**TY B.Tech. (CSE) – II [ 2021-22 ]**

**Software Engineering Tools Lab**

**PRN/ Roll No: 2019BTECS00051**

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**Batch: T4**

**Assignment No. 1**

**Module 1- Introduction to OSS**

1.Weka is a GUI workbench that empowers data wranglers to assemble machine learning

pipelines, train models, and run predictions without having to write code.

Using Weka tool perform below tasks such as data preprocessing, data classification (use

any appropriate ML algorithm) and data visualization efficiently on given dataset.

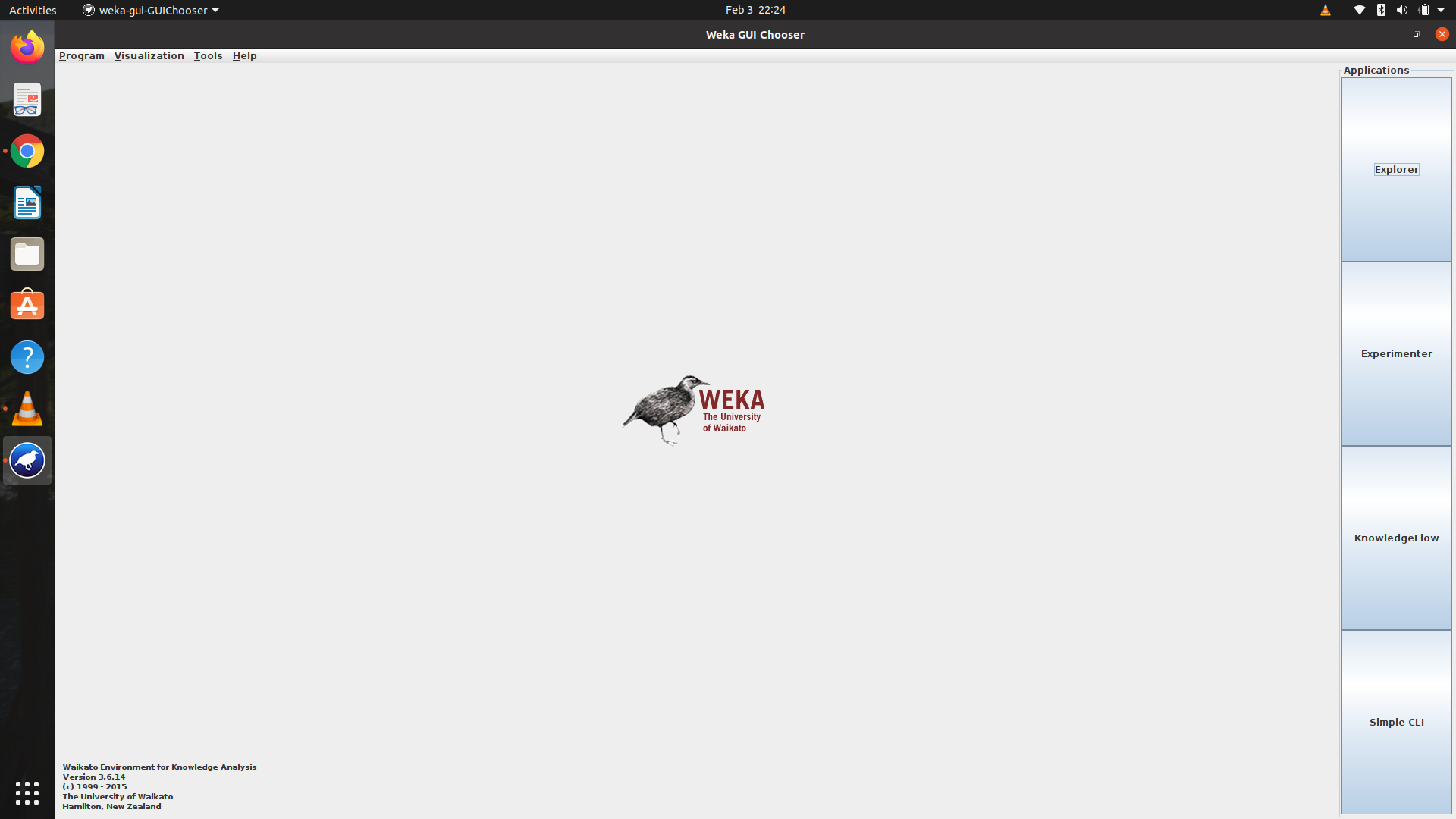
Use the Iris dataset given-

<https://drive.google.com/file/d/1A3Fxsfzm6BSfhFZGDrjI47RTe45bSgYP/view>

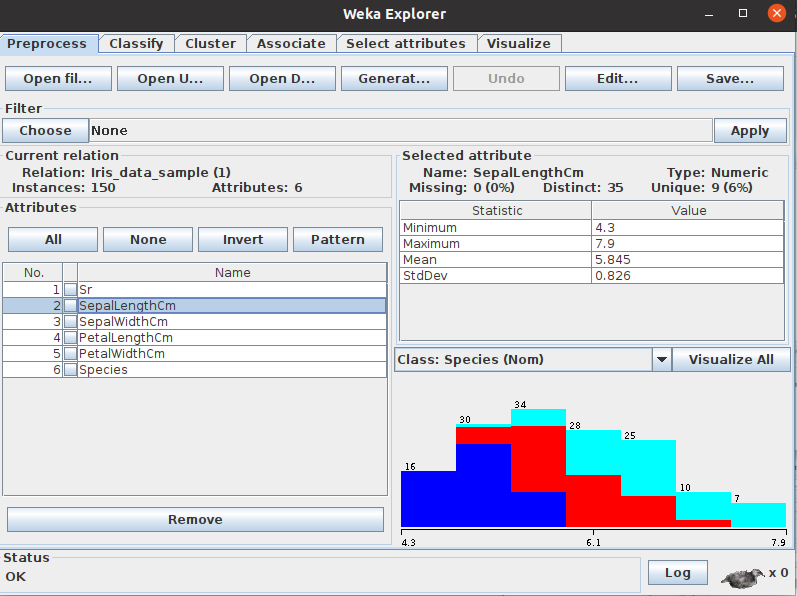
Note-provide screenshots for every task

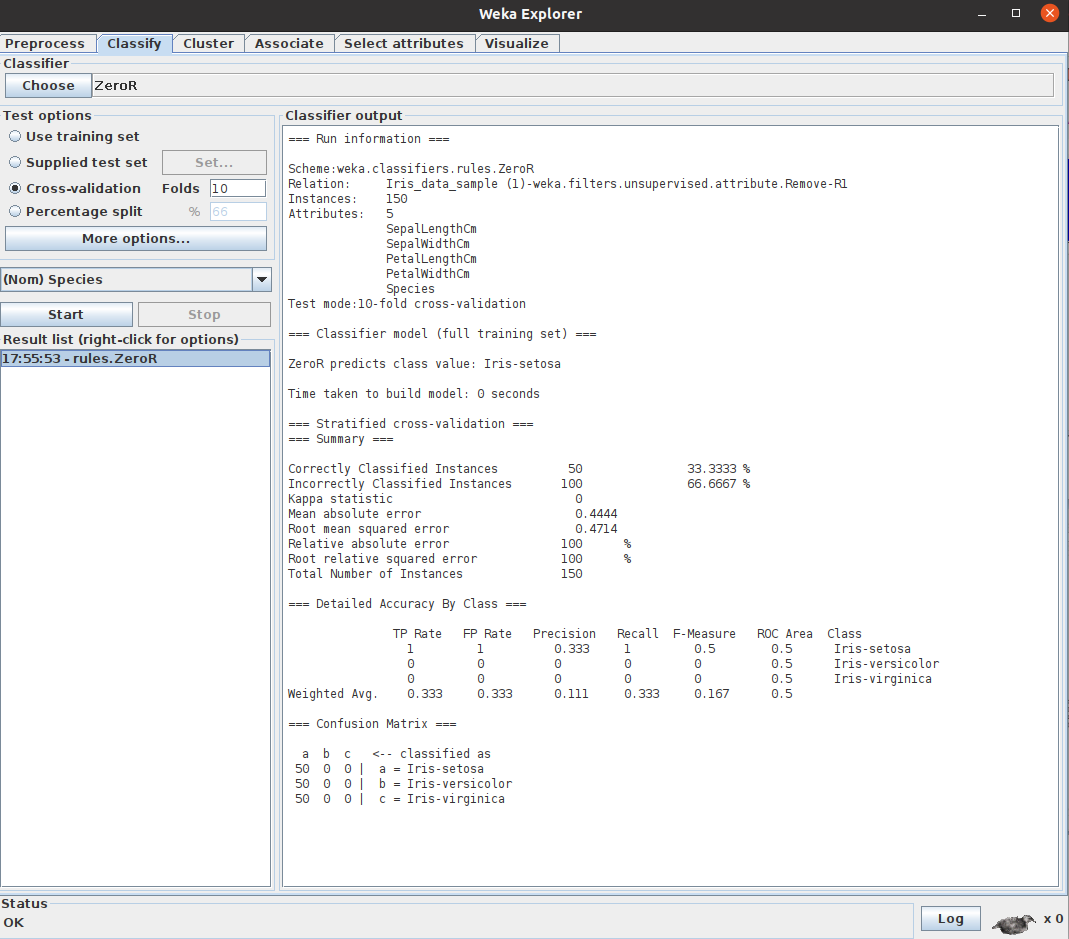
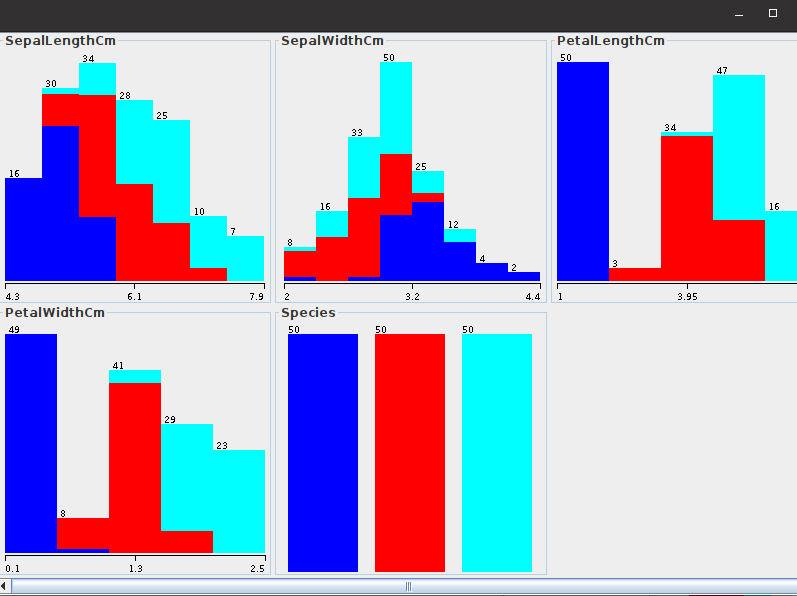
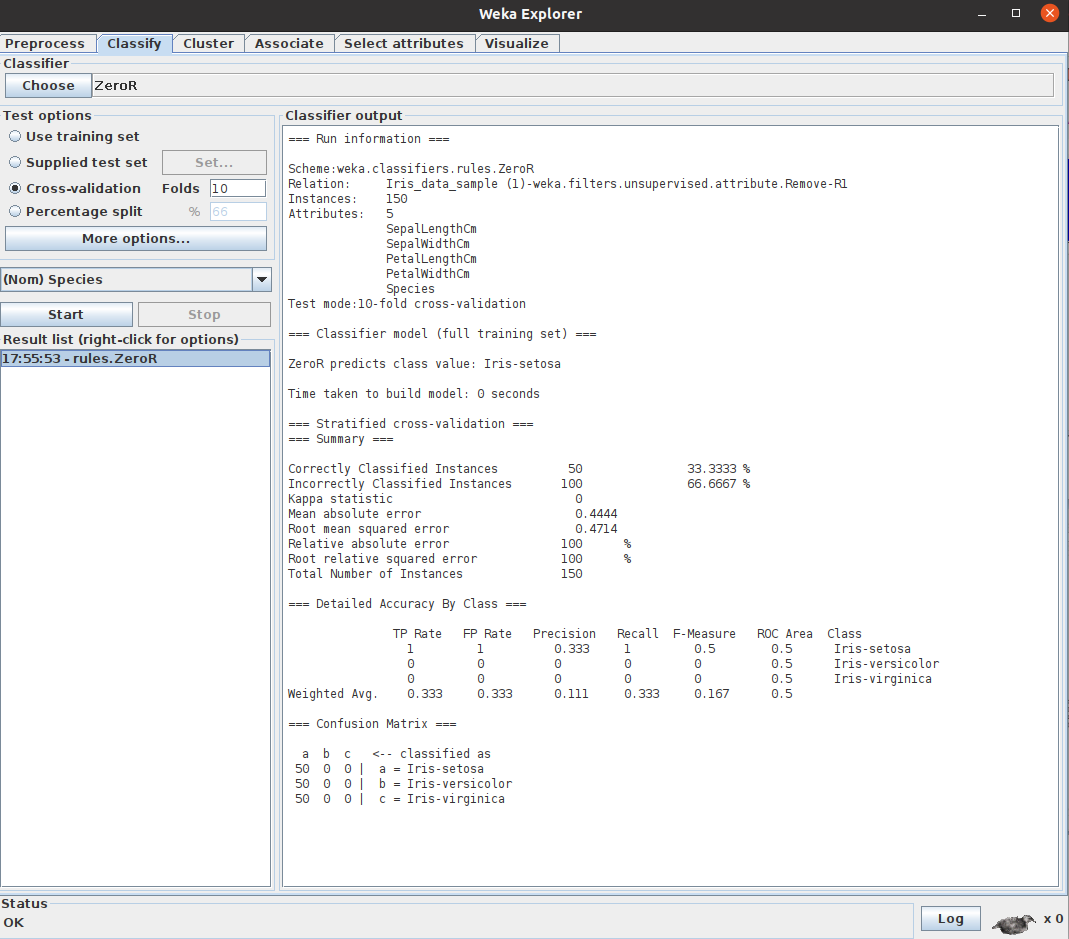
Create a report which will illustrate the details of tasks performed (for e.g to perform

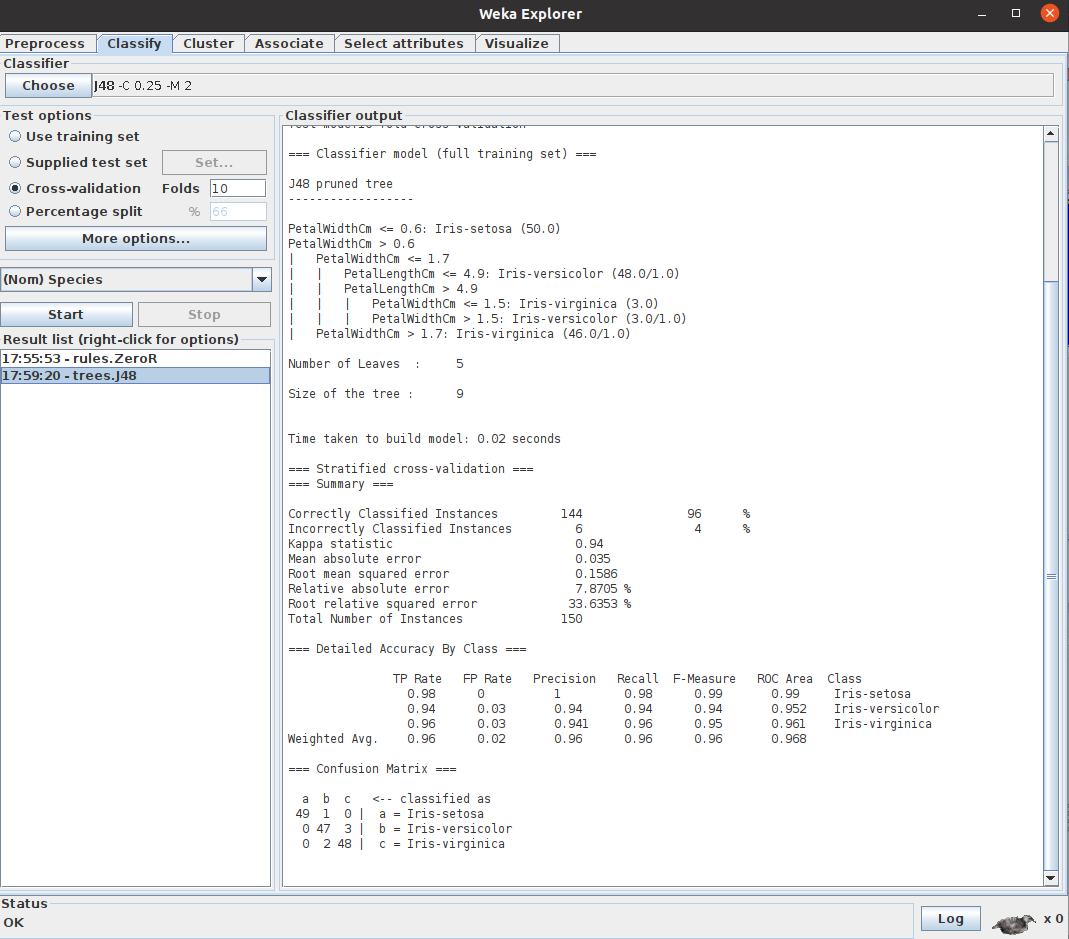
preprocessing of data provides details of navigation and selection of appropriate parameters).

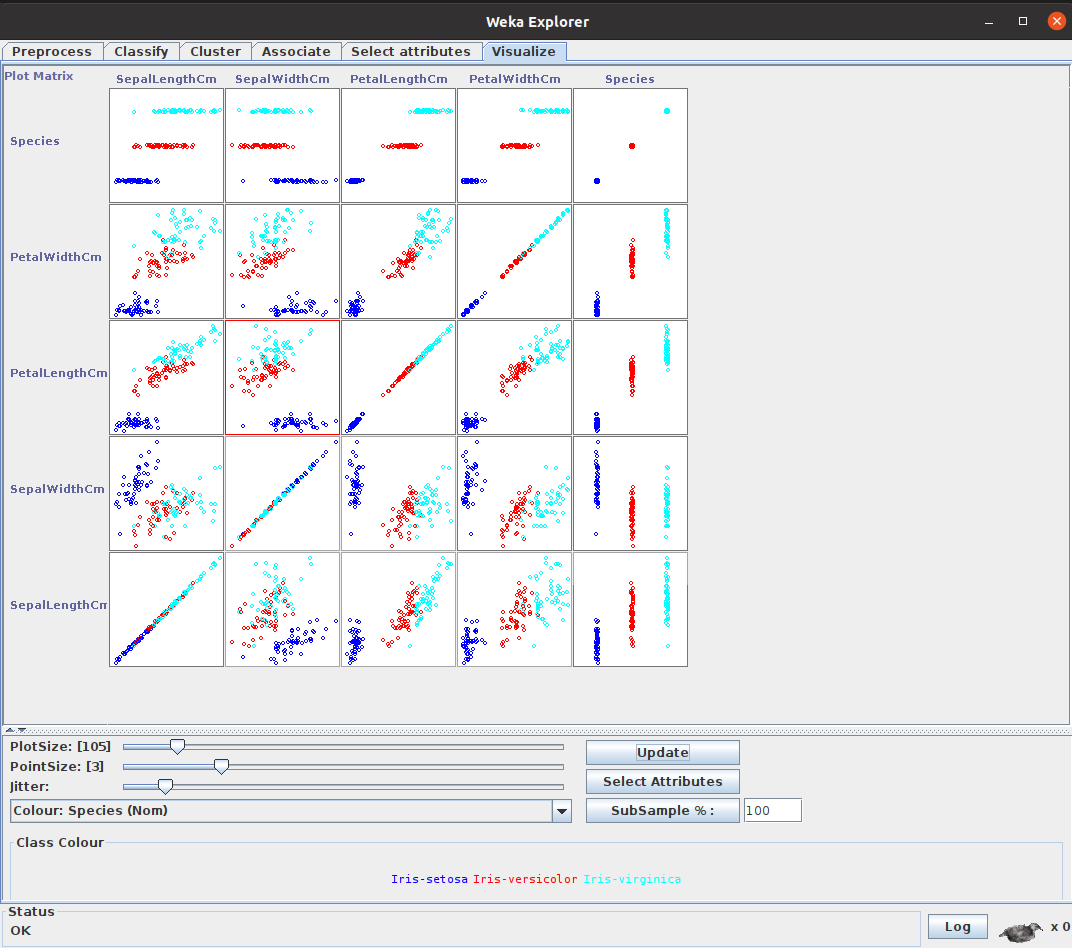
Weka GUI-

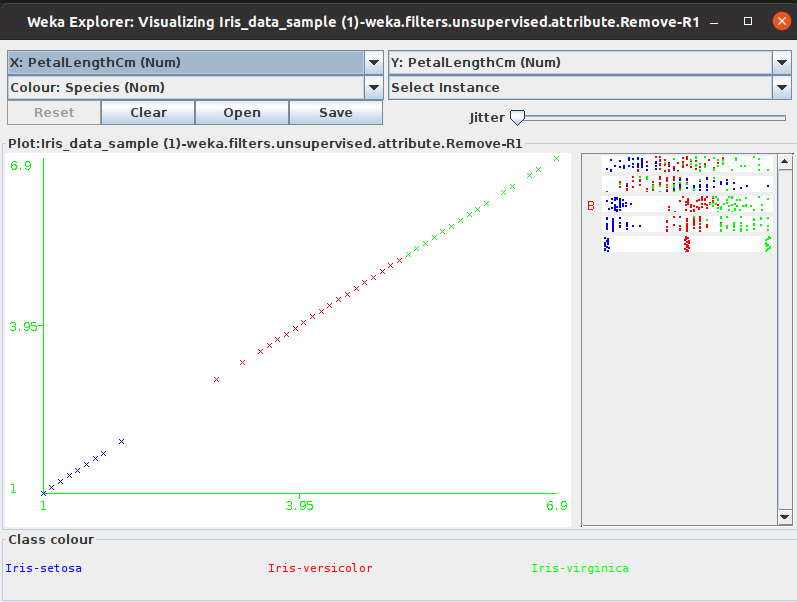
Preprocess:



Classify:



Visualize:



2. Orange is an easy to use data visualization tool with a large toolkit. In spite of being a

GUI-based beginner-friendly tool, you mustn’t mistake it for a light-weight one. It can do

statistical distributions and box plots as well as decision trees, hierarchical clustering and

linear projections.

a. Install orange

b. Show data distribution

c. Show linear projection

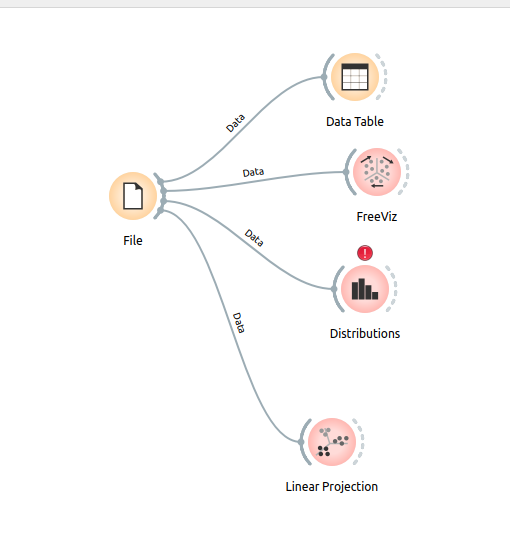
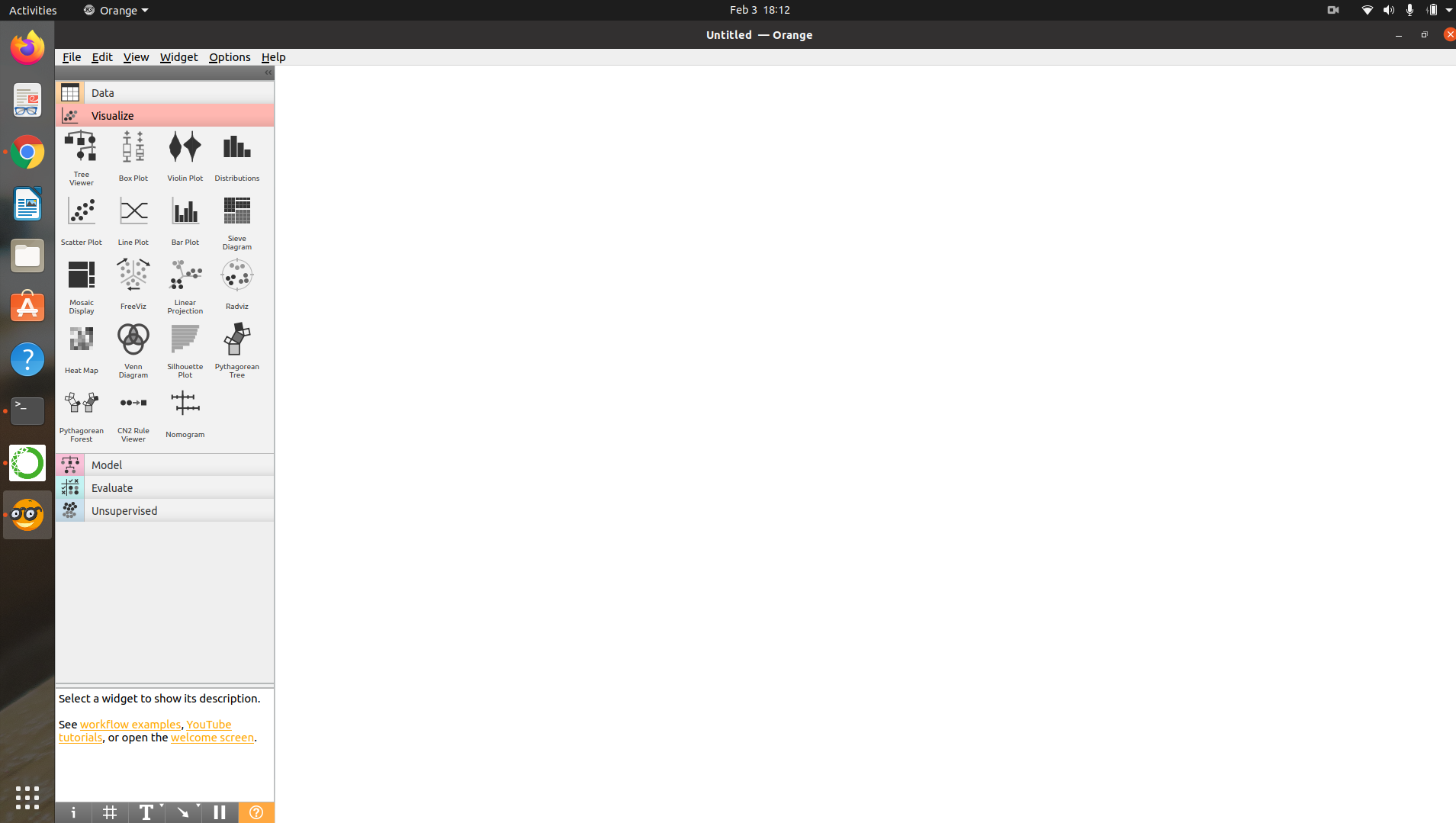
d. Show FreeViz

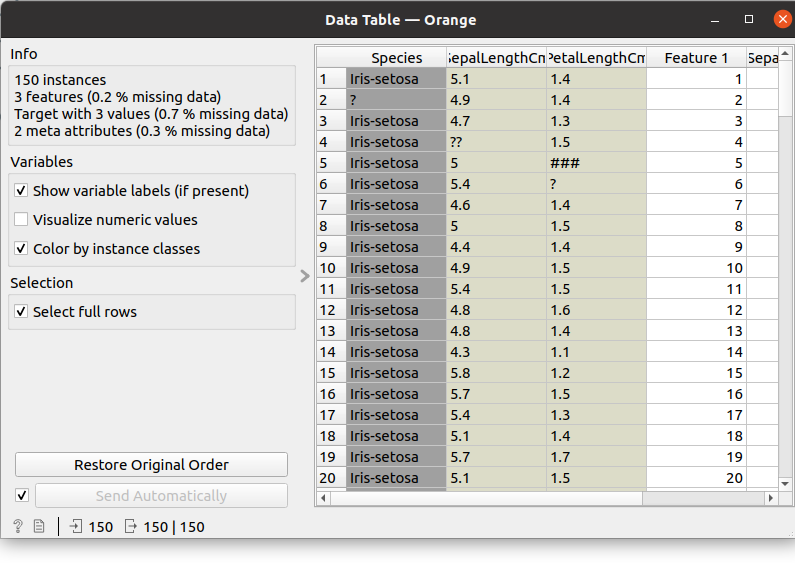
Use dataset

<https://drive.google.com/file/d/1m6sKI1Dap0XK6Bw1edUd5PohwpPwXnd9/view>

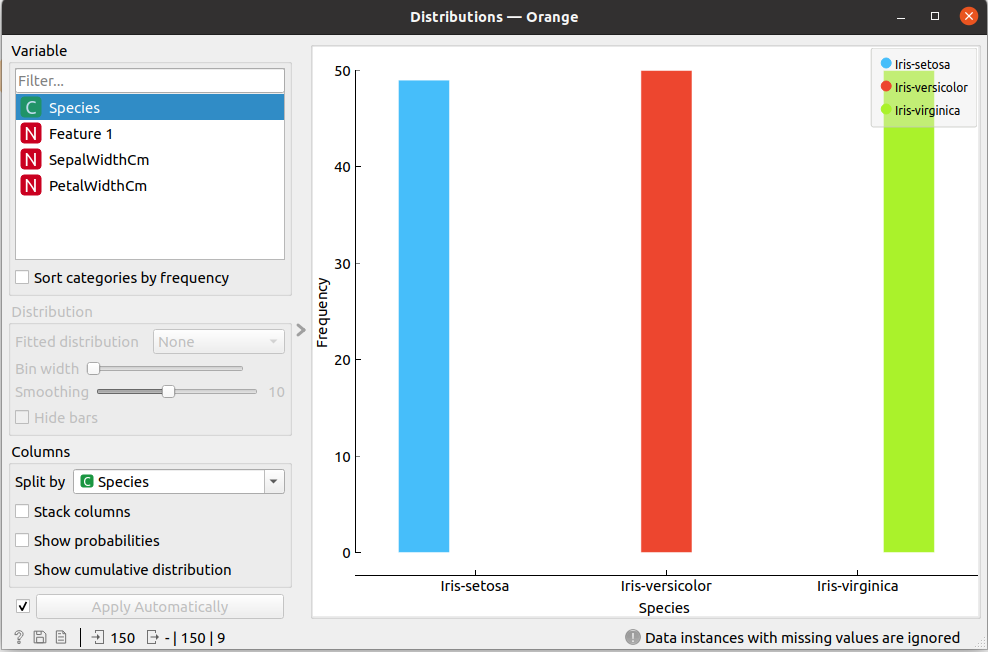
Create a report for this task and upload screenshots for the same.

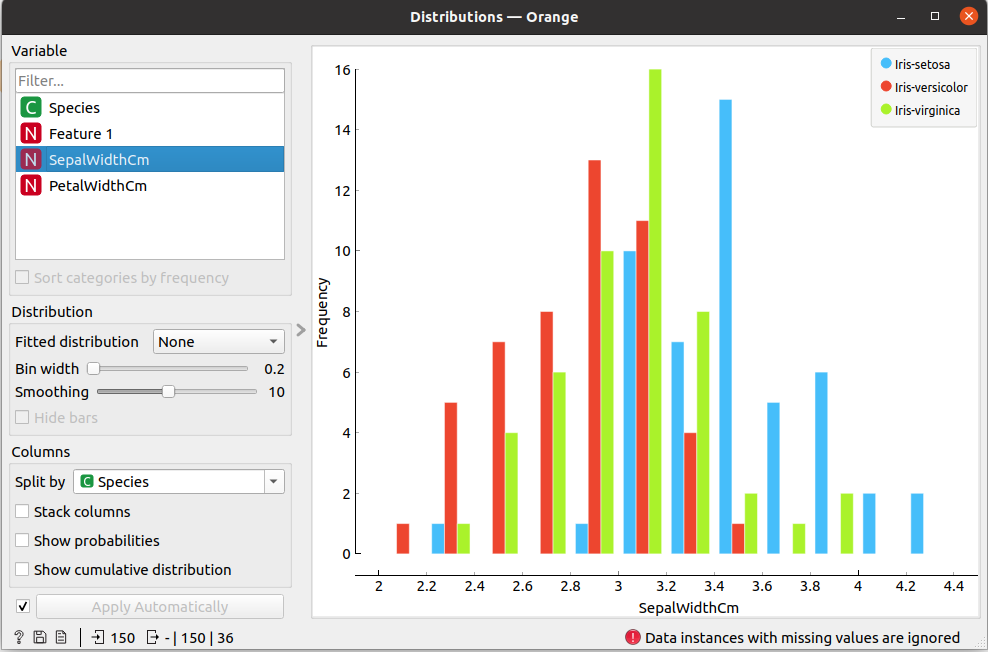
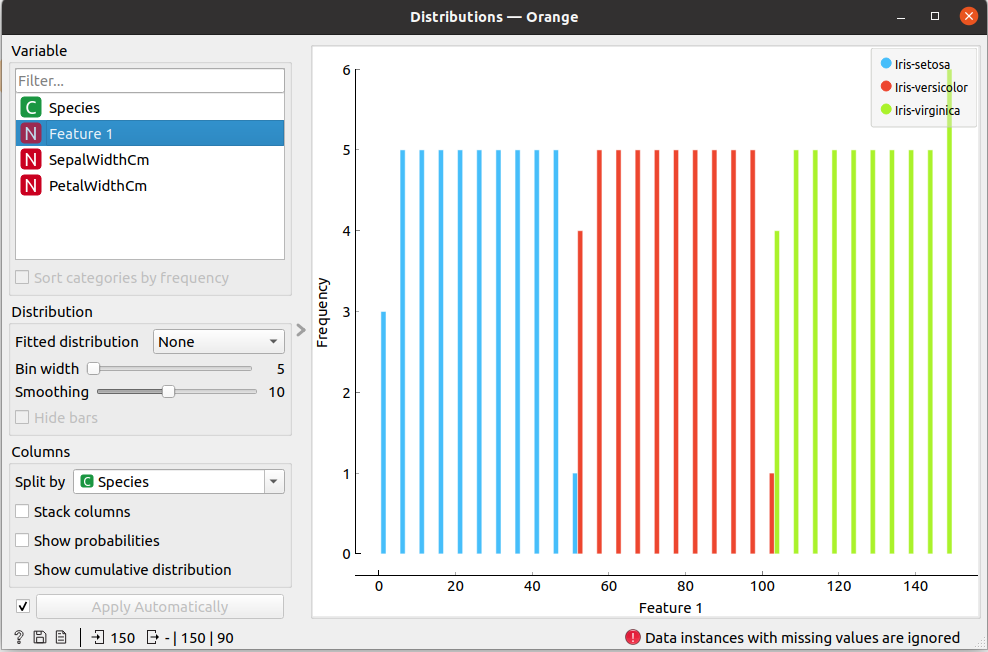
a. Install orange



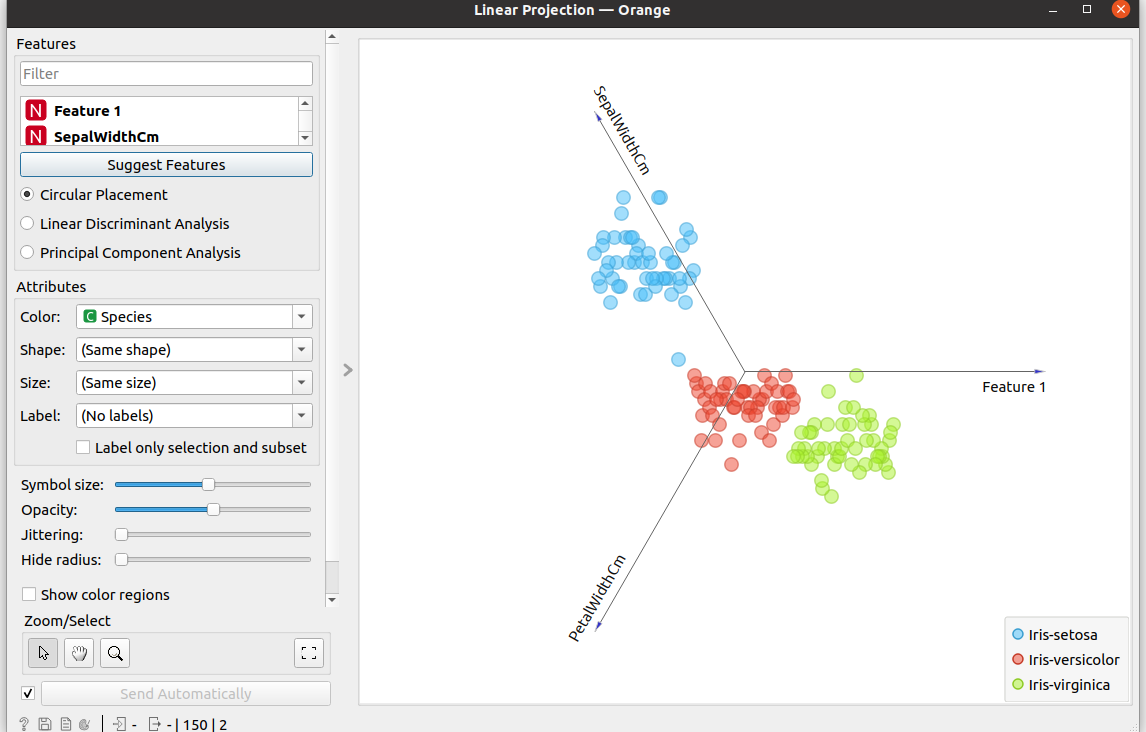


b. Show data distribution

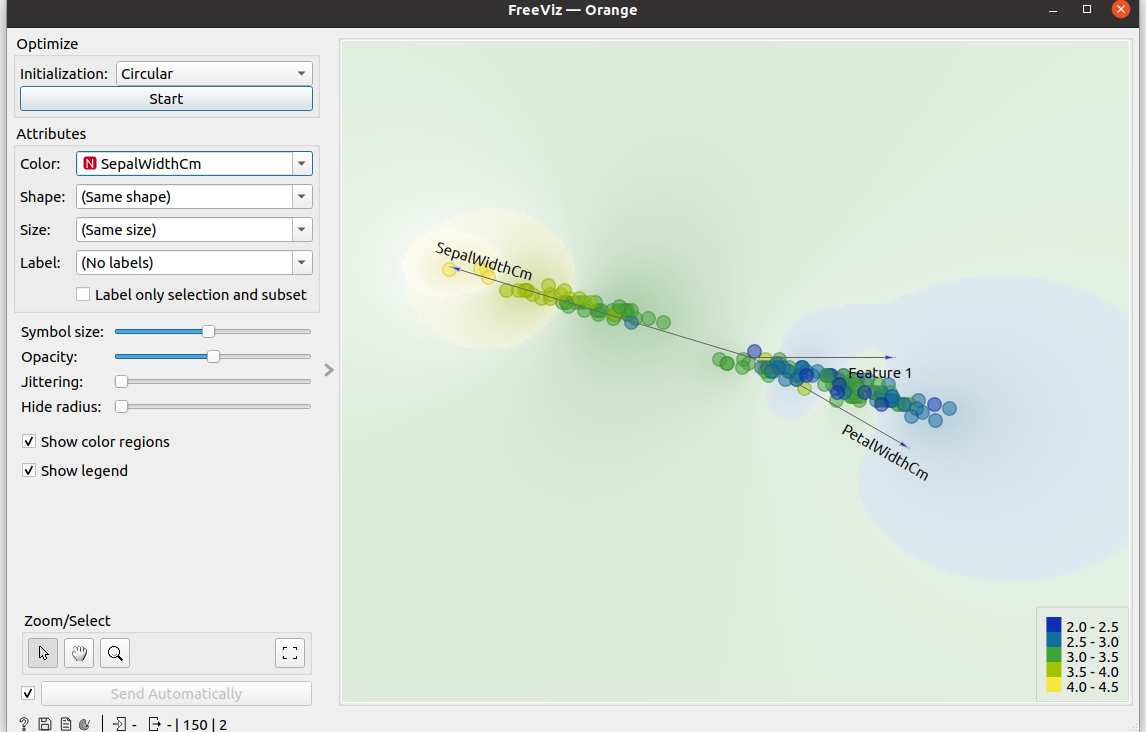
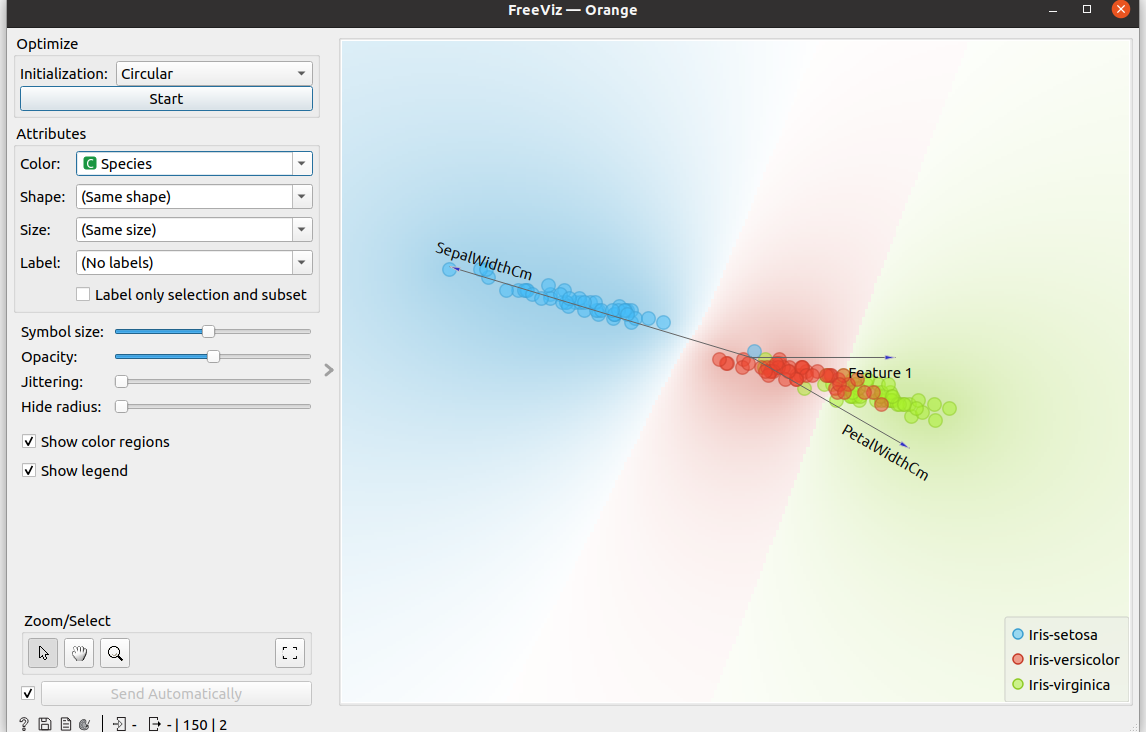




c. Show linear projection



d. Show FreeViz



3. Differentiate in between free software, Open source software and proprietary software with respect to its properties.

**FreeSoftware:  
 :**  
 “Free software” means software that respects users’ freedom and community. Roughly, it means that the users have the freedom to run, copy, distribute, study, change and improve the software. The term “free software” is sometimes misunderstood— it has nothing to do with price. It is about freedom. While open source is a development philosophy that is more business oriented, free software is a social and moral philosophy.

**Open Source Software :**

Open source software is a computer software whose source code is available openly on the internet and programmers can modify it to add new features and capabilities without any cost. Here the software is developed and tested through open collaboration. This software is managed by an open source community of developers. It provides community support as well as commercial support if available for maintenance. We can get it for free of cost. This software also sometimes comes with a license and sometimes does not. Free software is a social movement while open source is a development methodology. That’s why the term open source is more palatable to the corporate world because it places less emphasis on freedom.

**Proprietary Software:**

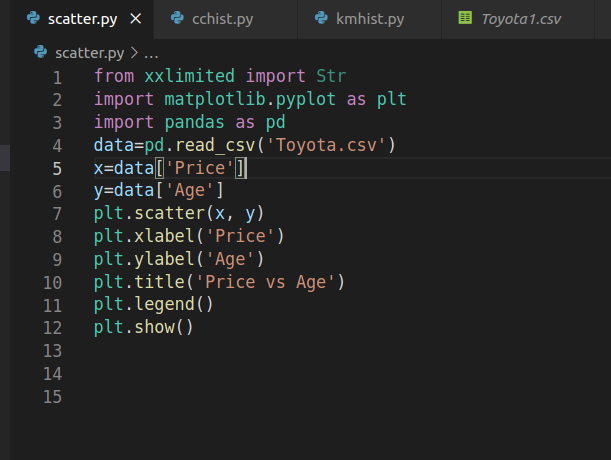
Proprietary software is a computer software where the source codes are not publicly not available ; only the company which has created it can modify it. Here the software is developed and tested by the individual or organization by which it is owned, not by the public. This software is managed by a closed team of individuals or groups that developed it. We have to pay to get this software and its commercial support if available for maintenance. The company gives a valid and authenticated license to the users to use this software.

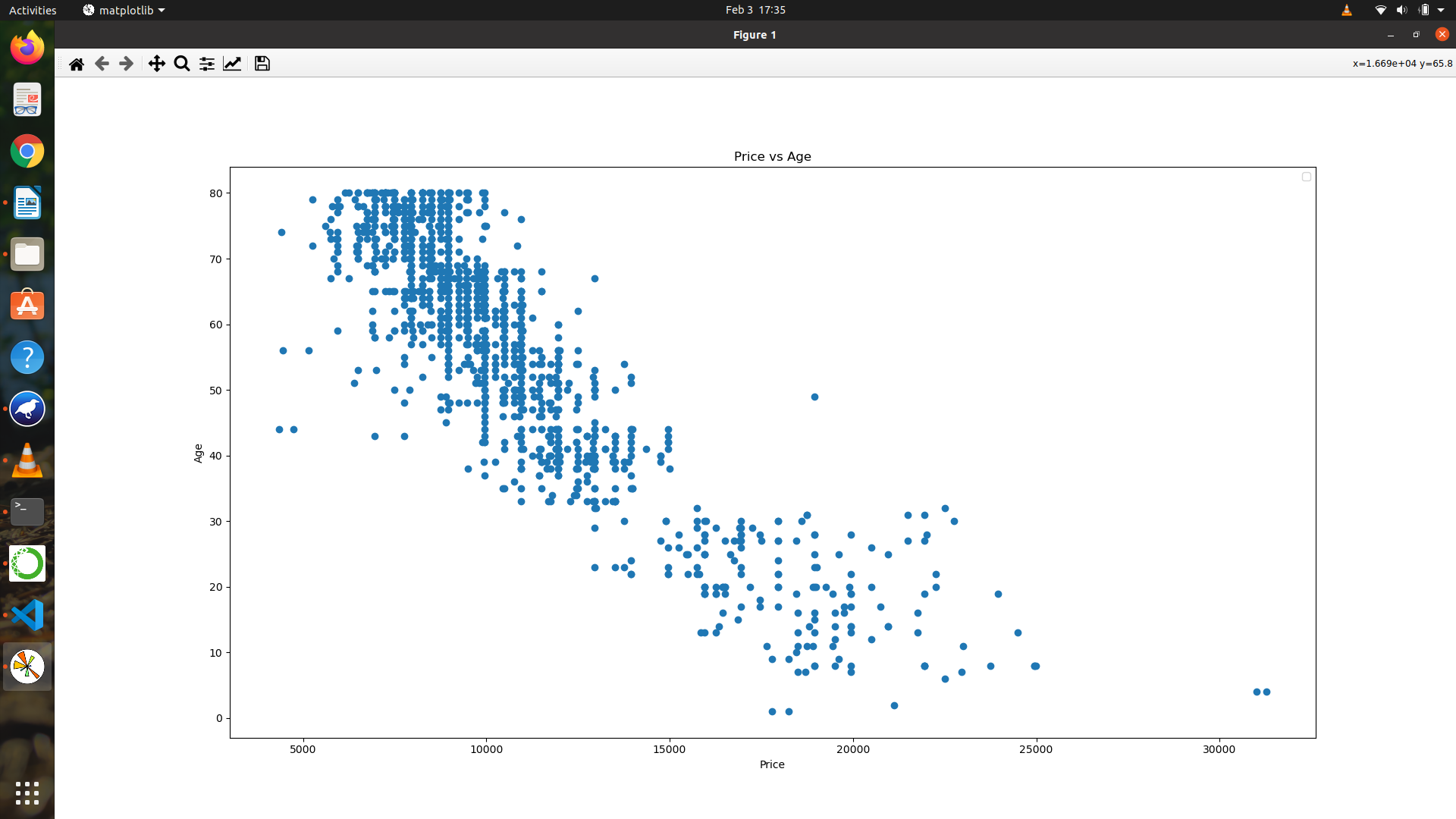
4. Using Anaconda Python create Histogram, Scatter plot and Bar plot for the dataset

given below.

Dataset- <https://drive.google.com/file/d/1i11BZFe8Xj9kNq7eeE9KOa_Iz1KhEdXJ/view>

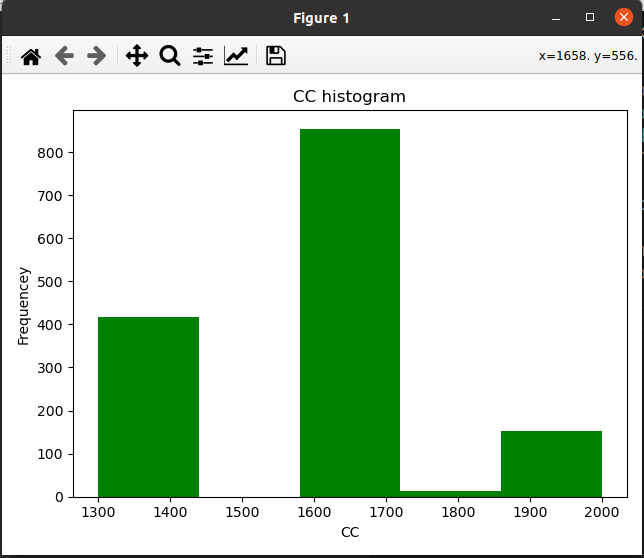
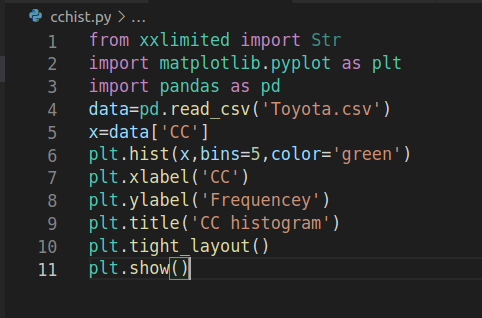
a. Scatter plot- Scatter plot of Price Vs Age



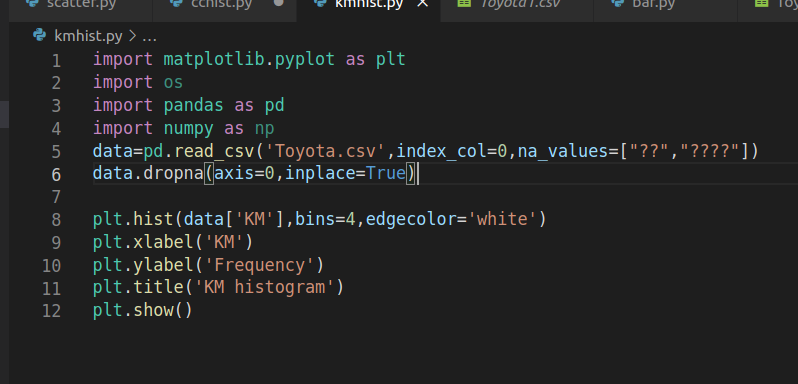


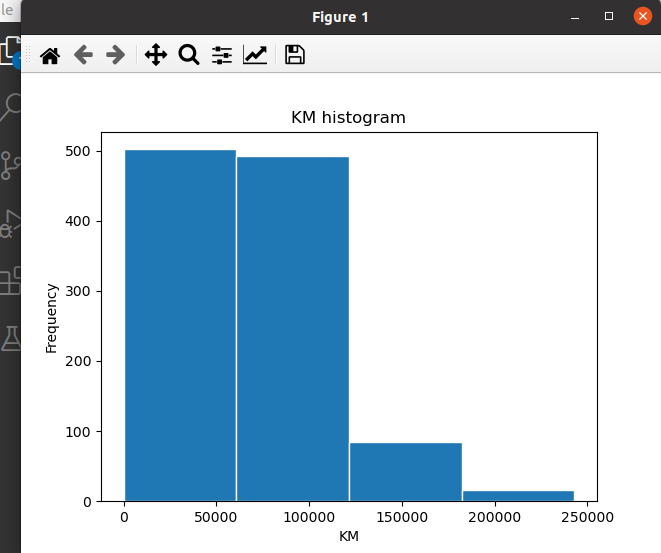
b. Histogram- for Kilometer and CC

For CC:

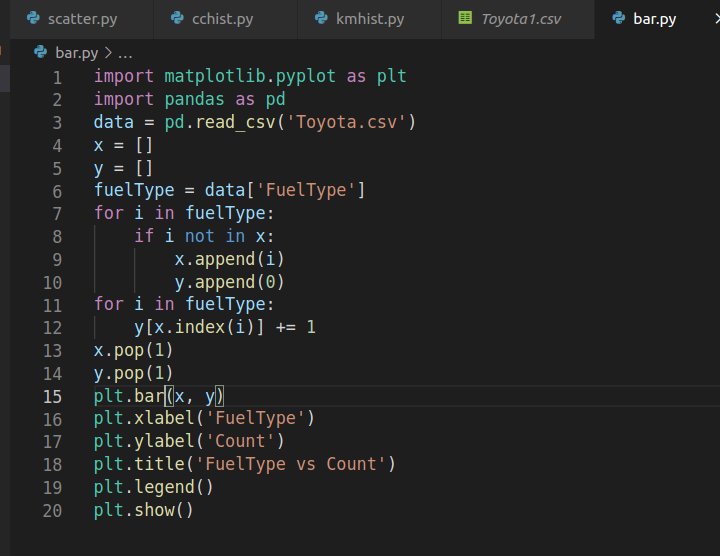


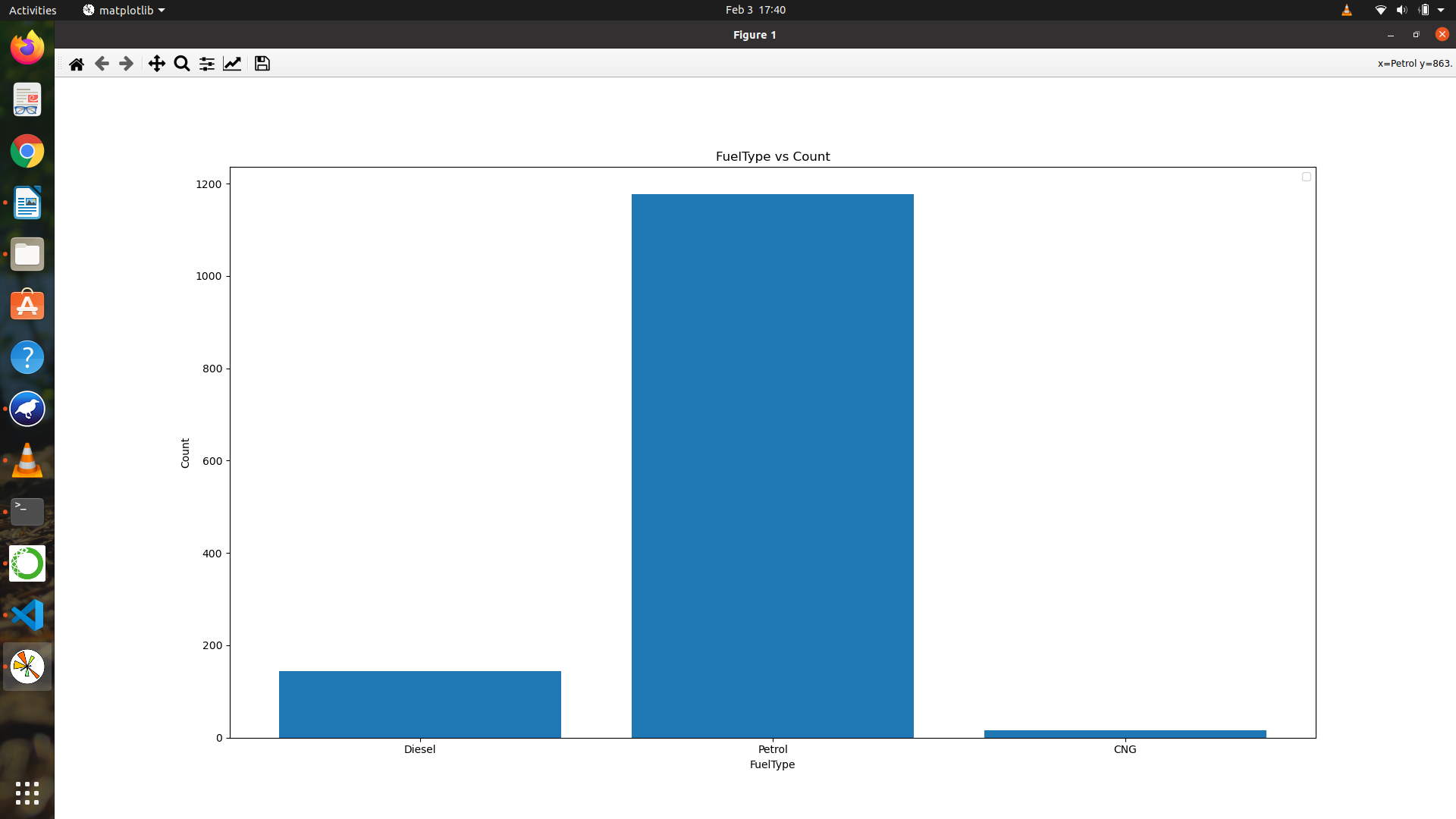
For KM:





c. Bar plot- Bar plot for different fuel types





5. Enlist some examples along with its purpose and properties (at least 10) of FOSS and proprietary software with respect to database.

**FOSS Software :**

a) Mozilla Firefox – Mozilla Firefox is a customizable internet browser and free open source software. It offers thousands of plug-ins that are accessible with a single click of your mouse.

b) VLC Media Player – VLC Media Player is one of the most popular open source software examples that you can use for free. This multimedia player is used for video, media and audio files and it plays discs, webcams, streams and devices.

c) Linux – Linux operating system is most commonly used on desktops. What makes this operating system different from the others is that it costs nothing and it is incredibly customizable.

d) Blender – Blender is a 3D graphics and animation tool that supports motion tracking, simulation, animation, video editing, rendering, modelling and much more

e) GNU Compiler Collection – GNU Compiler Collection is a collection of compilation tools for software development in the C, C++ and other programming languages.

f) Git -Git is an open-source distributed version control system. It is designed to handle minor to major projects with high speed and efficiency.

g) Sql MySQL. Tutorial.- MySQL is a widely used relational database management system (RDBMS). MySQL is free and open-source. MySQL is ideal for both small and large applications.

h) Php- PHP is a server-side language that can be used in conjunction with a database to create dynamic web pages. By the word "dynamic" it allows you to input or query data from a web page. These aren't the only things PHP allows you to do interaction with databases are a key feature of server-side languages i) Open suse- openSUSE Distributions. For desktop, server, and everything in between. Desktop Selection of distributions for desktop use

j) Wordpress- WordPress ( WP, WordPress.org) is a free and open source content management system (CMS) written in PHP and paired with a MySQL or MariaDB database

k) Python- Programming general purpose language

9) Ubuntu OS

**Proprietary Software:**

a) Microsoft Windows – Windows, is a group of several proprietary graphical operating system families, all of which are developed and marketed by Microsoft. b) Adobe Flash Player – Adobe Flash Player is computer software for content created on the Adobe Flash platform. Flash Player is capable of viewing multimedia contents, executing rich Internet applications, and streaming audio and video.

c) iTunes – iTunes is a media player, media library, Internet radio broadcaster, mobile device management utility, and the client app for the iTunes Store, developed by Apple Inc.

d) Google Earth - Google Earth is a computer program that renders a 3D representation of Earth based primarily on satellite imagery.

e) Skype – Skype is a proprietary telecommunications application that specializes in providing VoIP-based video-telephony, videoconferencing and voice calls.

f) Winrar WinRAR- is a powerful archive manager. It can backup your data and reduce the size of email attachments, open and unpack RAR , ZIP and other files downloaded from Internet

g) Microsoft Office -Collaborate for free with online versions of Microsoft Word, PowerPoint, Excel, and OneNote. Save documents, workbooks, and presentations online, in OneDrive.

h) Visual studio - Visual Studio Code is a code editor redefined and optimized for building and debugging modern web and cloud applications. Visual Studio Code is free and available on your favorite platform - Linux, macOS, and Windows.

i) Intel A full-service, turn-key program. Worldwide Pre-Packaged or Custom Bundles.

j) Adobe Adobe Acrobat Reader-The best PDF viewer just got better. View, sign, collaborate on and annotate PDF files with our free Acrobat Reader software.