Experiment – 1 Functional Testing of Devices

Aim: Flashing the OS on to the device into a stable functional state by porting desktop environment with necessary packages.

Components Required : Raspberry Pi kit , SD card , card Reader , Ethernet cable , keyboard , mouse , Operating system , Power supply , AC to DC Adapter , Socket, HDMI 2 VGA cable.

Procedure :

Step 1 : We need to insert SD card into a card reader and format it because to avoid unpredictable issues that may occur during read and write operation in device.

Step 2: After formatting the SD card then download the Raspberry Pi OS and Raspberry Pi Imager and copy the Raspberry Pi OS into the SD card.

Step 3: For interfacing the screen and the Raspberry Pi we need use HDMI 2 VGA cable. Connect the VGI cable to the CPU and other end is connected to Raspberry Pi kit . In order to give the input program we are connecting the Keyboard and mouse to Raspberry Kit USB ports. For internet access connect the Ethernet pin and on the power supply.

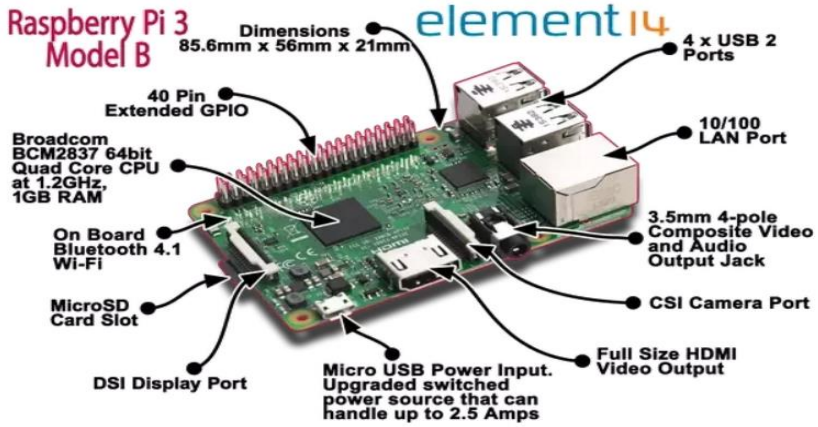
Step 4: When the system starts opening ,for flashing the OS into Raspberry Pi some basic system settings must be done .

Step 5: Go to the preferences and click on Raspberry Pi configuration and the whole description of Raspberry Pi Os is visible and go to interfaces

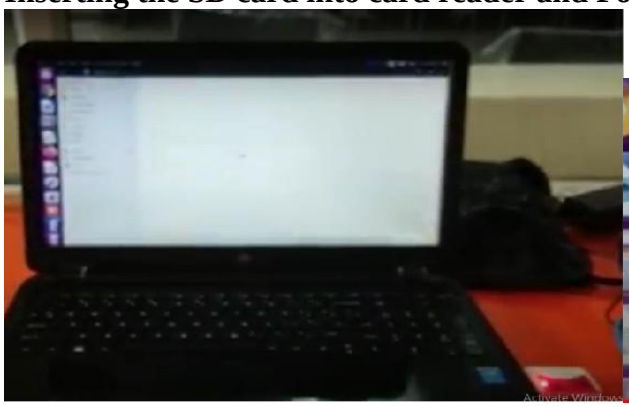
Step 6: Click ok then we can observe the flashing of Raspberry Pi OS on Desktop.

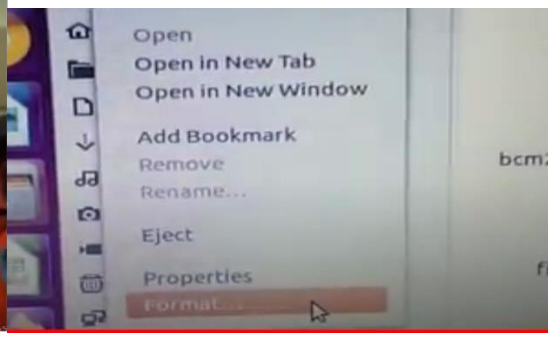
Output :

Raspberry Pi Kit



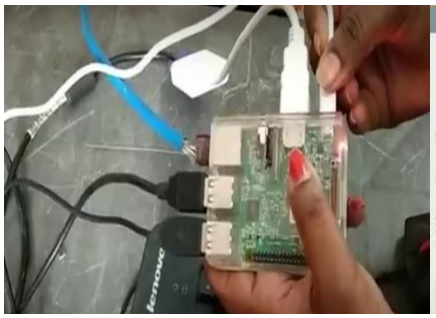
Inserting the SD card into card reader and Formatting the SD card



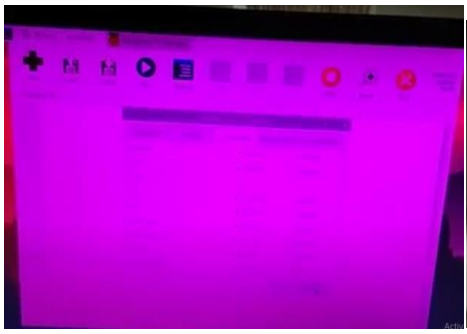


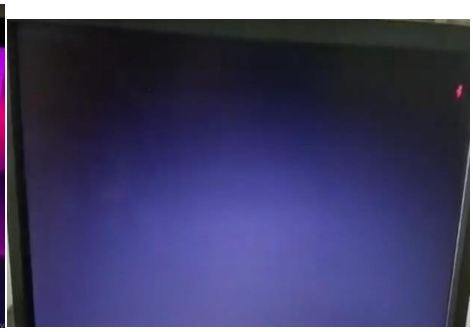
Installation of Raspberry Pi Imager and Operating System(OS) into SD card

Connecting the interfaces required for flashing the Raspberry Pi OS



Basic system settings and on Raspberry Pi OS and flashing it





Result : In this way Flashing the OS on the device into a stable functional state by porting desktop environment with necessary packages is observed.