Procedure to Create an Experiment

Following are the stepwise instructions to add two numbers using Sandhi.

Step **1**:- Download and Install Sandhi from the following link.

http://sandhi.fossee.in/installation

Step **2**:- Go to the **Terminal** and type *sandhi* then press **Enter** as shown in Fig 1.

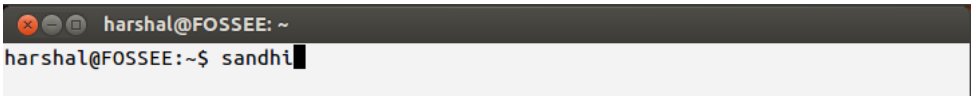

Fig 1

Step **3**:- After the Sandhi interface opens, goto *File* -> *New* as shown in Fig 2

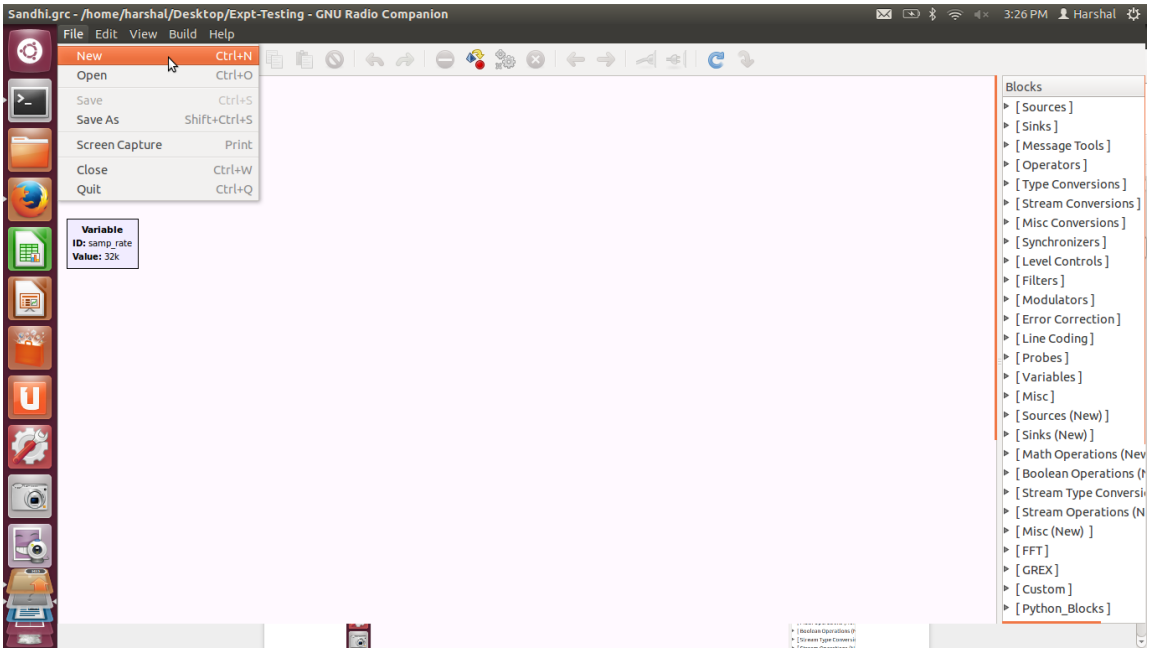

Fig 2

Step **4**:- Then goto *File* -> *Save As* as shown in Fig 3.

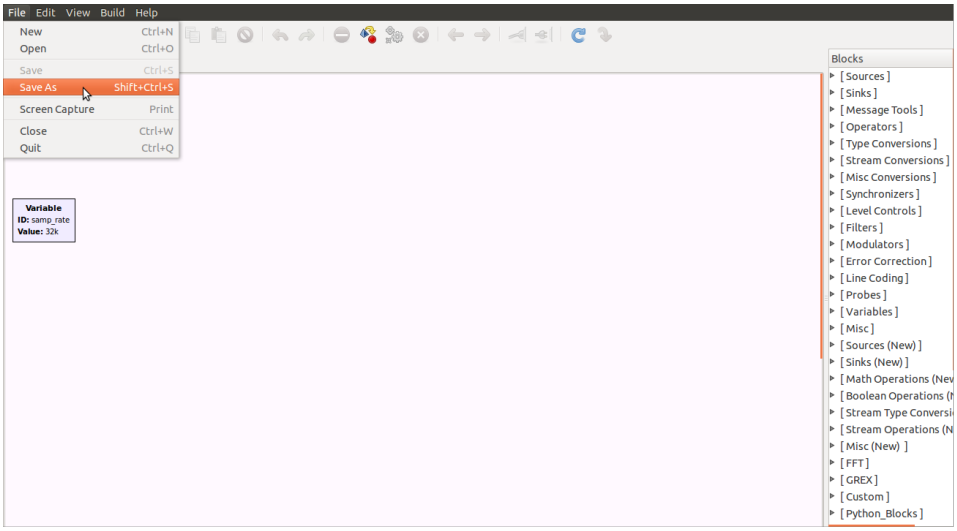

Fig 3

Save the file with the name as “addition” in your desired folder and click on **Save** button as shown in Fig 4.

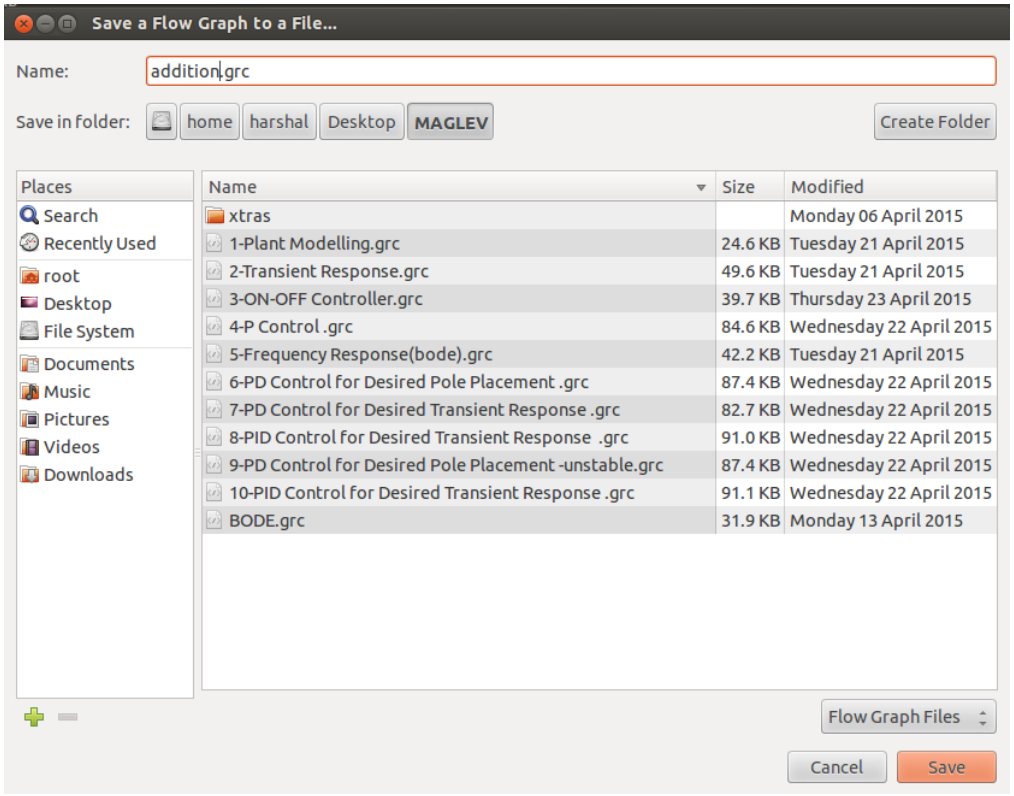

Fig 4

Step **5**:- Block Placement and Configuration.

- On the right hand side panel, locate and click on the arrow corresponding to **Calculation.** Under **Calculation,** double click on the **Calculator**. A Calculator block will be placed on the workspace as shown in Fig 5.

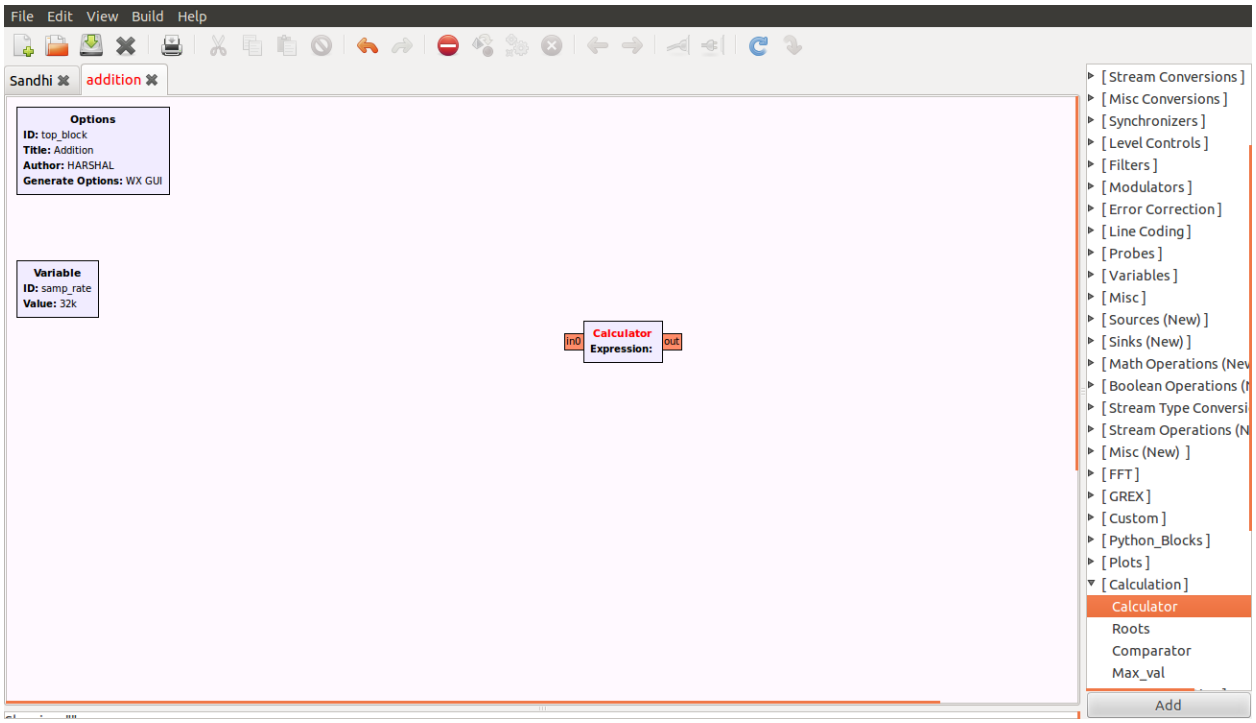

Fig 5

- Double click on the Calculator block to set the **Expression** and **Num Inputs** parameters in the properties window that pops up. For Expression, type ‘a0+a1’ and for **Num inputs,** type ‘2’ as shown in Fig 6.

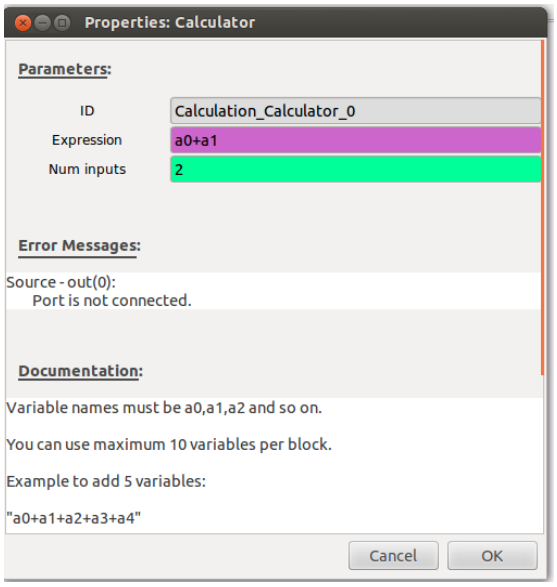

Fig 6

- Similarly, add two **Constant Source** blocks from the **Sources** category and add two **WX GUI Slider** blocks from the **WX GUI Widgets** category onto your workspace as shown in Fig 7.

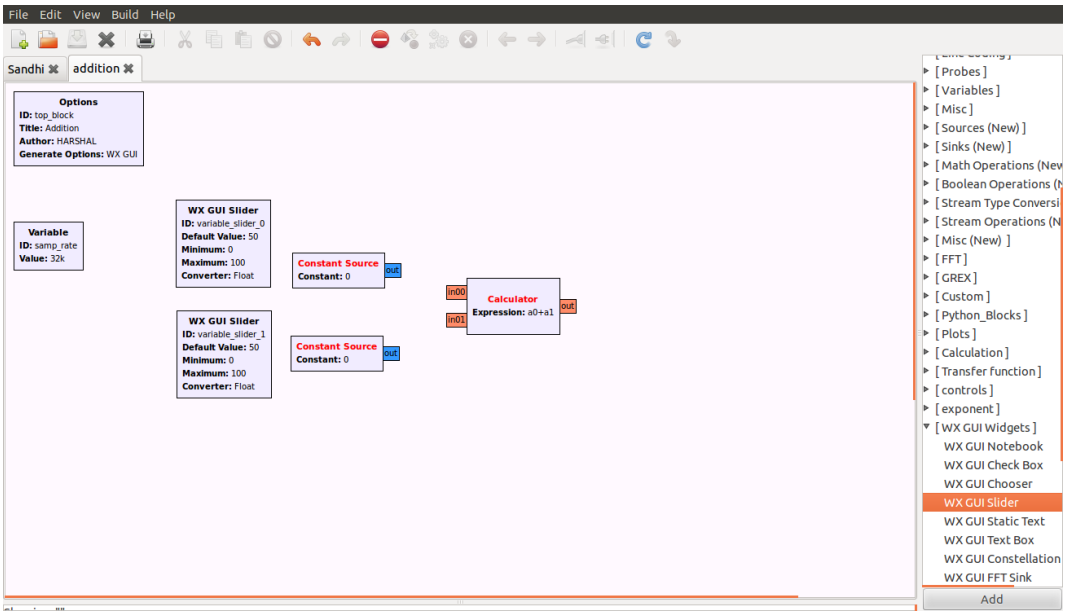

Fig 7

- Now, double click on the **WX GUI Slider** and set the parameters: **ID**, **Label**, **Default Value**, **Minimum**, **Maximum**, **Num steps** etc, as per your requirements as shown in Fig 8. Press **OK** and configure the other slider similarly.

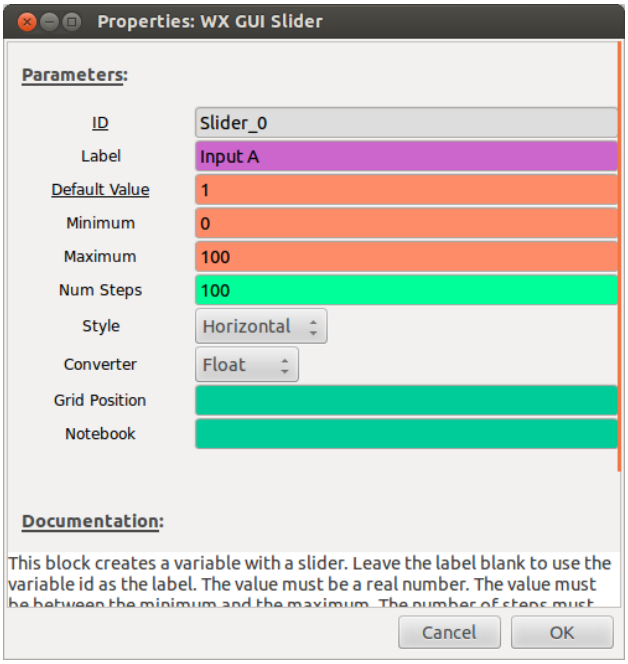

Fig 8

- From the properties window of one of the **WX GUI Slider** blocks, copy the ID. In the properties window of one of the **Constant Source** blocks, paste it in the **Constant** parameter as shown in Fig 9. For the **Constant Source** block select the property of the **Output Type** as **Float** in the property window.
- Similarly, configure the other **WX GUI Slider** block and **Constant Source** block.

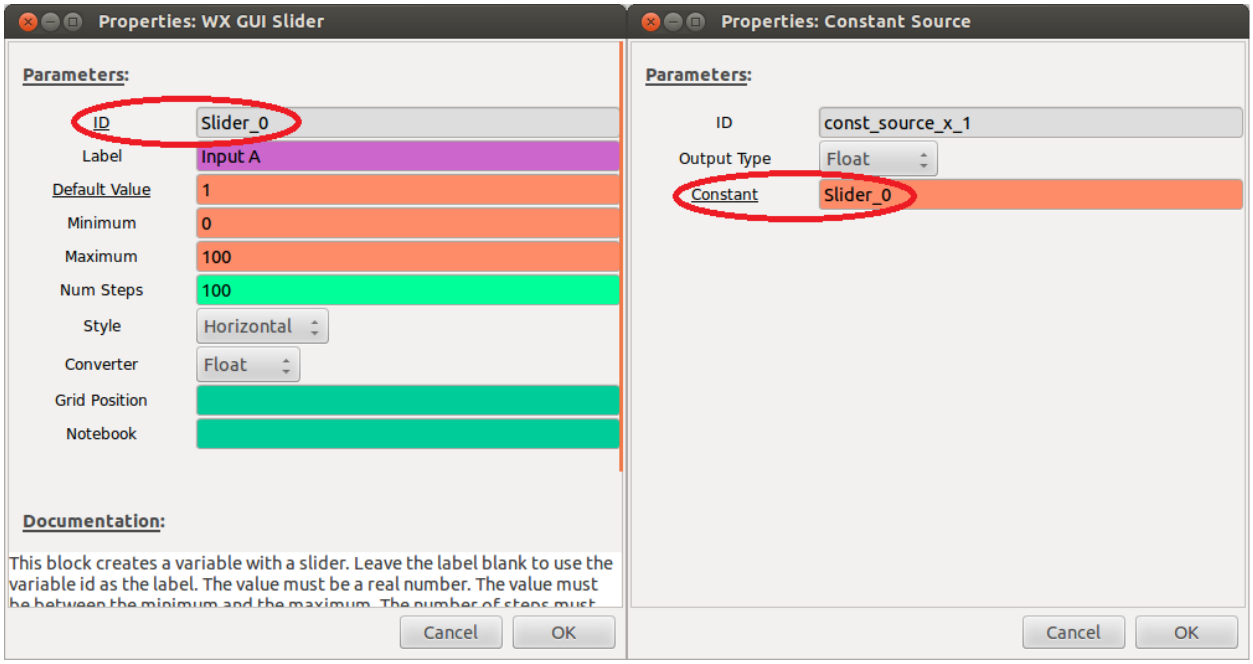

Fig 9

- As explained earlier, place a **WX GUI Number Sink** block under **Sink** category on your workspace as shown in the Fig 10.

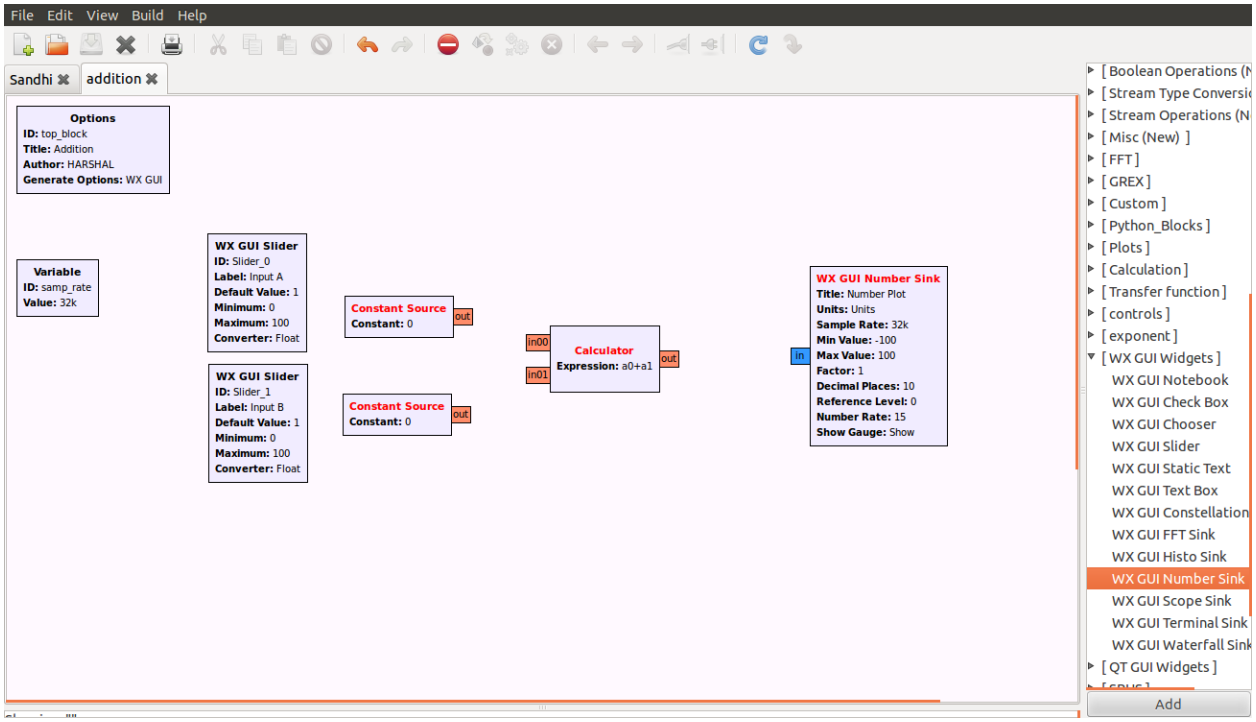

Fig 10

- Set the parameters like **Type** as **Float** , **Title** as **Output** and **Decimal Place** as **3** and then press **OK**. See Fig 11.

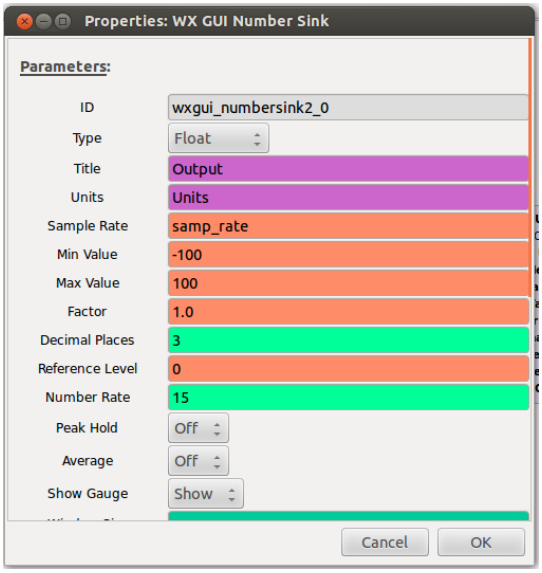

Fig 11

Step **6**:- To connect two blocks, click on the **Out** of one block and then click on the **In** of another block or vice-versa. Finally, complete the connections to create the experiment as shown in Fig 12.

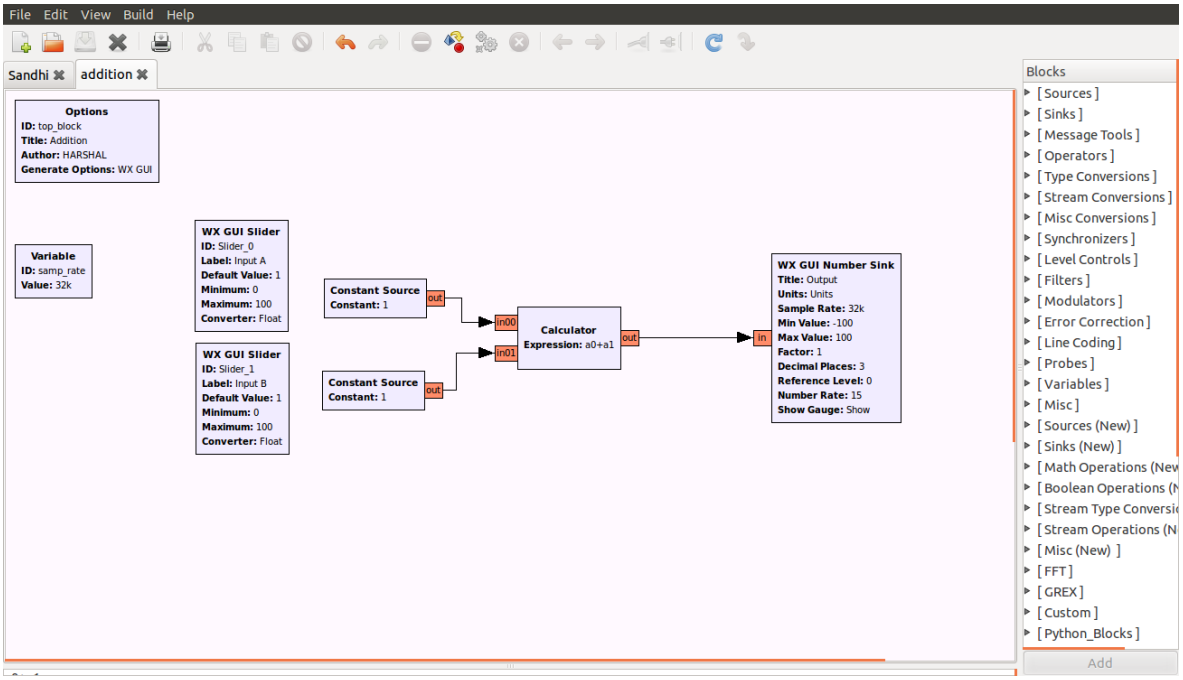

Fig 12

Step **7**:- Now, press **F6** function key on the keyboard or click on the **Execute the Flow graph** button in the standard toolbar as shown in Fig 13. This will run the experiment and produces the output in a new window.

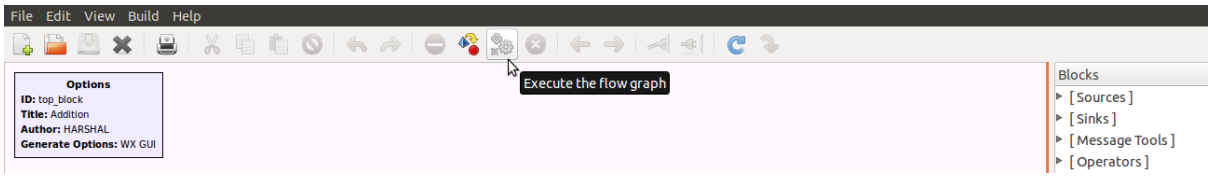

Fig 13

Results are obtained as shown in Fig 14. One can vary the inputs by moving the slider pointer. You may observe the changes in the output based on the changes in the input parameters.

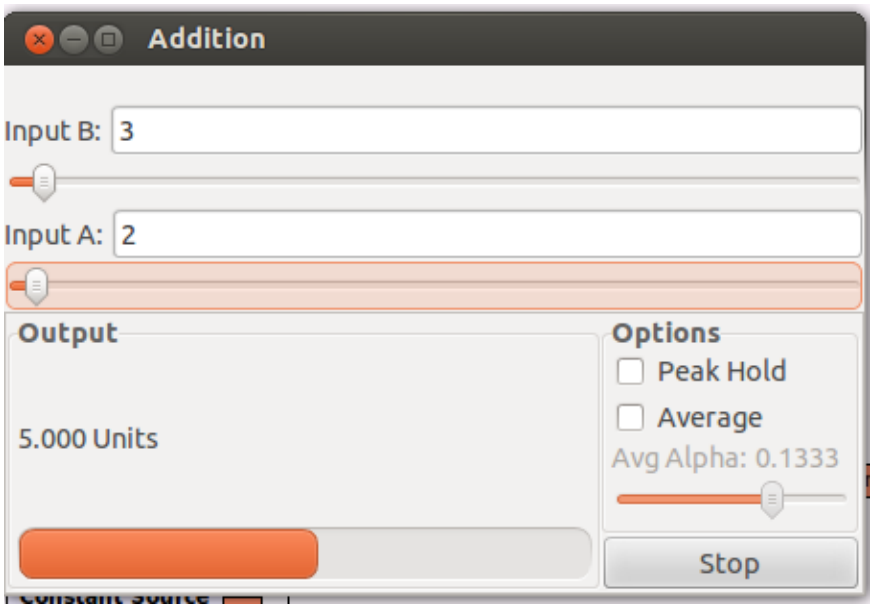

Fig 14

Procedure to execute an existing Sandhi experiment

Step 1:- Go to the **Terminal** and type *sandhi* then press **Enter**.

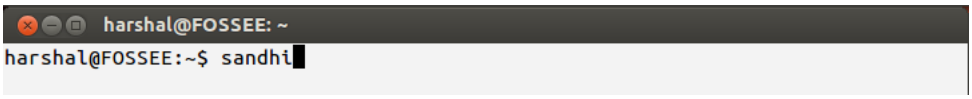

Fig 1

Step 2:- After the Sandhi interface opens, goto *File* -> *Open* as given in Fig 2.

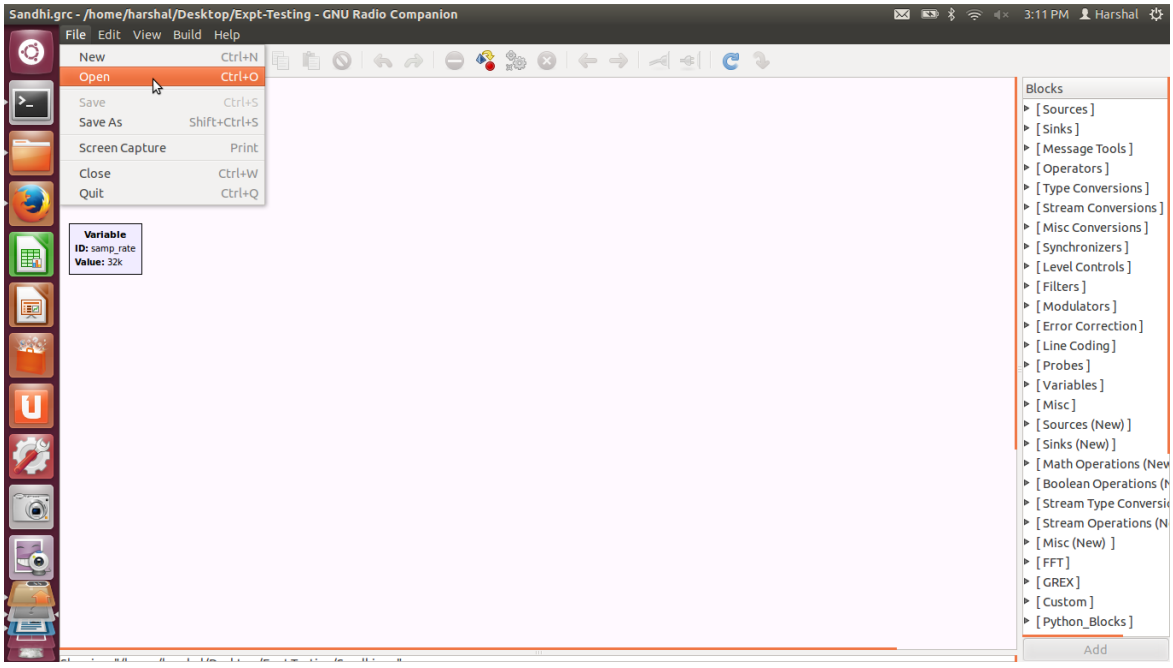

Fig 2

Step 3:- As shown in Fig 3, browse to the folder where the **.grc** files of the experiments (MAGLEV) are saved. Then click on the experiment which you wish to execute, click on **Open** button.

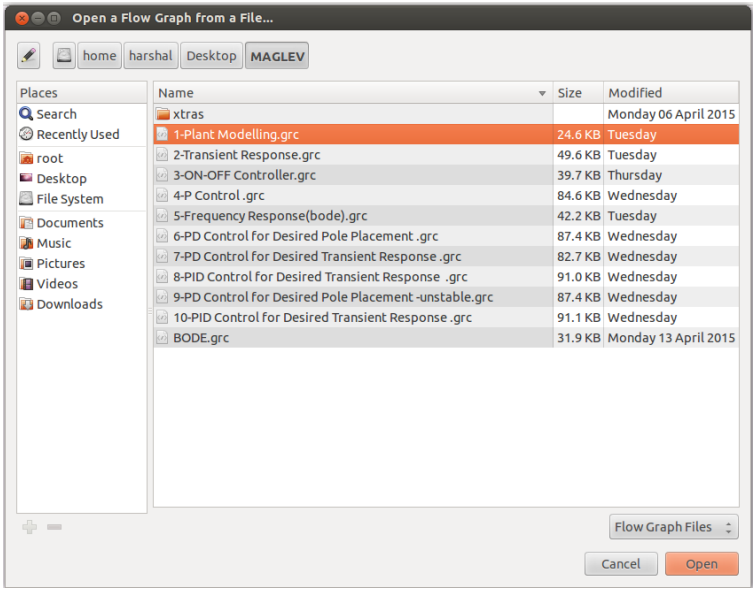

Fig 3

Step 4:- After the experiment is opened, press **F6** function key on the keyboard or click on the **Execute the Flow graph** button in the standard toolbar as shown in Fig 4. This will run the experiment and produce the output in a new window.

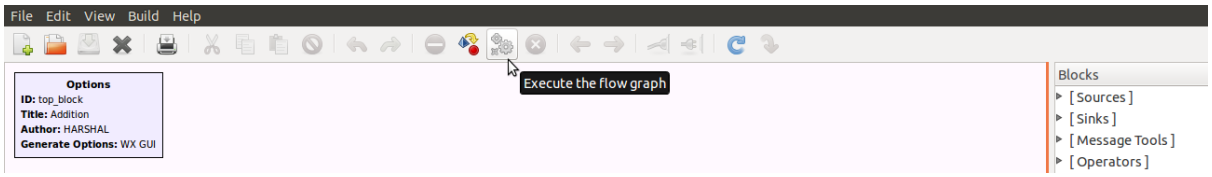

Fig 4