

DataStructure Simulator

DSS<1.0.0>

User Manual

Team Name : Helping_hands

Team Number : 49

Team Leader/Member : Roneet kumar shaw

About the application :

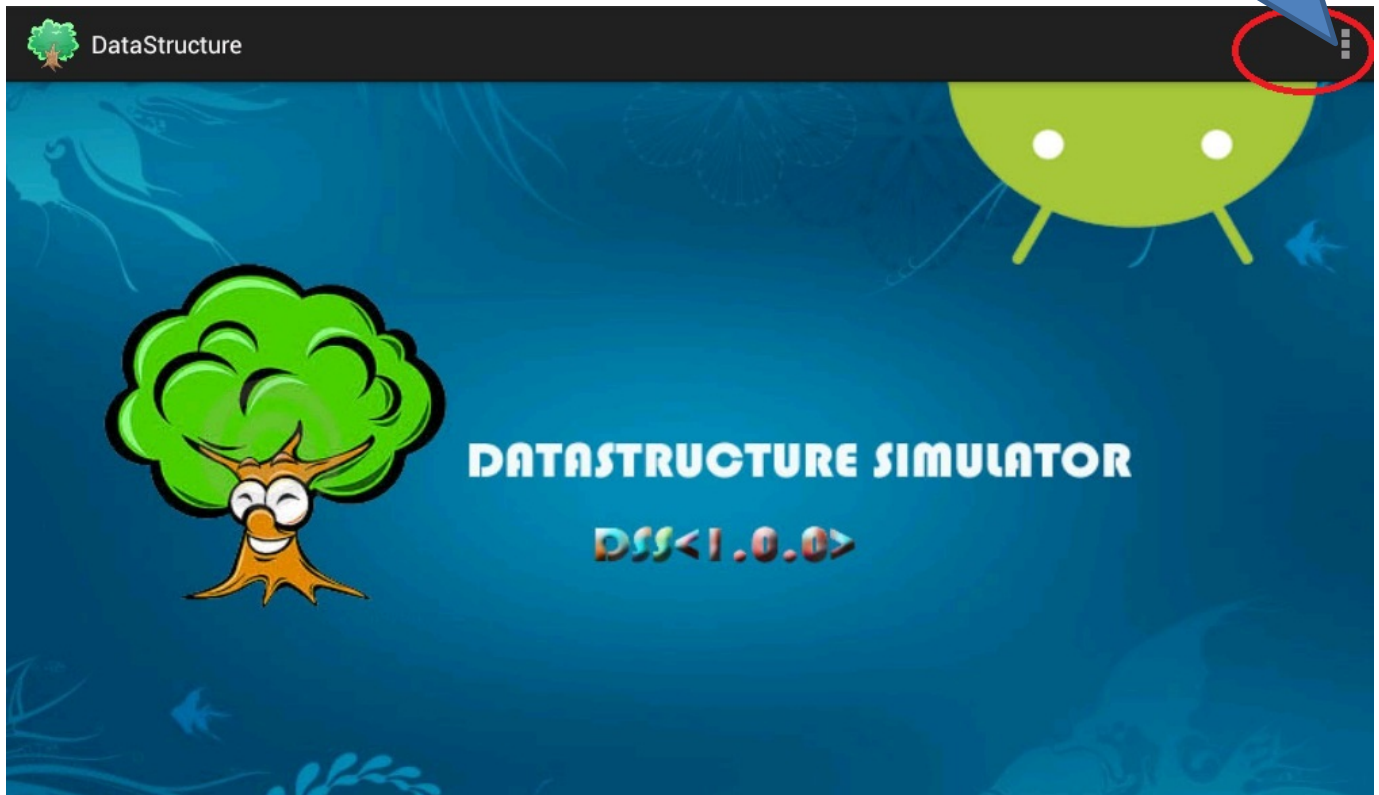
DataStructure simulation <1.0.0>(DSS) is an android application where all the datastructures with all its functionality are graphically demonstrated . The application also contains description of all the data structures in two different languages namely Hindi and English. The codes in the description are also written in two technical languages namely C and JAVA. The application's objective is to teach the students how different data structures works and to give them a crystal clear concept about its working. It can also be used by teachers as manual for teaching purpose.

DSS<1.0.0> is supported in almost every tablet which are available in the market. It works on devices which comes with android 2.1(Ecliar) and above.

DSS activities

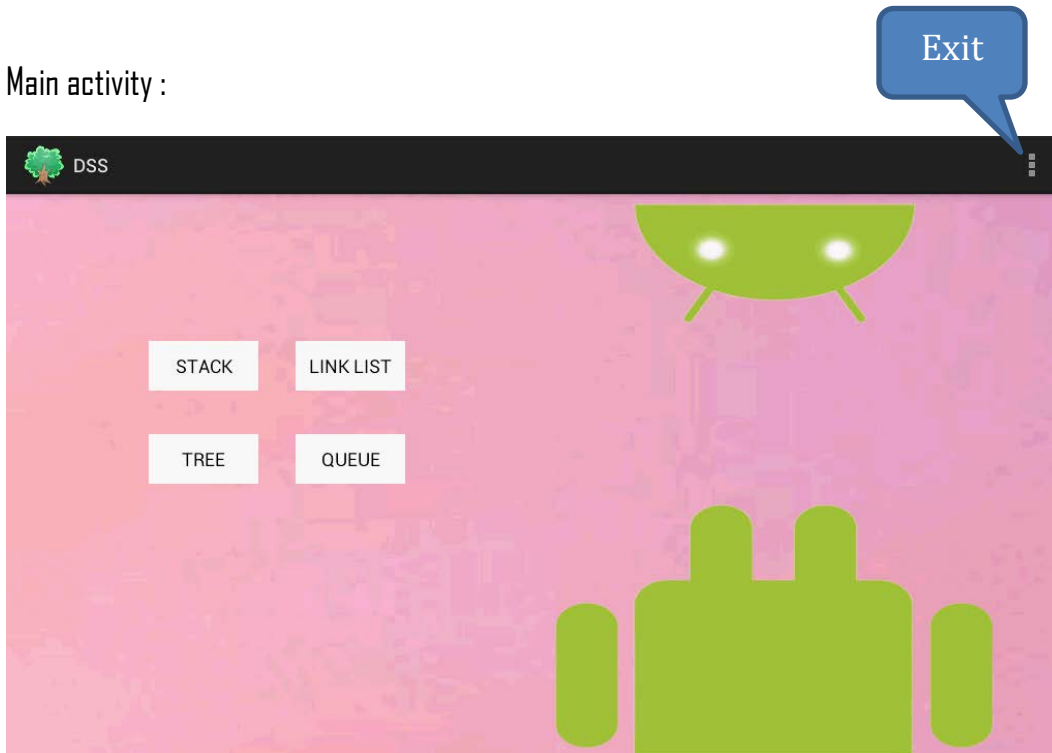
Front activity:

Click here to go to the next page

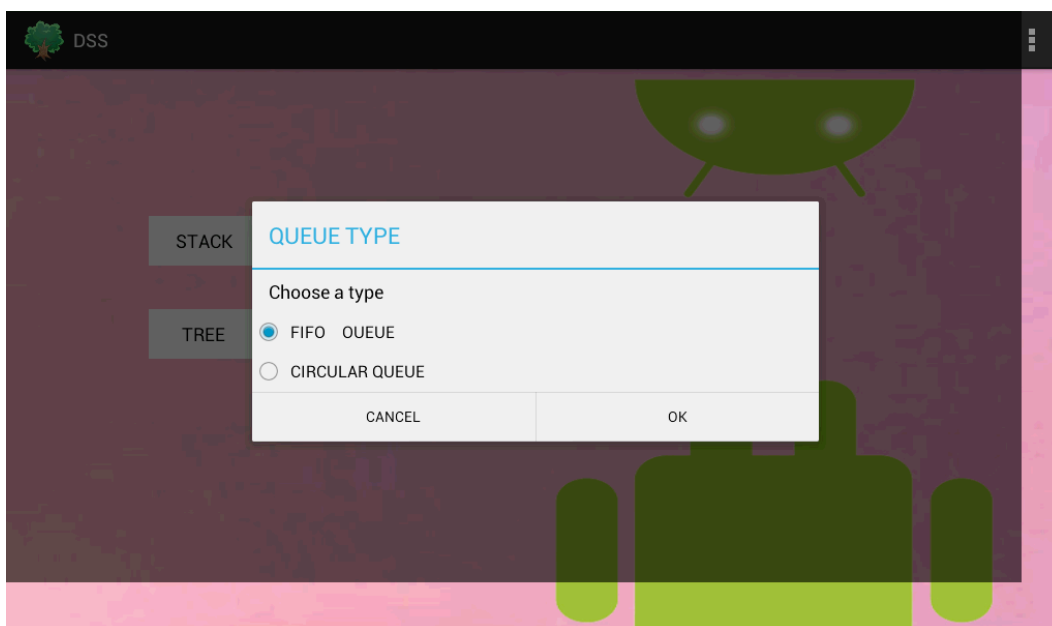


When the dss icon is pressed the front activity appears .This page automatically vanishes after four seconds and if it doesn't the user can click on the menu bar which is circled as red to go to the next page

Main activity :



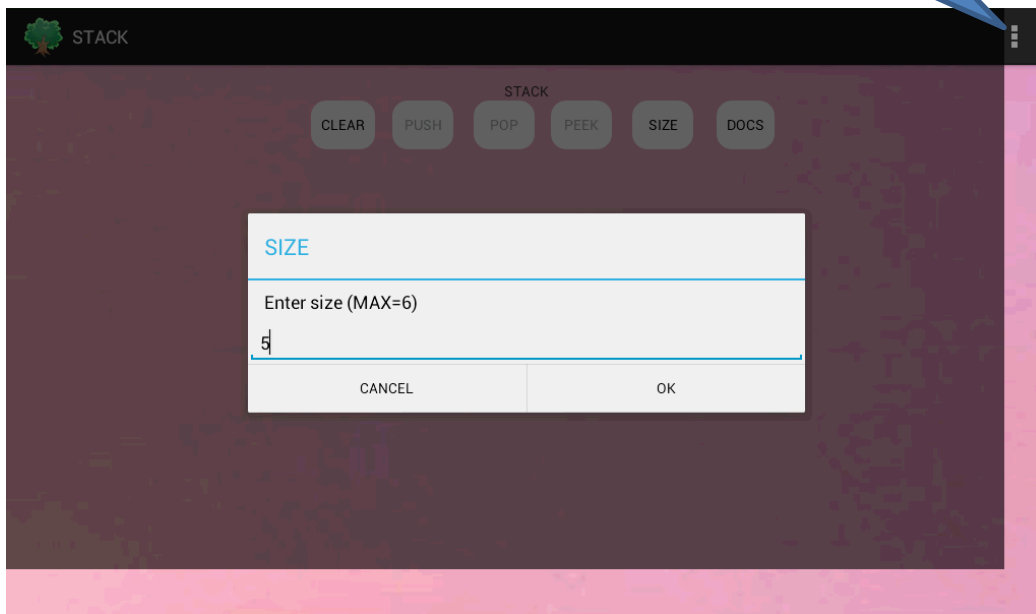
Four buttons are provided for mainly four data structures i.e stack,link list,queue(circular and fifo) and tree(Binary Search Tree).



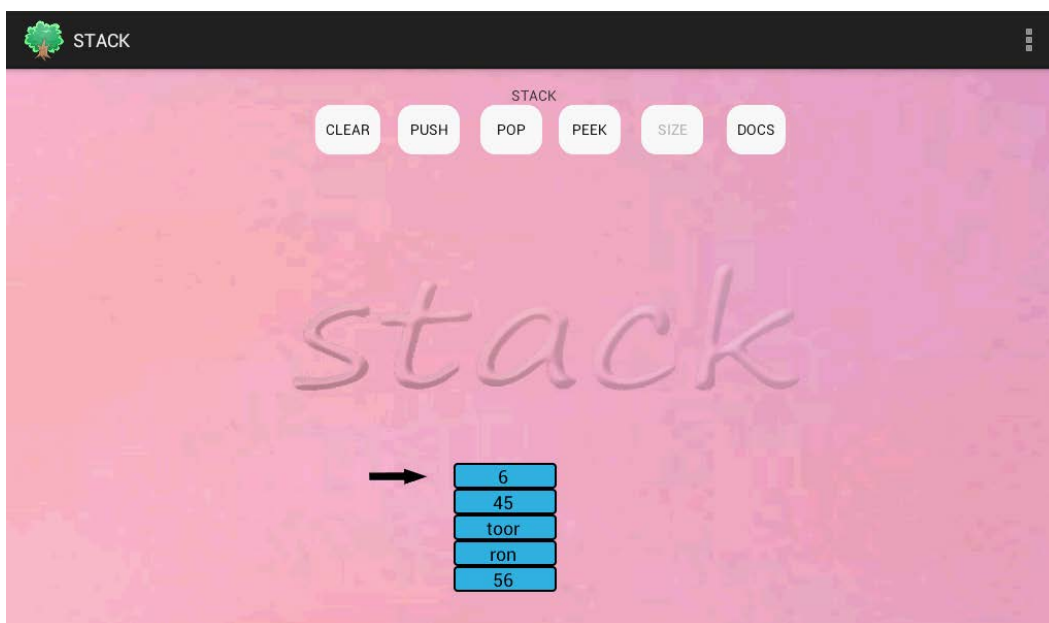
When the user clicks on queue button in the main activity . The user will be asked to tick a choice between fifo queue and circular queue.

Stack activity :

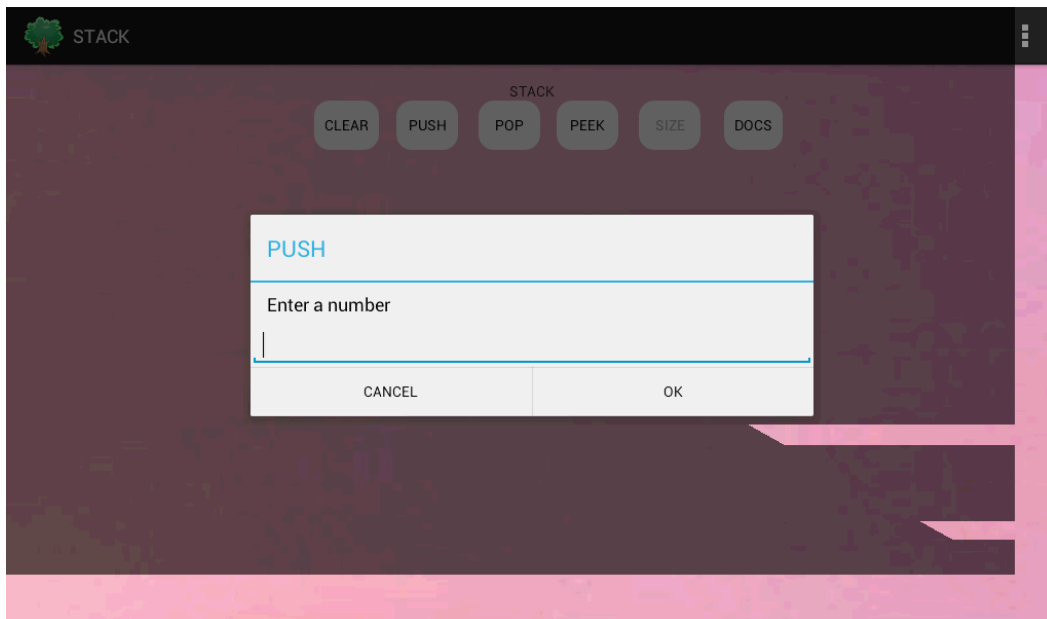
Click here to display
the menu



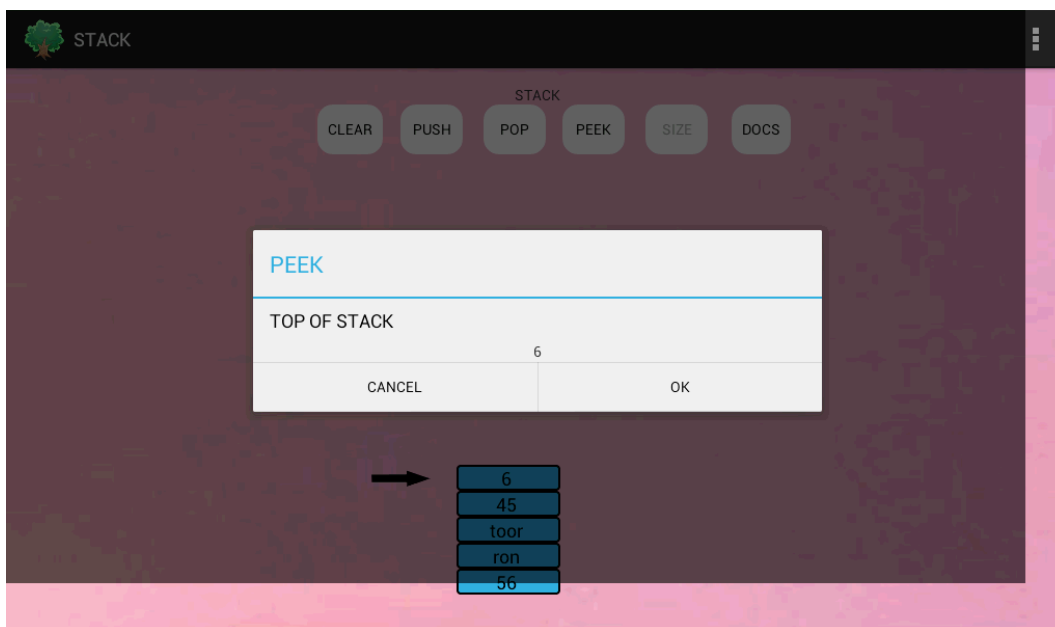
When the user clicks on stack button in the main activity the user will be directed to stack activity where the user will be asked for the size of the stack ,a maximum of size 6 is accepted due to the restriction of the size of the tablet. If the user gives more than 6 or negative size an error message will be printed.



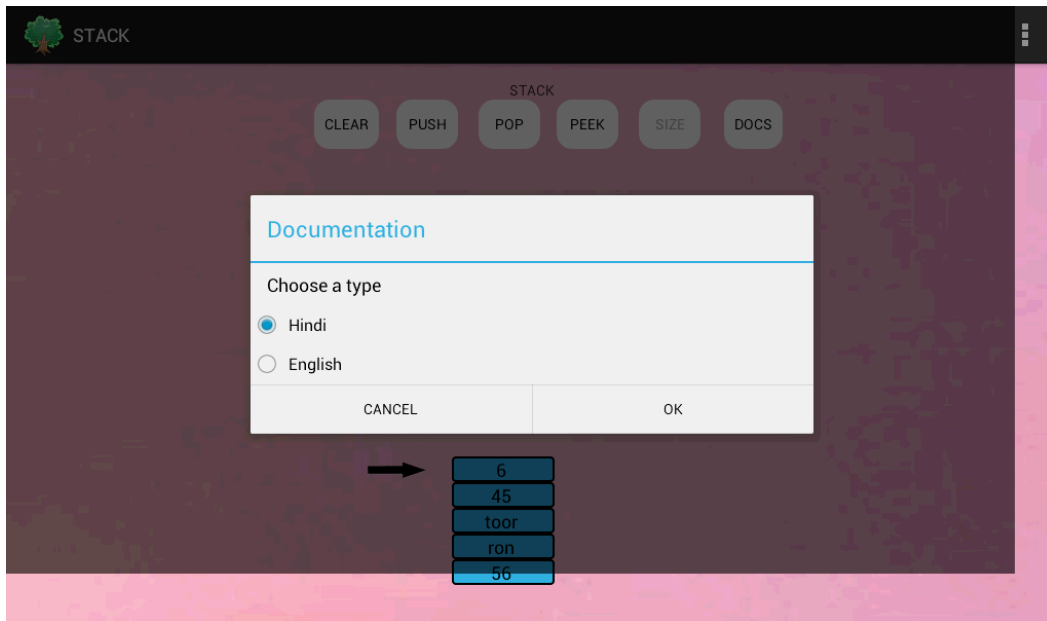
Stack activity with 5 elements pushed.



When the user clicks on PUSH button the user will be asked for an element to enter and then click on OK.



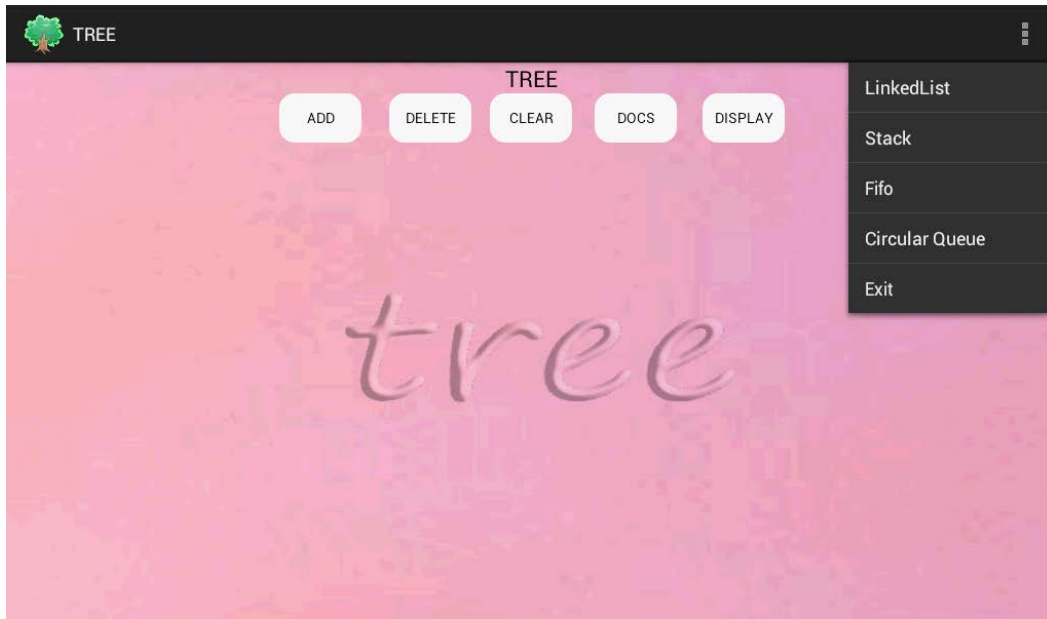
When PEEK button is clicked element present at the TOP OF STACK will be printed.



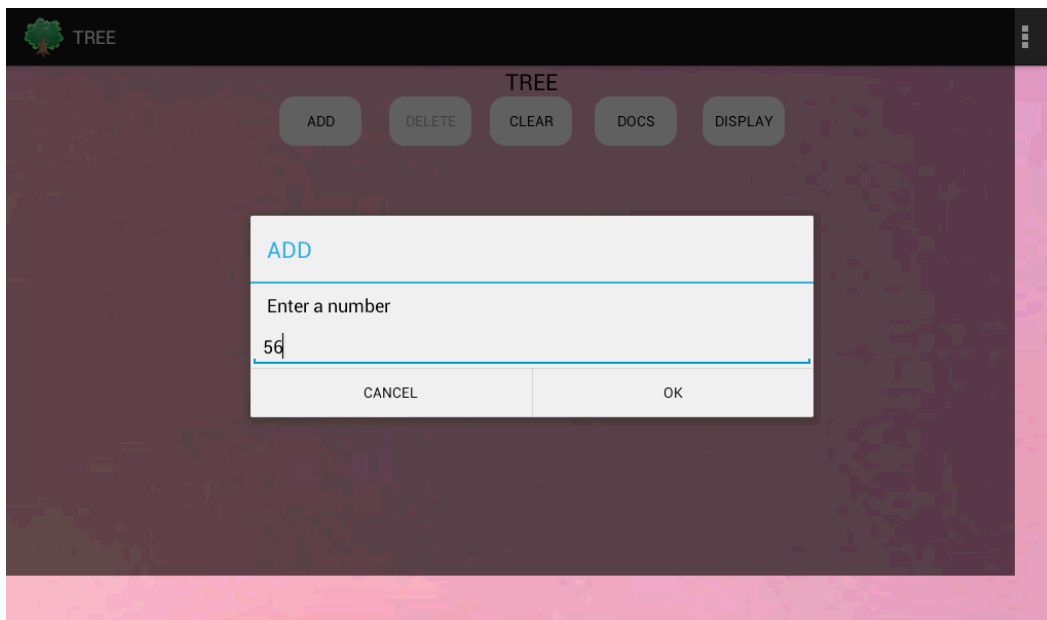
When the user clicks on DOCS button the user will be prompted to enter a choice to display the documentation in Hindi or English and then click on OK and the desired document will be displayed.

Whenever the user wants to clear everything and wants to start all the operations again the user should click on the CLEAR button to clear everything and start everything again.

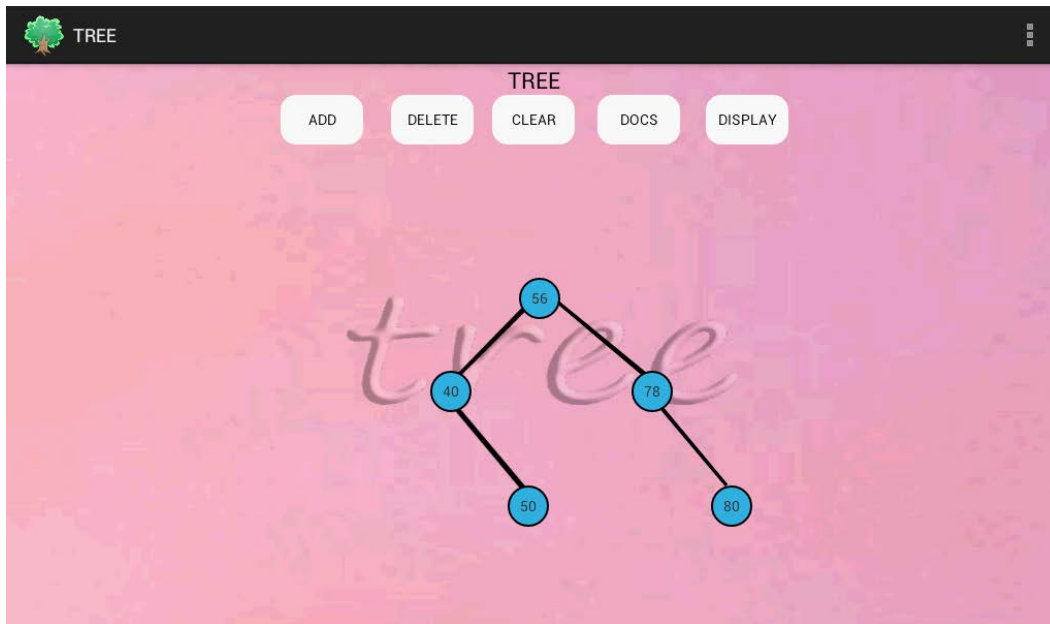
Tree activity :



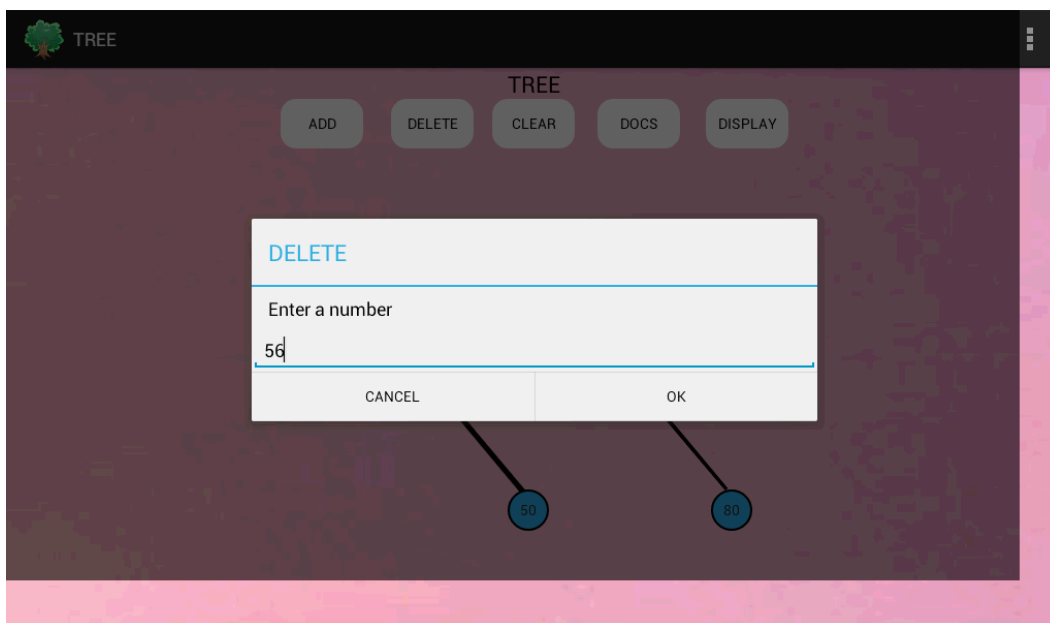
Tree activity with menu to go to different activities.



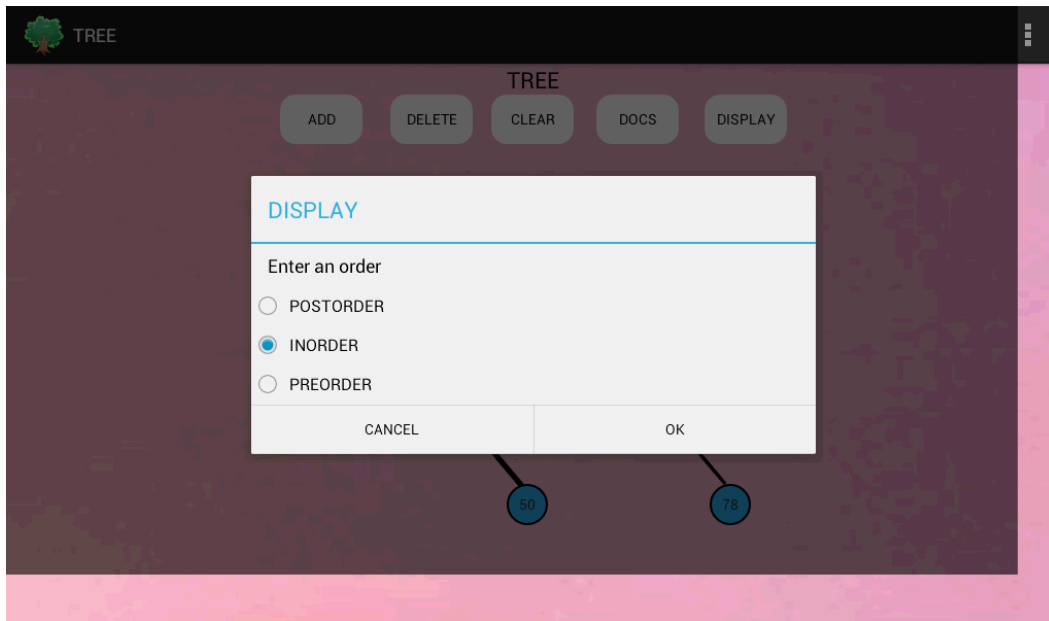
The user clicks on ADD button to add a node to the UI (only numbers are allowed else error will be displayed)



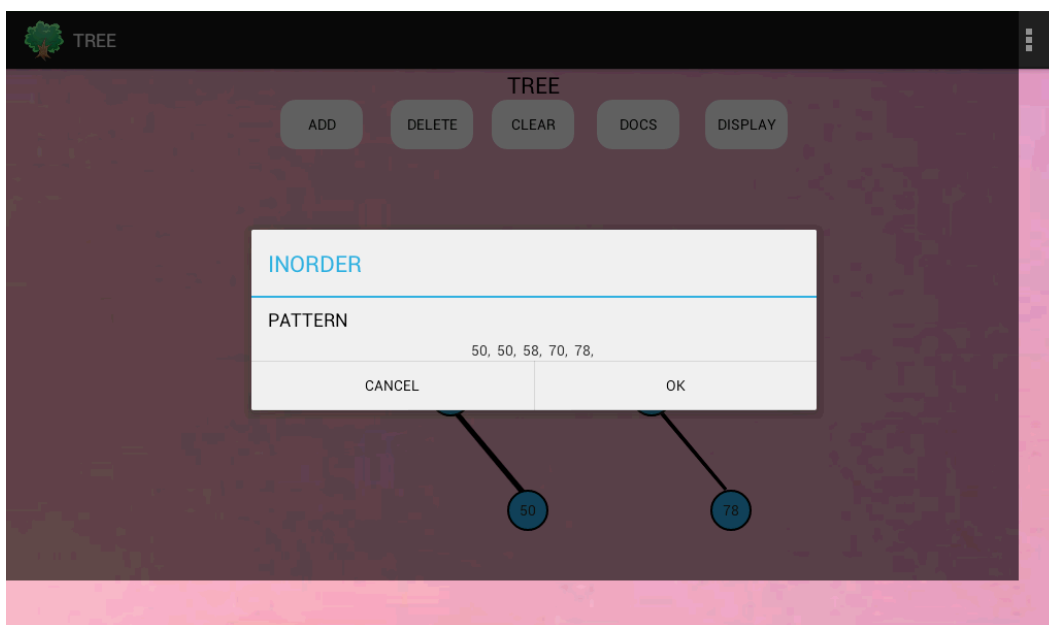
After adding the nodes the display will something look like above .The user can add nodes only upto three levels due to restriction of the size of the tablet(device).



The user can click on the DELETE button to delete the desired node and the UI will update accordingly .

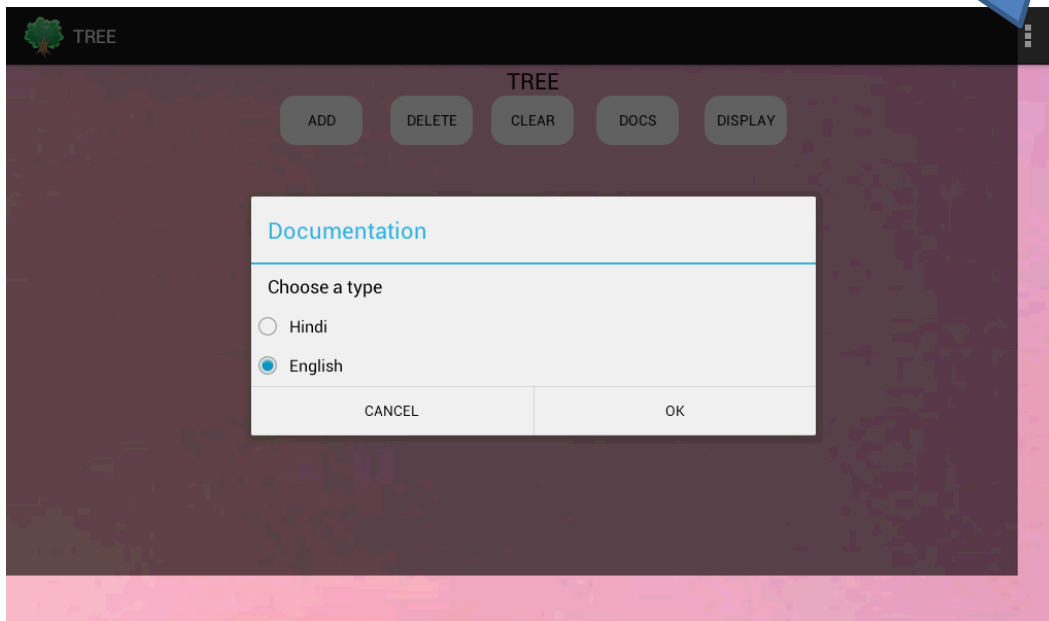


The user can click on the DISPLAY button to print the elements of the nodes in three different ways i.e postorder , inorder and preorder



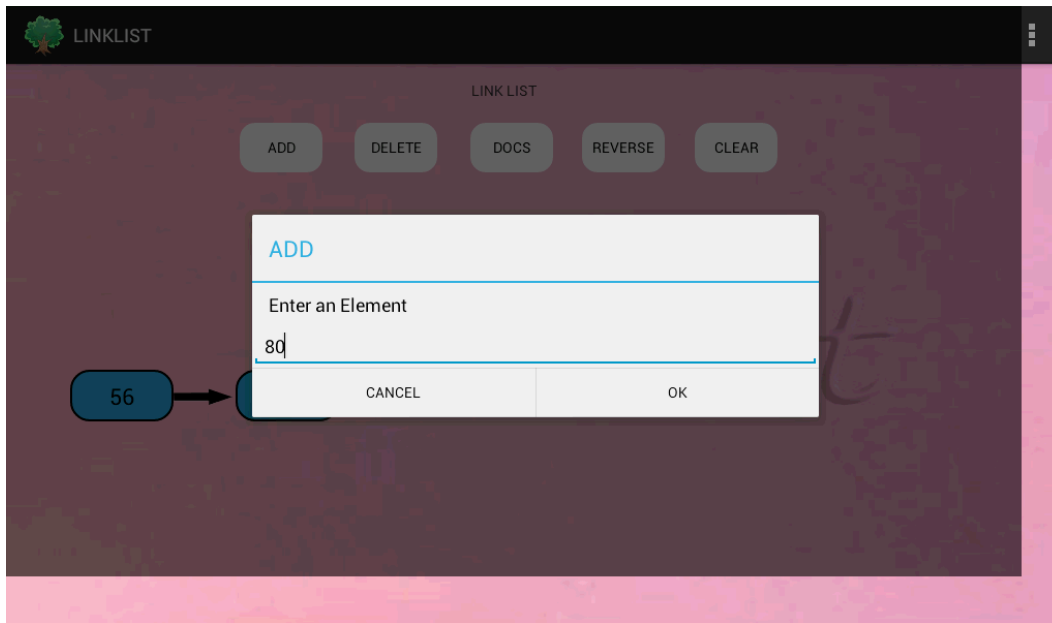
If inorder is clicked pattern will be printed in an AlertDialog.

Click here to go to the next activity



Documentation of tree is available in hindi and English and can be accessed by clicking on the DOCS button.

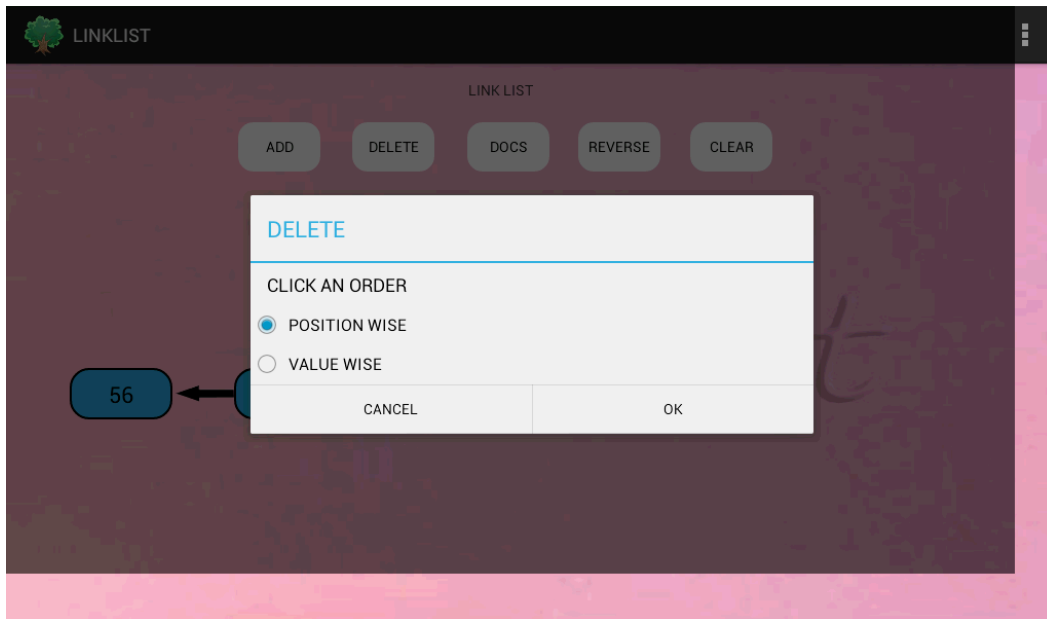
LinkedList activity :



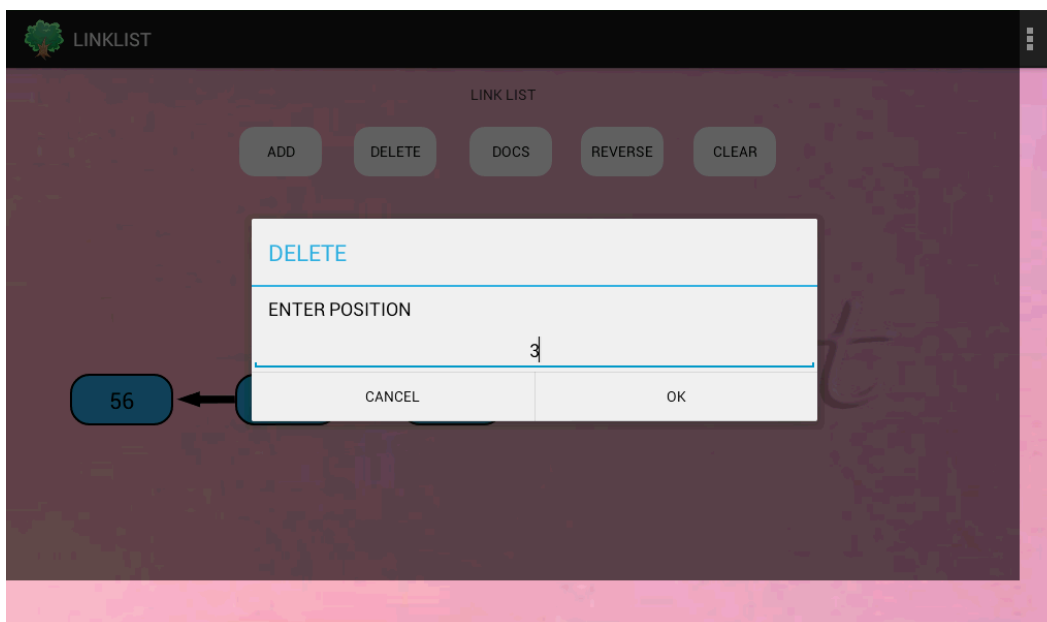
Click on the ADD button and enter an element to add a node in the UI



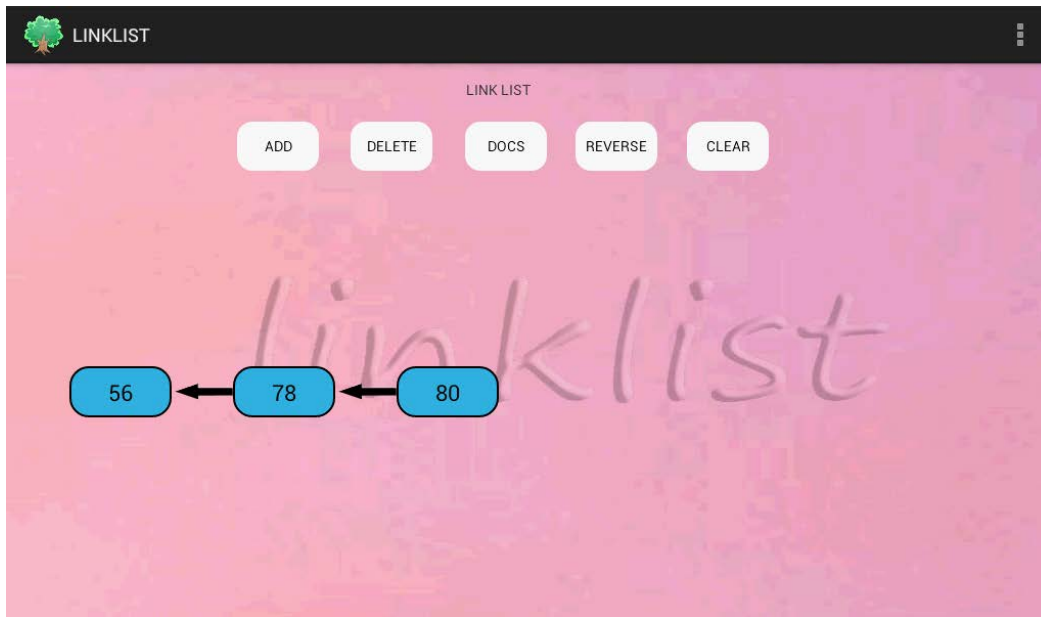
Linklist activity with three nodes added.



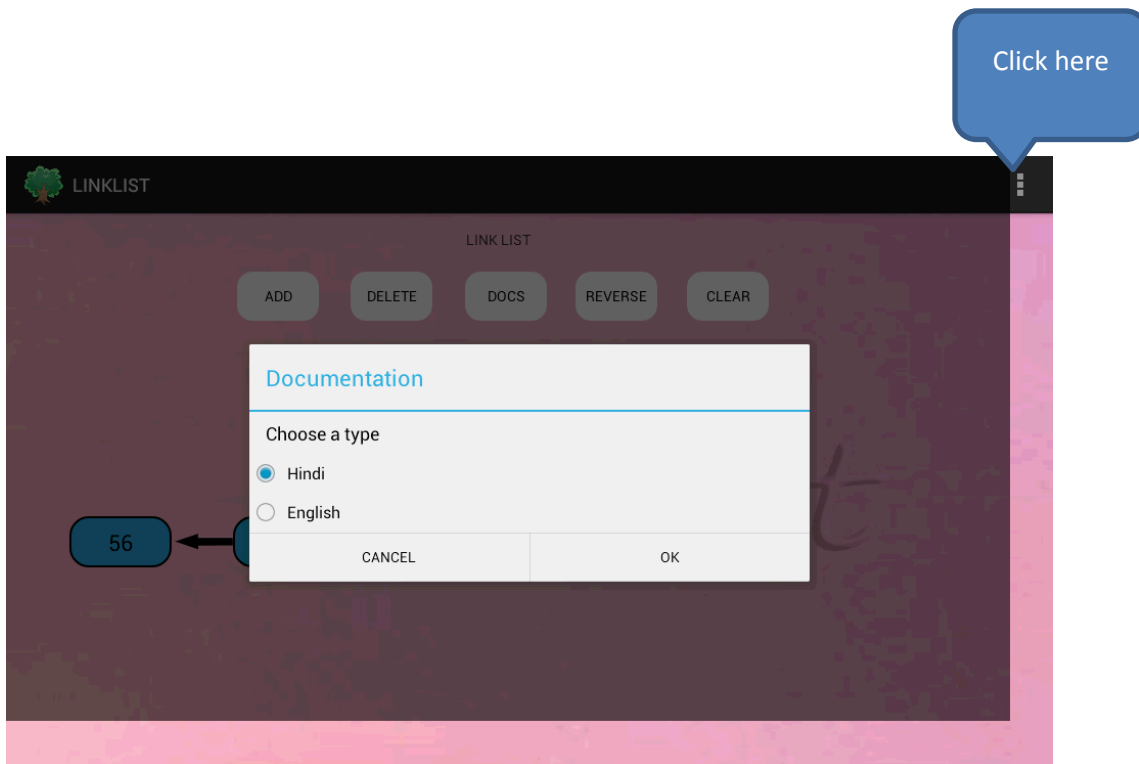
When the user clicks on DELETE button the user will be asked whether to delete a node value wise or position wise. The can click on any of the option and work accordingly



If the user selects position wise then he/she will be asked to input the position and after clicking on ok node if present on that position will be deleted.

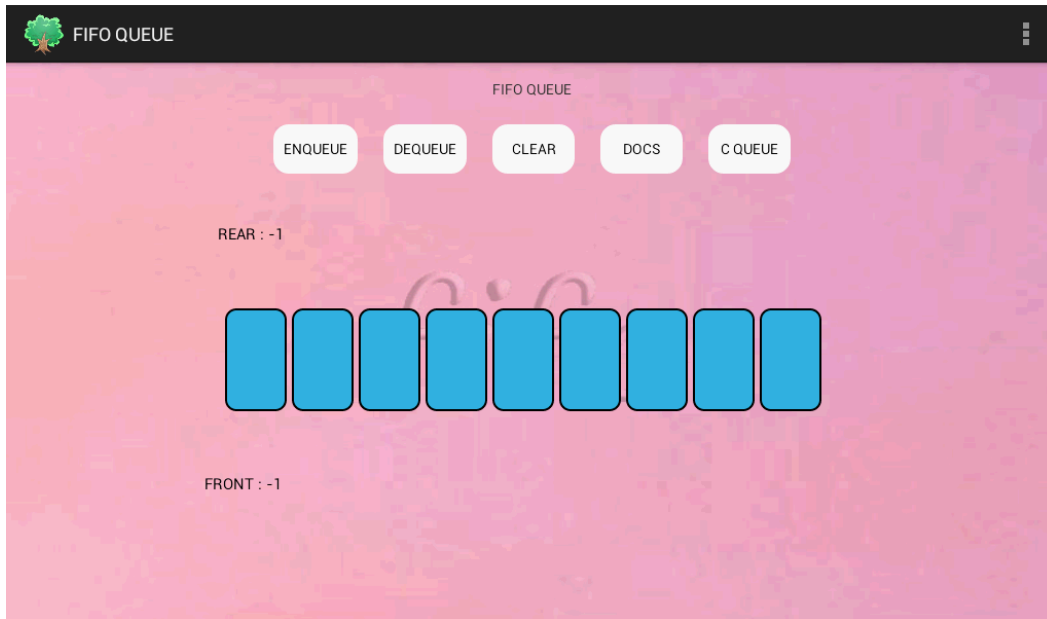


The user can click on REVERSE button the reverse the links of the list.

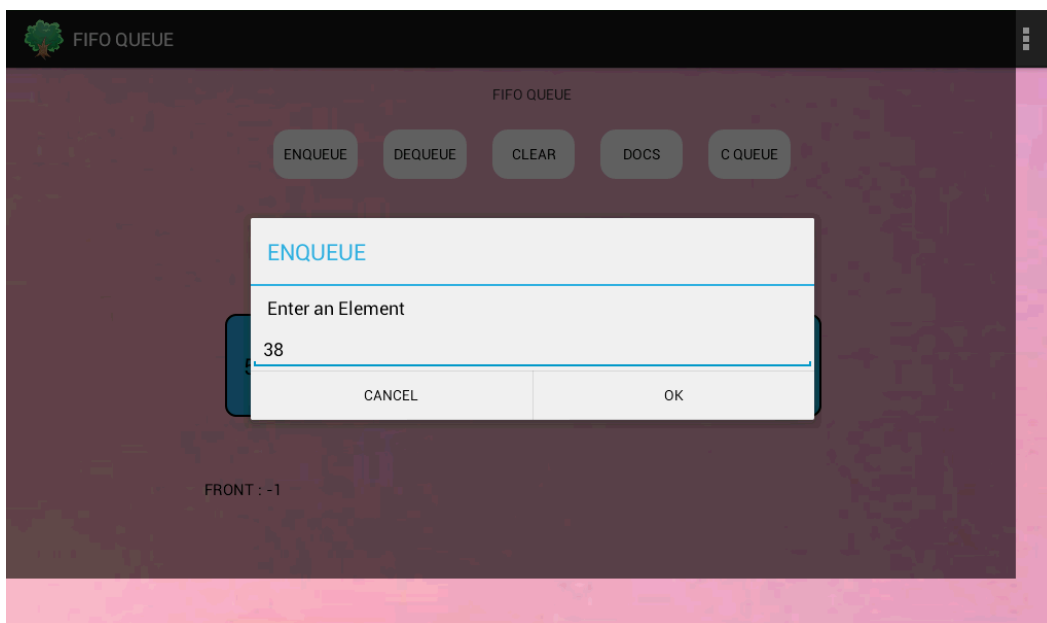


DOCS button is provided to display the documentation in hindi and English.

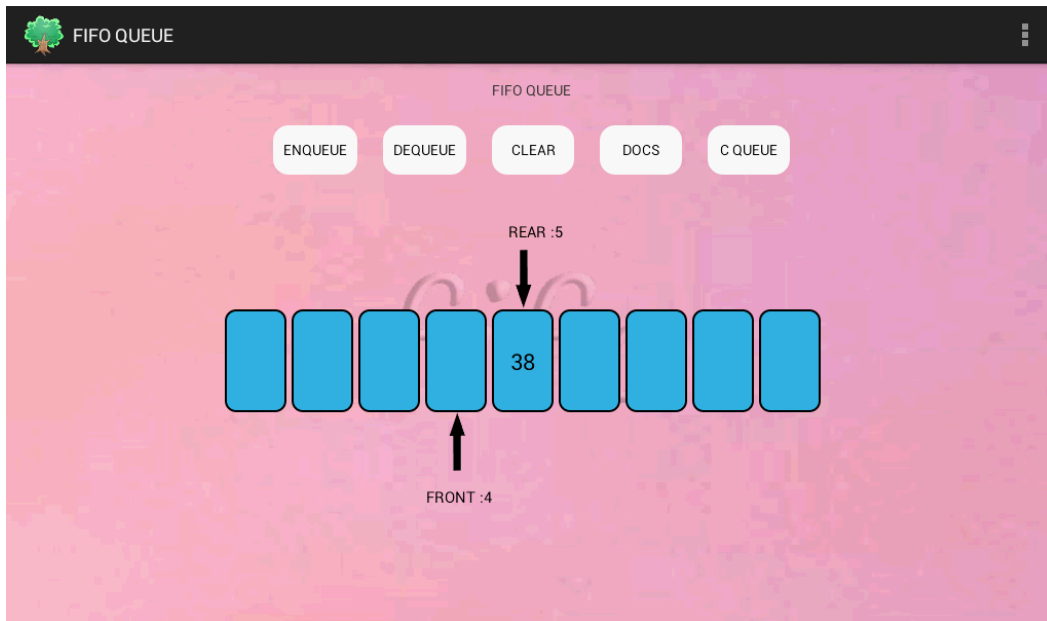
Fifo queue activity :



This is the front display of fifo queue activity with features like ENQUEUE, DEQUEUE ,CLEAR ,DOCS and C QUEUE(circular queue activity).



To add an element the user is required to click on ENQUEUE button and enter an element and click on OK. Element will be added to the UI.



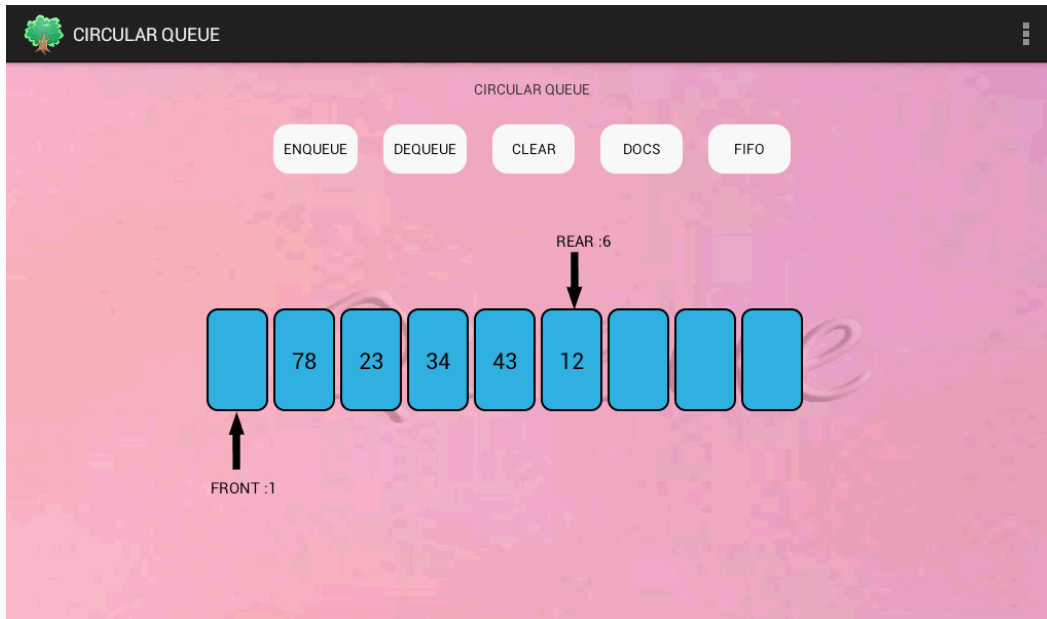
To delete an element click on DEQUEUE button and front value will be incremented and the element will also be deleted from the UI.

DOCS button is provided for documentation.

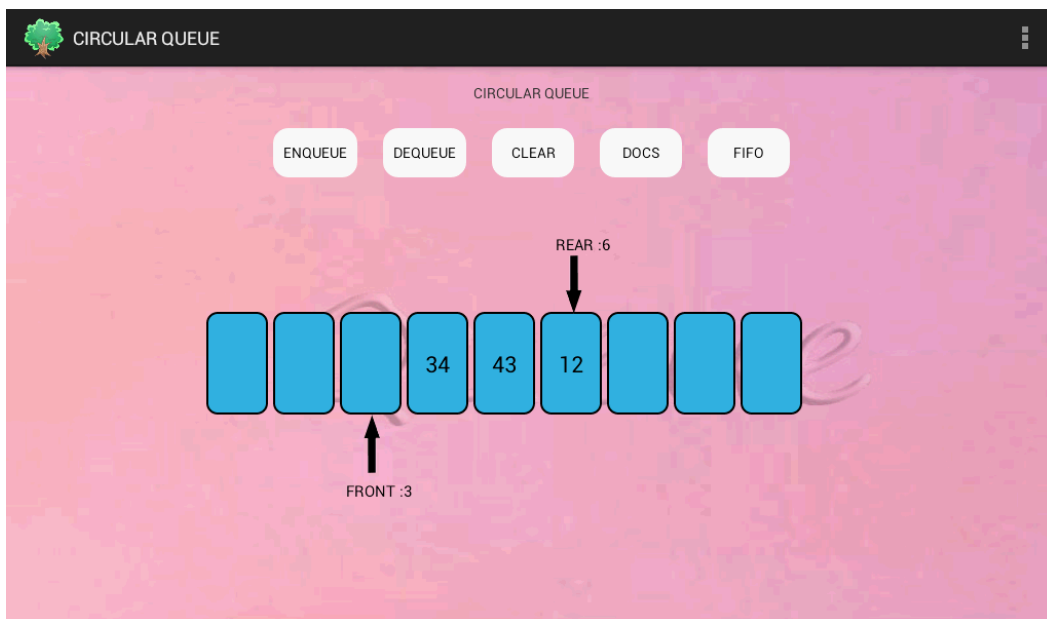
C QUEUE button is for going to the circular queue activity.

CLEAR is to clear the UI.

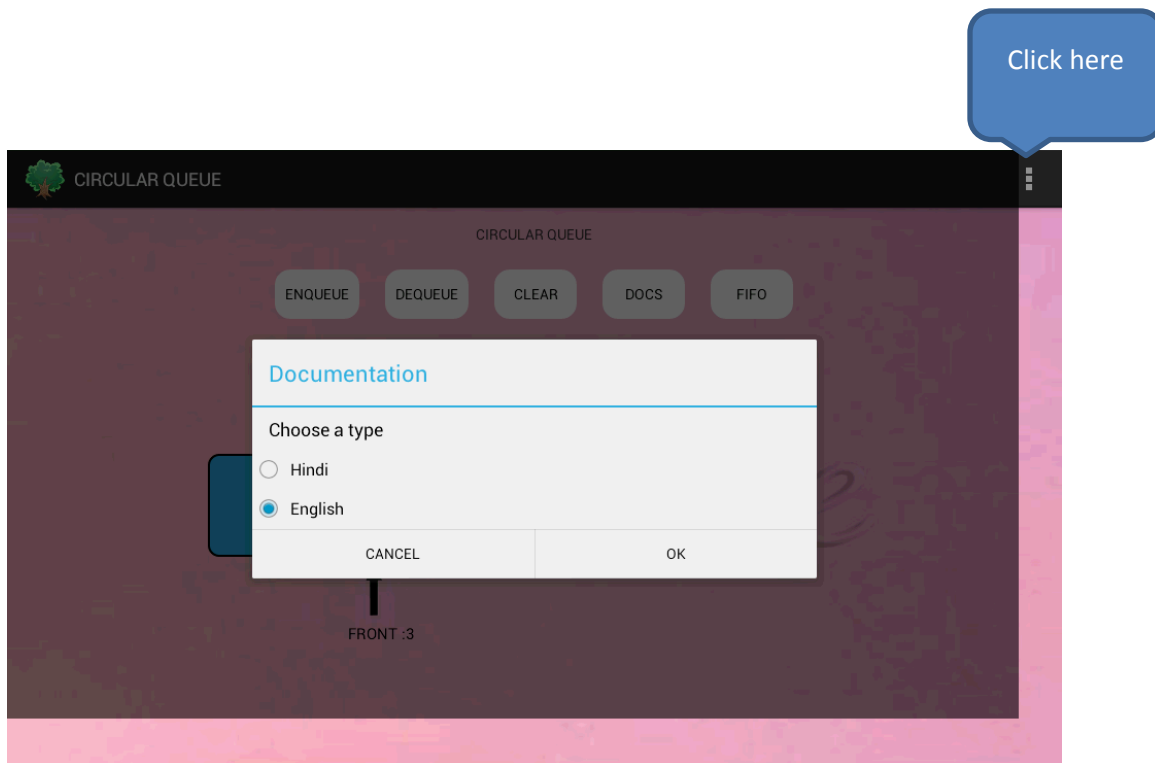
Circular Queue activity:



Circular queue activity with 6 nodes enqueued and 1 nodes dequeued. The user can click on ENQUEUE to add more nodes



Click on DEQUEUE button to delete a node .



Click on DOCS for documentation.

CLEAR for clearing all the values of the nodes.

FIFO to go to fifo queue activity.

Thank you.....

Hope you liked my app

DSS<1.0.0>