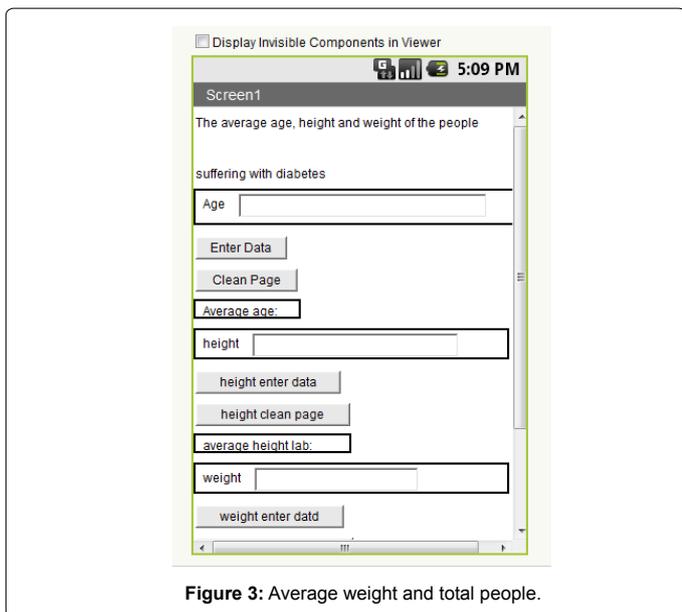
Figure 3: Average weight and total people.
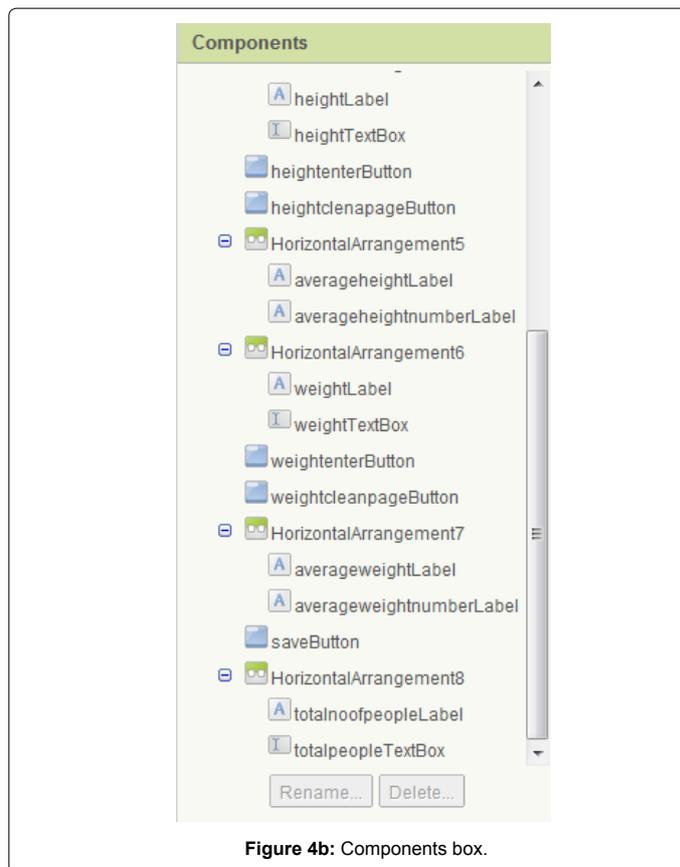
**Figure 4b:** Components box.
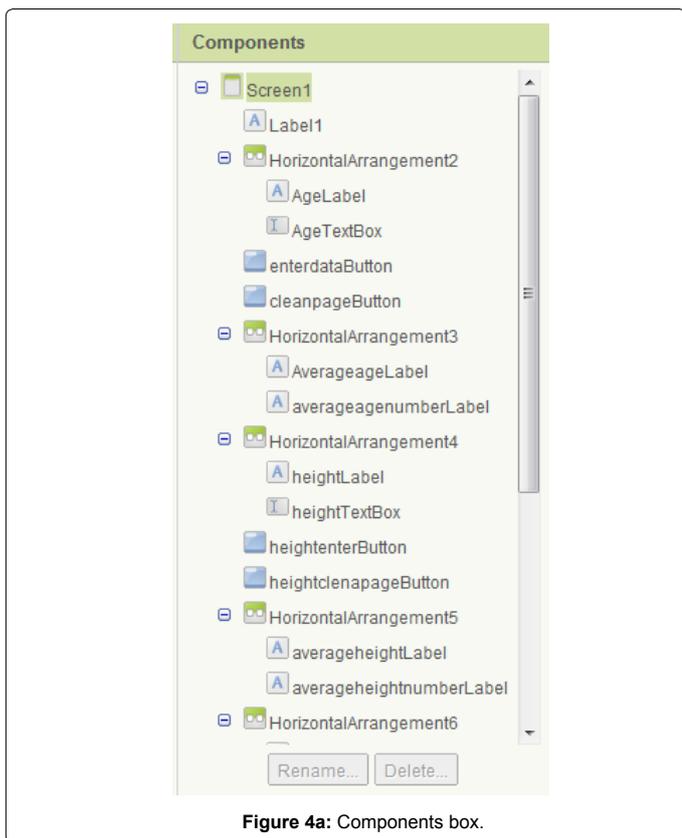
Figure 4a: Components box.

Figure 5: Mobile app.

global number of people as 0 (Figure 8).

The below (Figure 9) block do the function of button clean page when we click the button clean page it cleans the data entered in the age text box. The function of this height enter data button is same as the button enter data which is explained above but this button click calculate the average height of the data given by the user (Figure 10).

As said we require the height block in the blocks editor so we need

Figure 6: Part of the app.
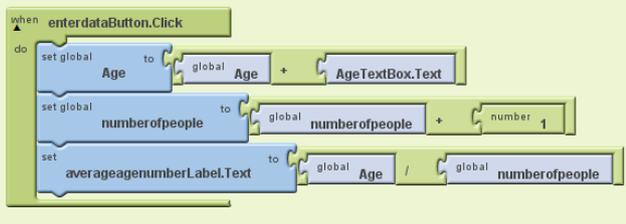
**Figure 7:** Button that enters data.
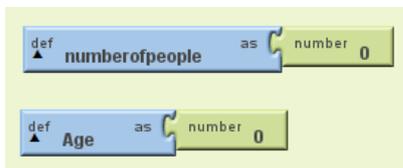
**Figure 8:** Functioning of the app.

Figure 9: Data cleaning app.
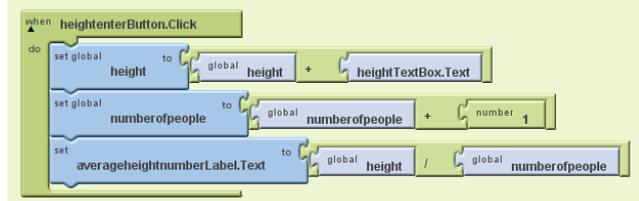

Figure 10: Calculate the average height.

**Figure 11:** Creation of height block.

Figure 12: Clean page button.
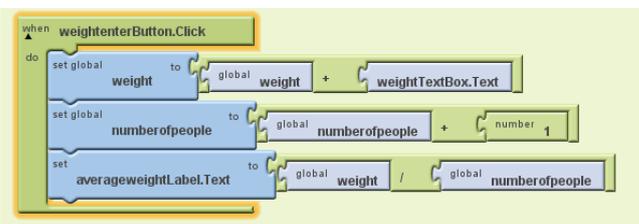

Figure 13: Buttons to calculate weight.
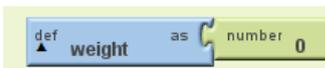
**Figure 14:** Block editor for app function.


Figure 15: Weight text box.
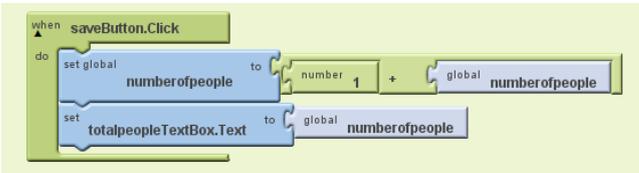
Figure 16: Weight of the entire person.

to create this block by using variable (Figure 11). This clean page button cleans the text which is entered in the height text box (Figure 12). This button is same as enter button which is explained above but it calculate the weight and shows the average weight of the data which we entered (Figure 13). This is same as explained above about the variable which is required for the block editor to make the app function (Figure 14). This block function is to clean up the data which is entered in the weight text box (Figure 15). Whenever the user click on save it increases the number by one when we complete the whole data entry we need to press the save button to make sure the required data is entered in it and a person will be added to it by seeing the text box we can say how many persons data has been taken by us or the user (Figure 16). Finally this how the block editor looks (Figure 17).

Statistical Analysis of the Data by using the App Created by me

I took two peoples age, First person age is 25, Second person age is 50 (Figure 18).
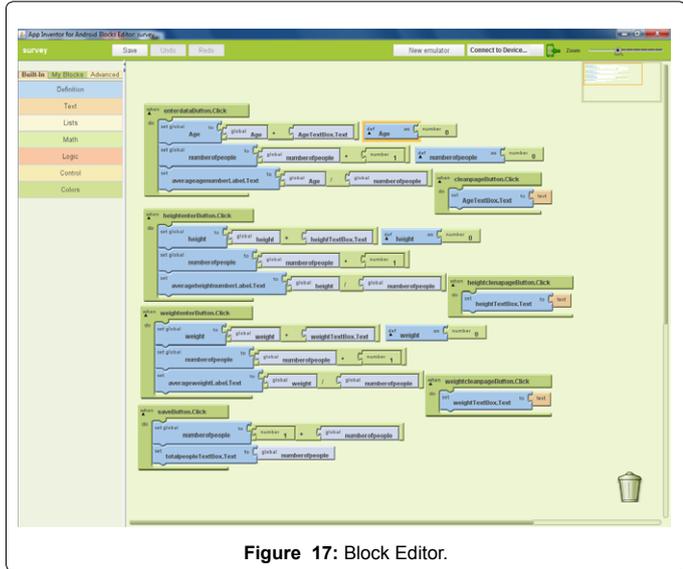
Figure 17: Block Editor.
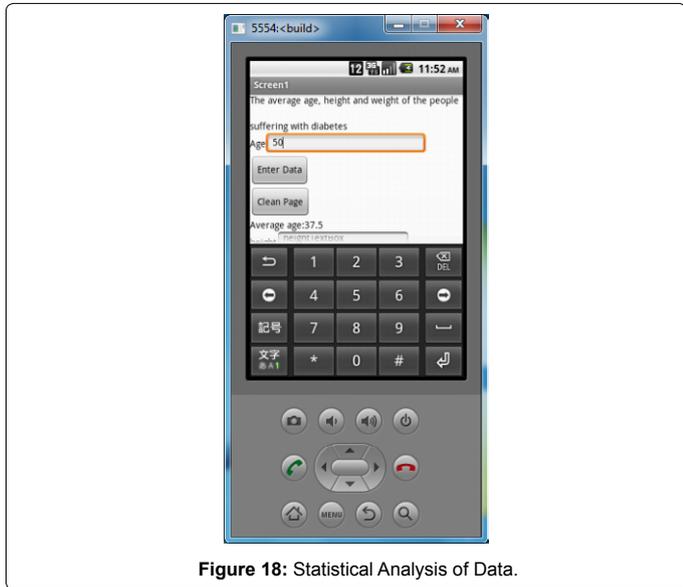
Figure 18: Statistical Analysis of Data.
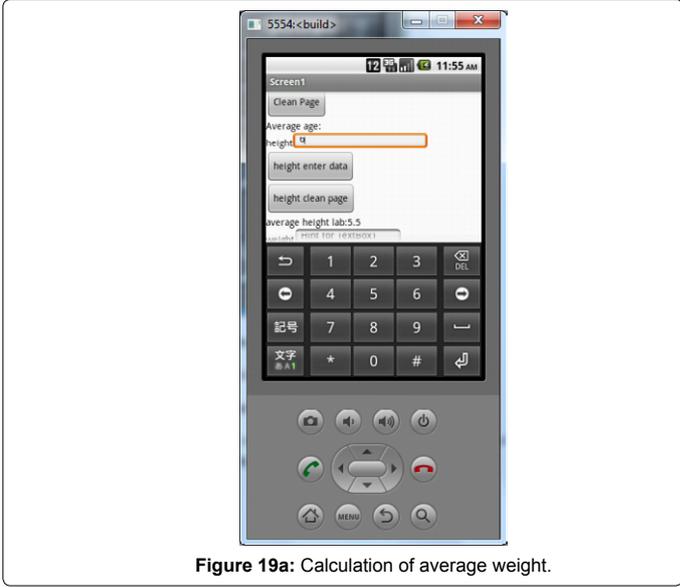
Figure 19a: Calculation of average weight.
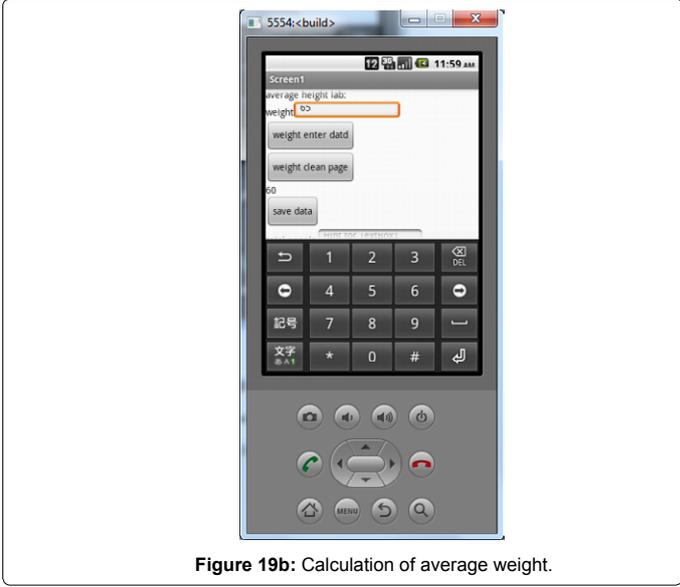
Figure 19b: Calculation of average weight.

And the average age calculated and shown in the result box is 37.5 so by seeing this result we can say that the app is functioning correctly (Figure 19a).

Data:

First person height is 5

Second person height is 6

And the average height shown in the app is 5.5 it is right (Figure 19b)

Data taken

First person weight 55

Second person weight 65

Average weight is 60 it works.

As I click two times on the save button it added 2 to the text box (Figure 19c) (Table 1).
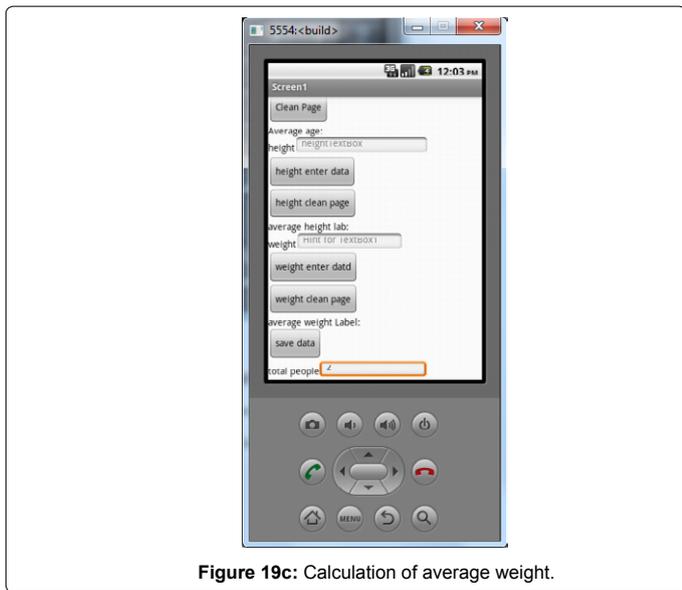
Figure 19c: Calculation of average weight.
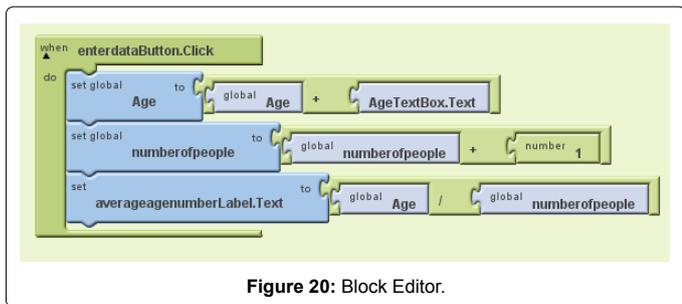
Figure 20: Block Editor.
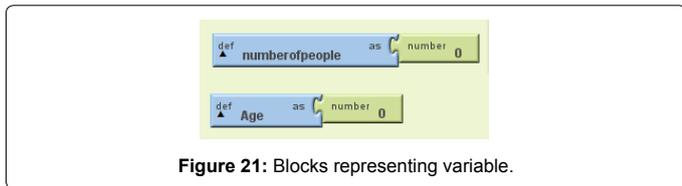
Figure 21: Blocks representing variable.
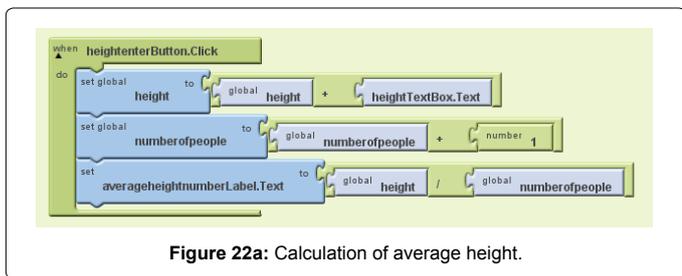
Figure 22a: Calculation of average height.

Detail Explanation of the Procedure I went through to Create this Application

Aim

To create an application which shows the result of a survey and which capture like a survey questioner.

Requirements

We need a java program in system which we are working on and a web site name www.appinventorbeta.com and a mobile device or we can connect it to the mobile device which is downloaded from the net.

For what my survey app is for?

My app is to collect the data of the diabetes patient and make sure that by this I can calculate the average age of the person when the diabetes is going to attack and will calculate the average height and weight of the people who are effected with diabetes.

Procedure

First I opened the web site named www.appinventorbeta.com then I downloaded the mobile app which is present in it then after I clicked on the build your app after clicking on it a window is opened and in it I clicked on new project and the I named it as survey I am able to see a viewer box components box and a box which is having all the require buttons and labels etc.

Procedure in the viewer

Then I started the main work which is required to create the survey app. I dragged the label to the viewer window and named it as age and same to the height and weight also and to enter the text for age, weight, and height I added up a text box to the viewer window and to make it side by side we need to go to the screen arrangement and drag the horizontal screen arrangement and place it on window and arrange the age label and age text box in it and same process for both height and weight to arrange them horizontally on the window and same process for all the averages of age height and weight Then I added the button enter data and clean page for all three of them and a save button is added at the end to add up the number one whenever it is clicked by this we end the arrangement on the viewer window.

Procedure in block editor

First we need to click on the button enter data button click and drag the block enter data button (Figure 20). Click then we need to join the blocks and we should insert the blocks in it the blocks which are required for us according to our survey questioner we need to attach the blocks to add the age and to get the average age of the people we need to add one more thing to it that is number of people as we don't have blocks like set global age to, set global number of people to and set average number label to so we need to create these blocks by using

Test no	case	data	expected	actual	final	Pass/fail
1.	Age enter data button click	It shows the average age	Average age should be shown	Average age should be shown	Got the result which is required	pass
2.	Height enter data button click	It should show the average height	Average height to be shown	Average height to be shown	Able to see the required result	pass
3.	weight enter data click	It will display average weight	Average weight to be shown	Average weight to be shown	Able to see the correct result	pass
4.	Save button click	It adds the number 1 whenever we click on it	To add a number 1 in the text box	To add a number 1 in the text box	Able to see the required result when clicked on it	pass

Table 1: Data application.

Block no	Blocks	Location
1.	Set global age to	From my blocks, my definitions
2.	Set global number of people to	From my blocks, my definitions
3.	Set average age Number label text	From my blocks, average age label button

Table 2: Blocks representing variable.

Blocks no	Blocks	Location
1.	Def number of people as	built-in, from my definitions and from it def variable
2.	Def age as	From built-in, from my definitions and from it def variable

Table 3: Creation of block by using variables.
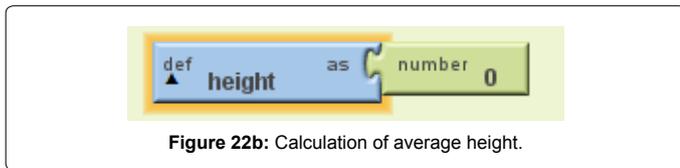
Figure 22b: Calculation of average height.

Blocks no	Blocks	Location
1.	Set global height to	From my blocks, my definitions
2.	Set global number of people to	From my blocks, my definitions
3.	Set average height Number label. text	From my blocks, average height label button

Table 4a: Calculation of average height.

Block no	Block	Location
1.	Def height as	built-in, from my definitions and from it def variable

Table 4b: Calculation of average height.
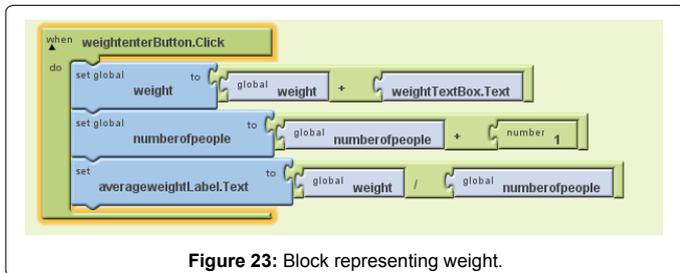
Figure 23: Block representing weight.

Blocks no	Blocks	Location
1.	Set global weight to	From my blocks, my definitions
2.	Set global number of people to	From my blocks, my definitions
3.	Set average weight Number label. text	From my blocks, average weight label button

Table 5: Block representing weight.

the variable which in present in the built-in in definitions (Figure 21 and Table 2).

We need to set the global age and global number of people to 0 so that we can add the total required number by typing them in textbox (Figure 22a,22b and Table 3).

The second block is for height by which we can calculate the average height to create these blocks the same processes of age is followed but the names will be changed and we need to set the global height as 0 in it (Table 4a and 4b). And now the third block which represents the weight (Figure 23) (Table 5) this is also done in the same processes as
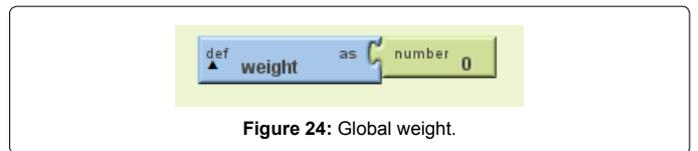

Figure 24: Global weight.
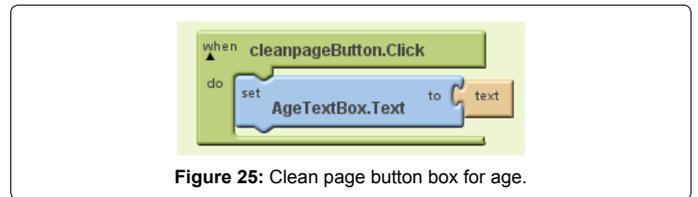
Figure 25: Clean page button box for age.


Figure 26: Clean page button box for height.

Figure 27: Clean page button box for weight.

Block no	Block	Location
1.	Def weight as	From built-in, from my definitions and from it def variable

Table 6: Weight def variable.

Block no	Block	Location
1.	Clean page button. Click	From my blocks, from clean page button
2.	Age text box text	From my blocks, from age text box button
3.	Text	From built-in, from text

Table 7: Clean page button box for age.

Block no	Block	Location
1.	Height clean page button. Click	From my blocks, from height clean page button
2.	Height text box text	From my blocks, from height text box button
3.	Text	From built-in, from text

Table 8: Clean page button box for height.

Block no	Block	Location
1.	Weight clean page button. Click	From my blocks, from weight clean page button
2.	Weight text box text	From my blocks, from weight text box button
3.	Text	From built-in, from text

Table 9: Clean page button box for weight.

the age but we need to set the global weight as 0 (Figures 24-27) (Tables 6-9).

Problems Facing

1. We can't save the data permanently in the mobile which is downloaded from the net whenever we reconnect the mobile the old

data will be erased so by this we can't use it effectively.

2. In a project there is only limited input to be done if we exceed it the blocks for it cannot be placed in the block editor. By this we cannot create the big app with different questions or many questions.

System Architecture

Computerized adaptive test on mobile devices (CAT-MD)

The proto type CAT-MD uses the theory called as item response theory (IRT) as an underlying psychometric theory; psychometric theory is the psychological theory or technique for mental measurement [1].

Computerized adaptive test

In higher education testing is the one of the most widely used tool. This is to test the ability of the student in different fields of education.

In the recent years the usage of computerized adaptive testing (CAT) has expanded rapidly. This is mainly due to the advance in communication and information technology. A CAT is a method for administering test that adapts to the examinees ability level. In this journal the key research is on the implementation of CAT using mobile devices. This research is an attempt to examine the design and development issues that may be important in the implementation of the CAT on the different mobile products like mobile phones and PDAs [1].

Artificial Intelligence (Ai)

AI is a mature field with the proven technology for activities such as data mining, information retrieval and natural language processing it has huge success in domains like finance, games and medical diagnostics. In this there are many applications for intelligent system. Example like

1. A system to help a horticulturist diagnose and propose treatment for plants disorders out in the field [2].

References

1. Triantafillou E, Georgiadou E, Anastasios A Economides (2006) The design and evaluation of a computerized adaptive test on mobile devices.

2. Halla L, Gordonb A, Newallc L, Jamesb R (2004) A development environment for intelligent applications on mobile devices.