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Free Softwares for Raspbian

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Contents

***Abstract*—This manual provides steps for installing various softwares in Raspbian.**

1 Office

1.1 Document Editor

1. LaTeXis a powerful word processor typically used for writing mathematical documents. *Texmaker* is a very good editor for LaTeX. *Okular* is a nice document viewer for .pdf and other formats and *gv* is used for viewing .ps files.

```
sudo apt-get install texlive-
    publishers texlive-latex-extra
     texlive-fonts-recommended
    texlive-fonts-extra texlive-
    science texmaker okular gv
```

2. *Gnumeric*: Lightweight spreadsheet software.

```
sudo apt-get install gnumeric
```

3. *Libreoffice*: MS-Office substitute for Linux.

```
sudo apt-get install libreoffice
    libreoffice-gtk
```

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1.2 Graphics Editor

1. *GIMP*

```
sudo sudo apt-get install gimp
```

2. *Inkscape*

```
sudo apt-get install inkscape
```

2 Arduino Software

1. The precompiled *Arduino IDE* can be downloaded from the terminal.

```
sudo apt-get install arduino
```

2. If you are downloading arduino from the source,

```
sudo usermod -a -G dialout $USER
```

and then install arduino.

3 Geany Text-Editor

1. *Geany* is an extremely lightweight editor with builtin support for various programming langauges.

```
sudo apt-get install geany
```

2. The AVR-Assembly and AVR-GCC software are useful for low level programming

```
sudo apt-get install avrdude
    gcc-avr avr-libc
```

3. It support to run your avr-gcc code.

```
sudo apt-get install make
```

4 Math Programming

Python provides a powerful alternative to MATLAB through various libraries.

```
sudo apt-get install python-
    numpy python-scipy python-
    matplotlib python-mpmath
    python-cvxopt
```

5 VNC

VNC is useful for remote desktop connection to raspberry pi. The following instructions are useful for viewing the raspbian desktop on an android device.

1) Install tightvncserver

```
sudo apt-get install
   tightvncserver
```

2) Start vncserver and choose a password.

```
vncserver
```

   Follow the instructons for setting up a password.

3) Kill vncserver

```
vncserver -kill :1
```

4) Configure vnc startup file for lxde (raspbian desktop)

```
nano ./vnc/xstartup
```

   and paste the following

```
#!/bin/sh
unset SESSION_MANAGER
unset DBUS_SESSION_BUS_ADDRESS
exec startlxde
```

   Save and exit by pressing Ctrl+X.

5) Configure the desktop geometry

```
nano ~/vncstart.sh

#!/bin/bash
vncserver :1 -geometry 1200x700
    -depth 16 -pixelformat
   rgb565
```

   save and exit.

6) Start the vncserver

```
bash ~/vncstart.sh
```

   Note that you will have to do this everytime you restart the raspberry pi.

7) Install VNC Viwer app on your android device through playstore.
8) Configure VNC Viewer by entering the connection details as *ipaddress::5901* where *ipaddress* is the ip address of your raspberry pi.
9) Connect.