# Sardar Patel Institute of Technology

# (Information Technology Department)


## ADBMS Lab

## Experiment 7

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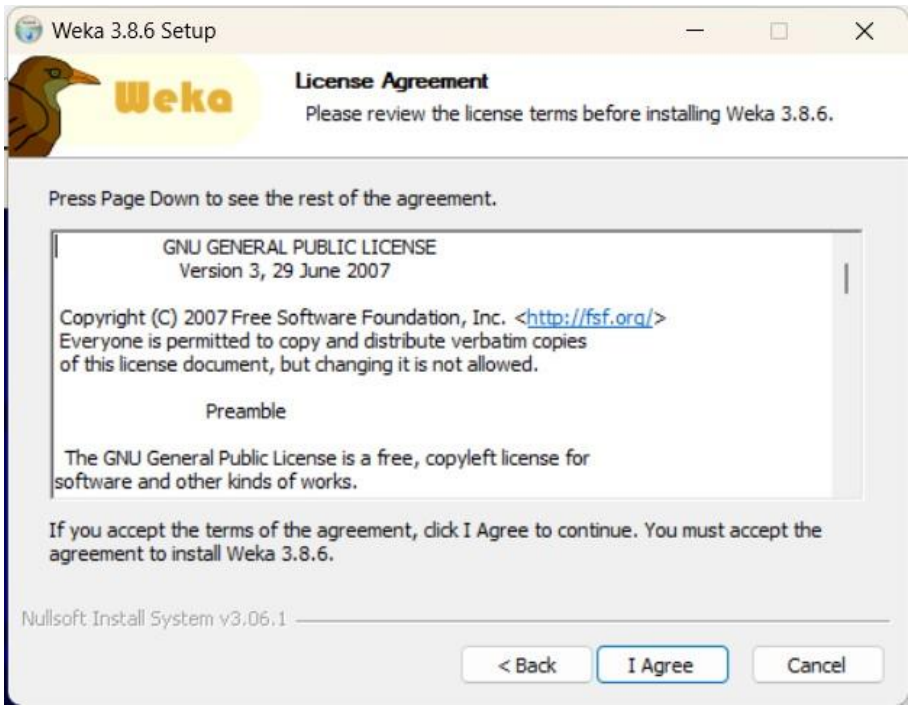
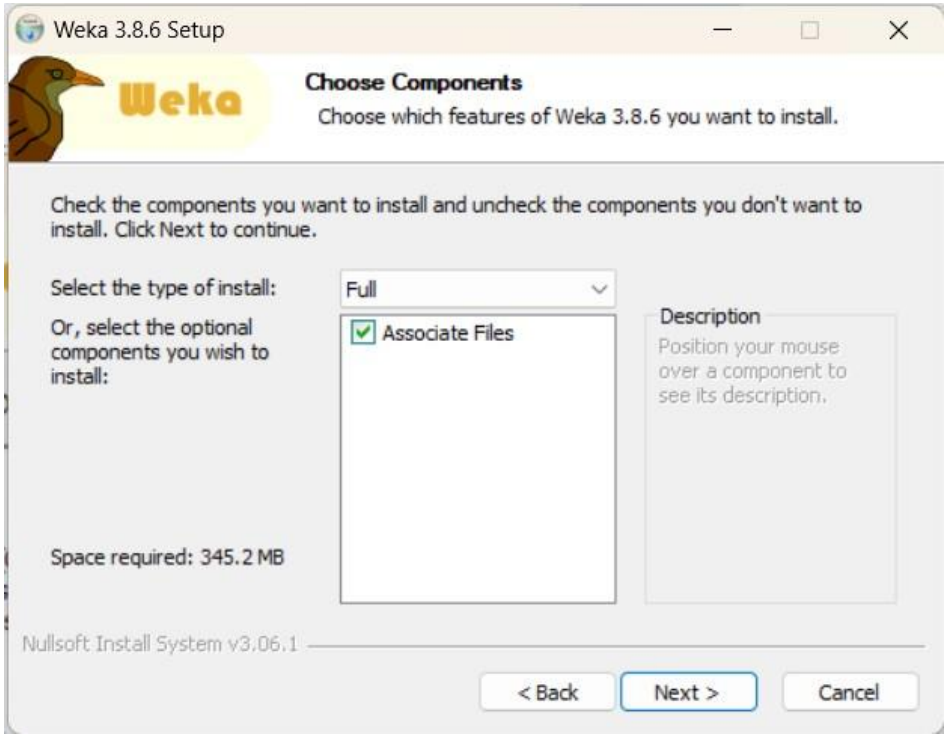
**Class:** TE (IT)

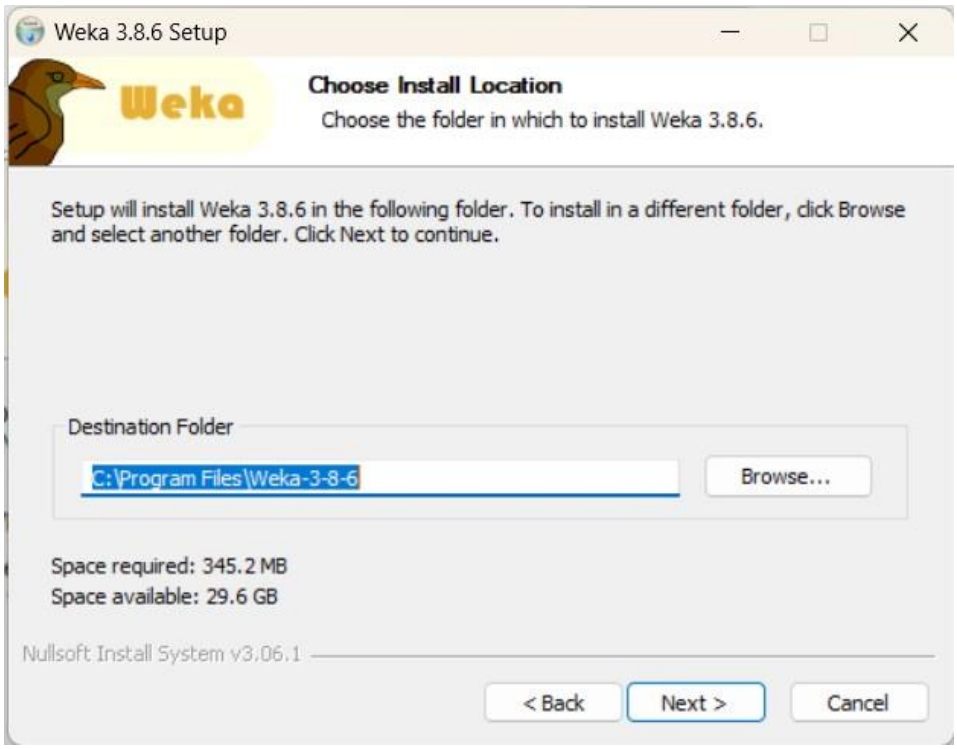
**UID:** 2020400026

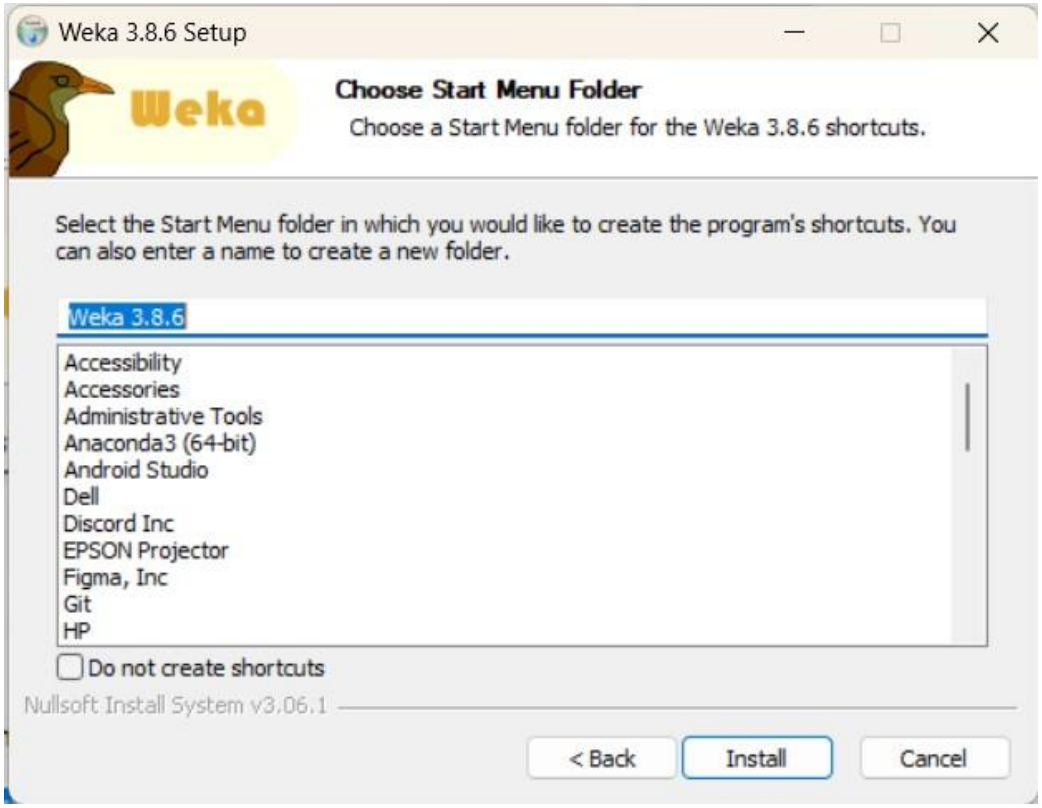
# Batch : B

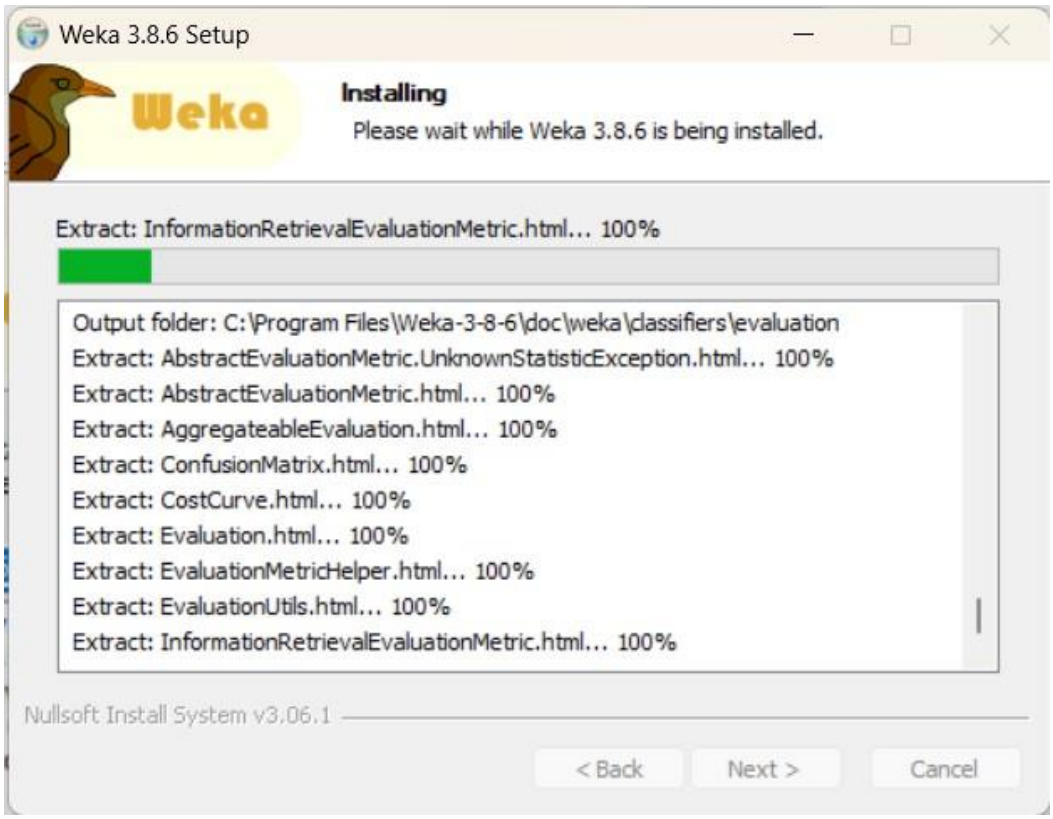
## Aim: Build a Data Warehouse and Explore WEKA Implementation

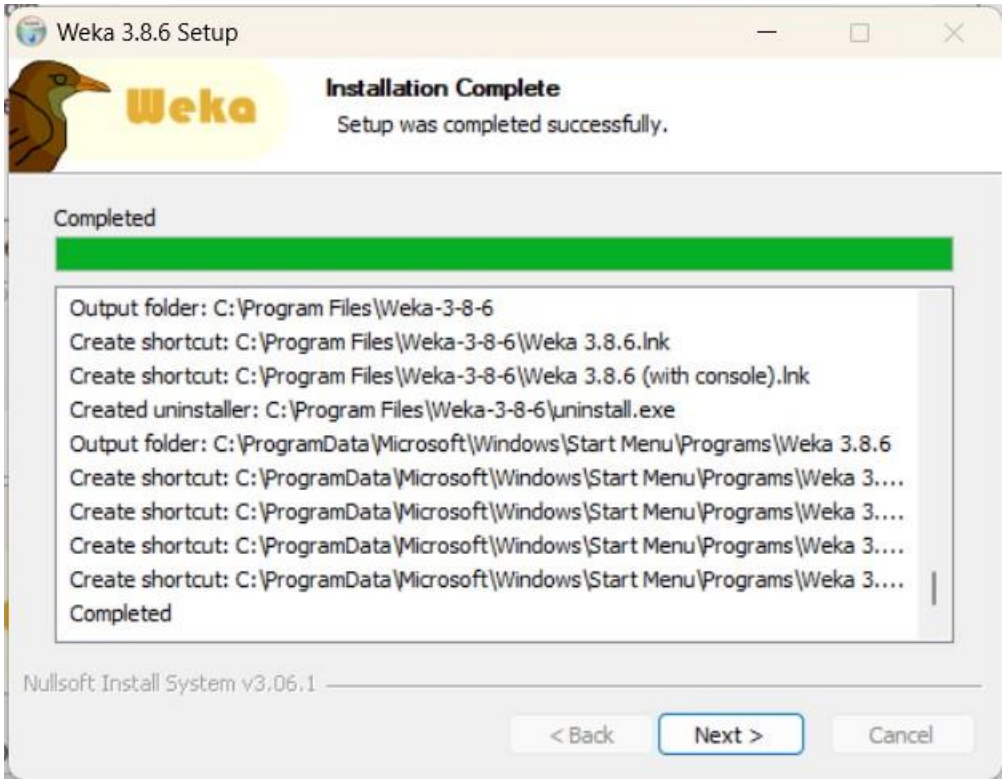

Weka 3.8.6 Setup
Weka
License Agreement
Please review the license terms before installing Weka 3.8.6.
Press Page Down to see the rest of the agreement.
GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007
Copyright (C) 2007 Free Software Foundation, Inc. <http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
Preamble
The GNU General Public License is a free, copyleft license for
software and other kinds of works.
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install Weka 3.8.6.
Nullsoft Install System v3.06.1
< Back
I Agree
Cancel

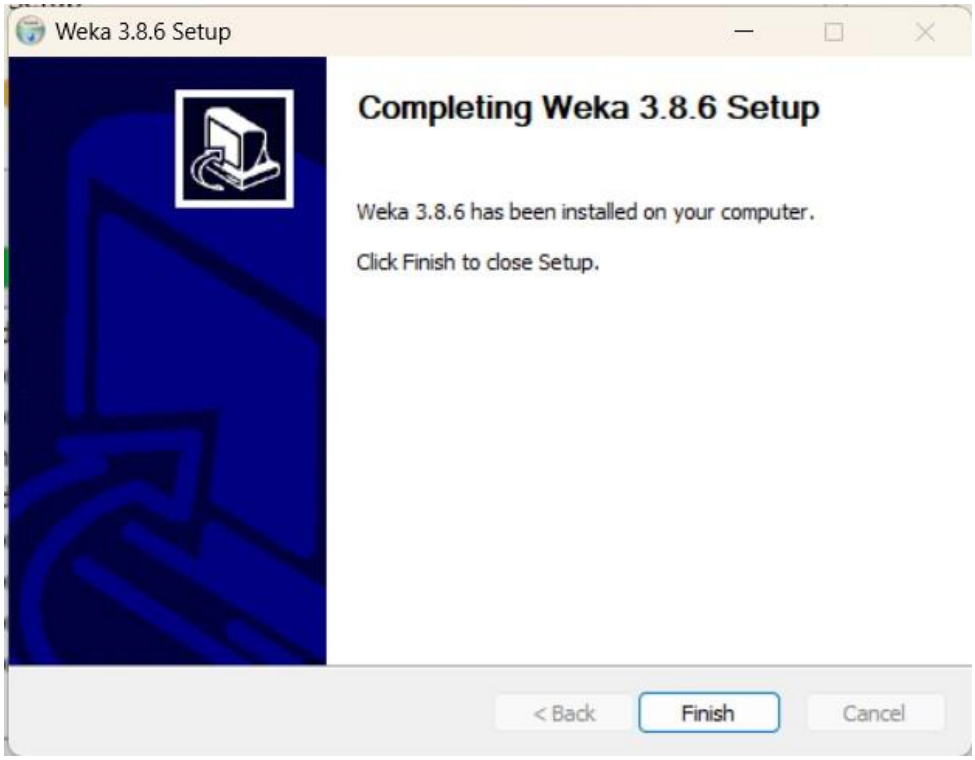

Weka 3.8.6 Setup
Weka
Choose Components
Choose which features of Weka 3.8.6 you want to install.
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.
Select the type of install:
Full
Or, select the optional components you wish to install:
Associate Files
Description
Position your mouse over a component to see its description.
Space required: 345.2 MB
Nullsoft Install System v3.06.1
< Back
Next >
Cancel


Weka 3.8.6 Setup
Weka
Choose Install Location
Choose the folder in which to install Weka 3.8.6.
Setup will install Weka 3.8.6 in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.
Destination Folder
C:\Program Files\Weka-3-8-6
Browse...
Space required: 345.2 MB
Space available: 29.6 GB
Nullsoft Install System v3.06.1
< Back
Next >
Cancel

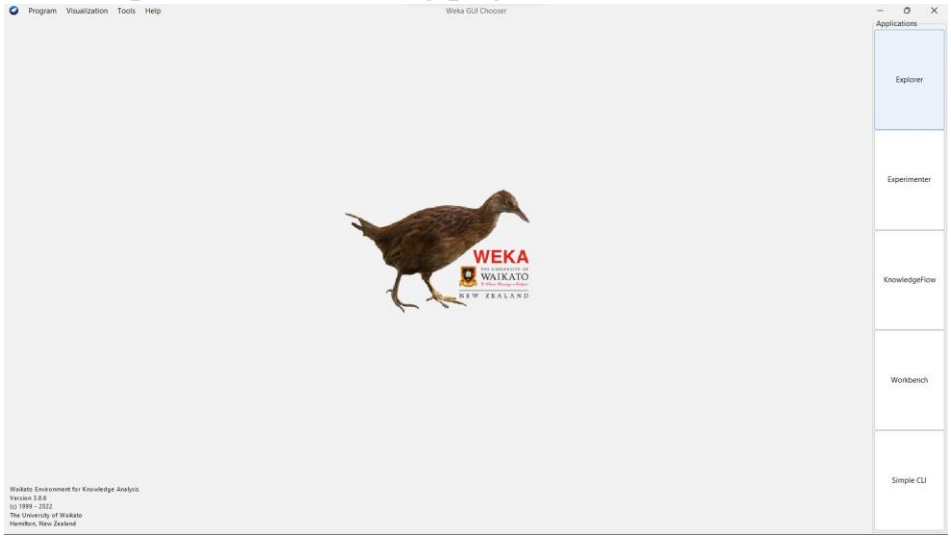

Weka 3.8.6 Setup
Weka
Choose Start Menu Folder
Choose a Start Menu folder for the Weka 3.8.6 shortcuts.
Select the Start Menu folder in which you would like to create the program's shortcuts. You can also enter a name to create a new folder.
Weka 3.8.6
Accessibility
Accessories
Administrative Tools
Anaconda3 (64-bit)
Android Studio
Dell
Discord Inc
EPSON Projector
Figma, Inc
Git
HP
Do not create shortcuts
Nullsoft Install System v3.06.1
< Back
Install
Cancel


Weka 3.8.6 Setup
Weka
Installing
Please wait while Weka 3.8.6 is being installed.
Extract: InformationRetrievalEvaluationMetric.html... 100%
Output folder: C:\Program Files\Weka-3-8-6\doc\weka\classifiers\evaluation
Extract: AbstractEvaluationMetric.UnknownStatisticException.html... 100%
Extract: AbstractEvaluationMetric.html... 100%
Extract: AggregateableEvaluation.html... 100%
Extract: ConfusionMatrix.html... 100%
Extract: CostCurve.html... 100%
Extract: Evaluation.html... 100%
Extract: EvaluationMetricHelper.html... 100%
Extract: EvaluationUtils.html... 100%
Extract: InformationRetrievalEvaluationMetric.html... 100%
Nullsoft Install System v3.06.1
< Back
Next >
Cancel

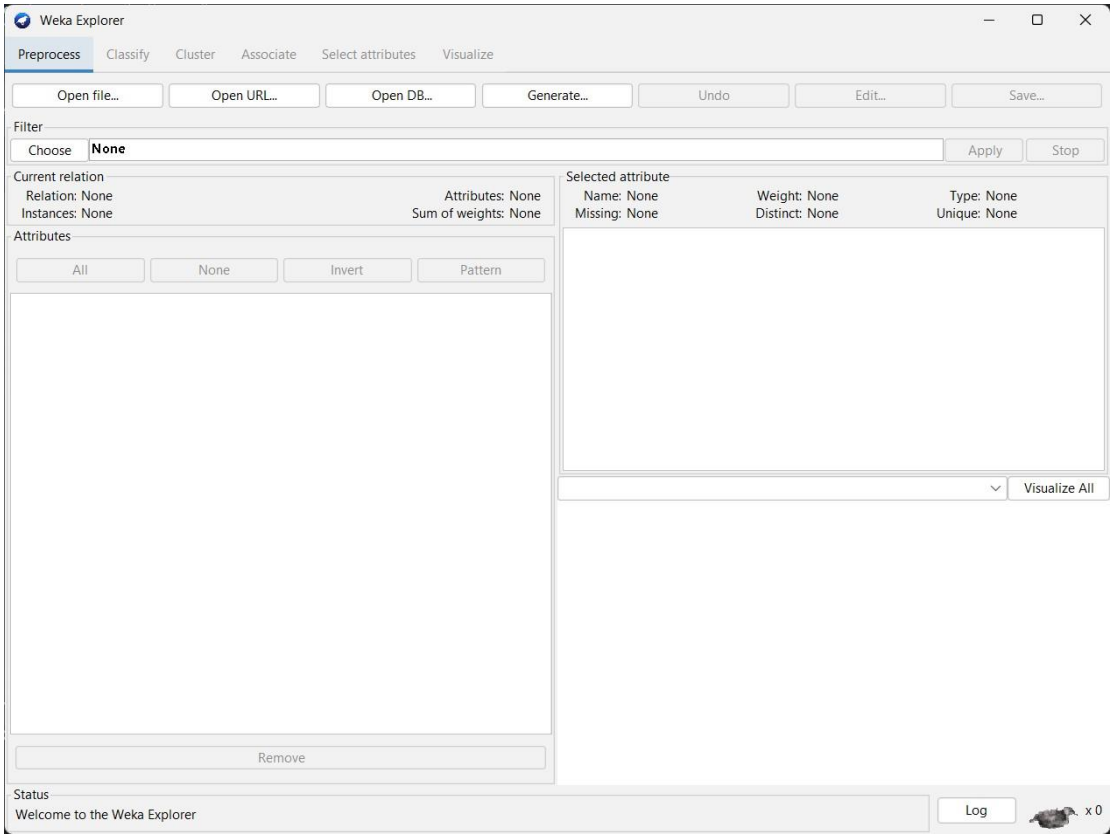

Weka 3.8.6 Setup
Weka
Installation Complete
Setup was completed successfully.
Completed
Output folder: C:\Program Files\Weka-3-8-6
Create shortcut: C:\Program Files\Weka-3-8-6\Weka 3.8.6.lnk
Create shortcut: C:\Program Files\Weka-3-8-6\Weka 3.8.6 (with console).lnk
Created uninstaller: C:\Program Files\Weka-3-8-6\uninstall.exe
Output folder: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Weka 3.8.6
Create shortcut: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Weka 3....
Create shortcut: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Weka 3....
Create shortcut: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Weka 3....
Create shortcut: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Weka 3....
Completed
Nullsoft Install System v3.06.1
< Back
Next >
Cancel



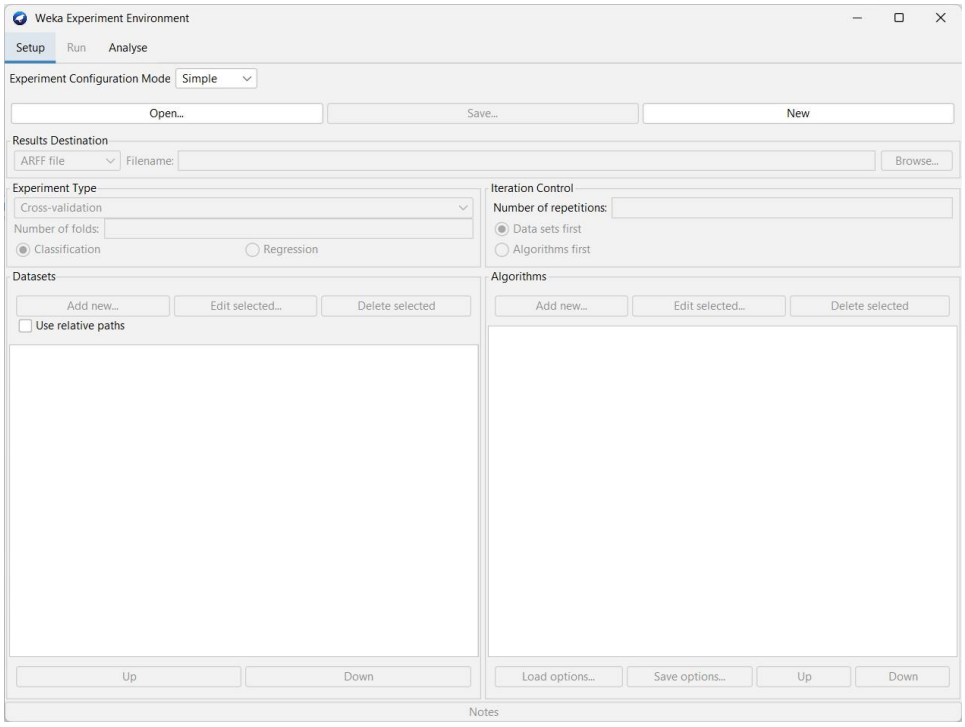

**Weka Opened: The landing page of Weka software**



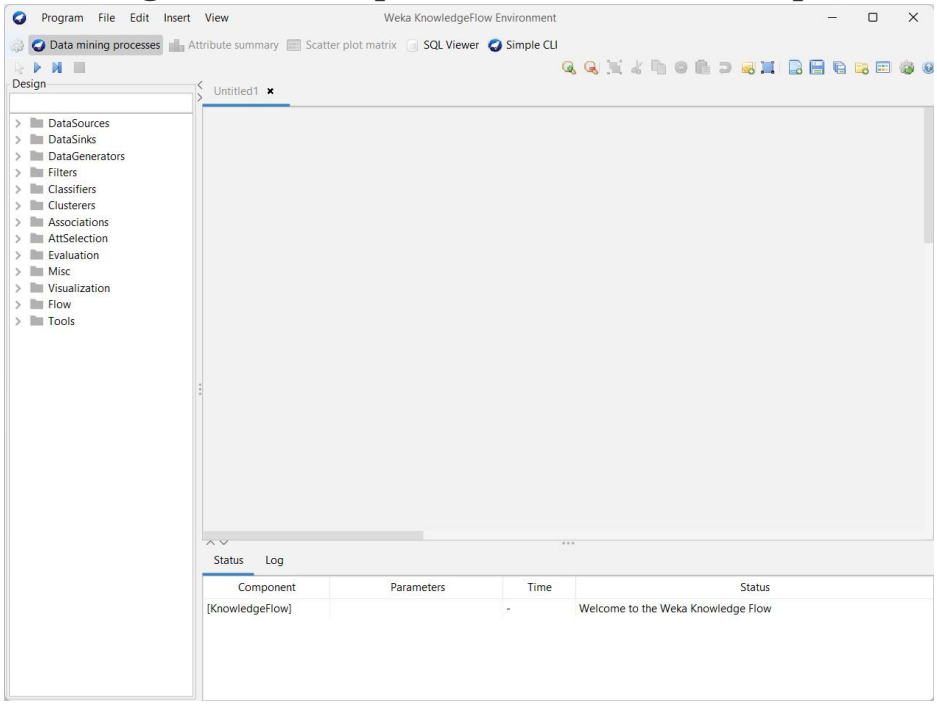

**Explorer tab: It allows datasets and the predictions of Classifiers and Clusterers to be visualized in two dimensions.**



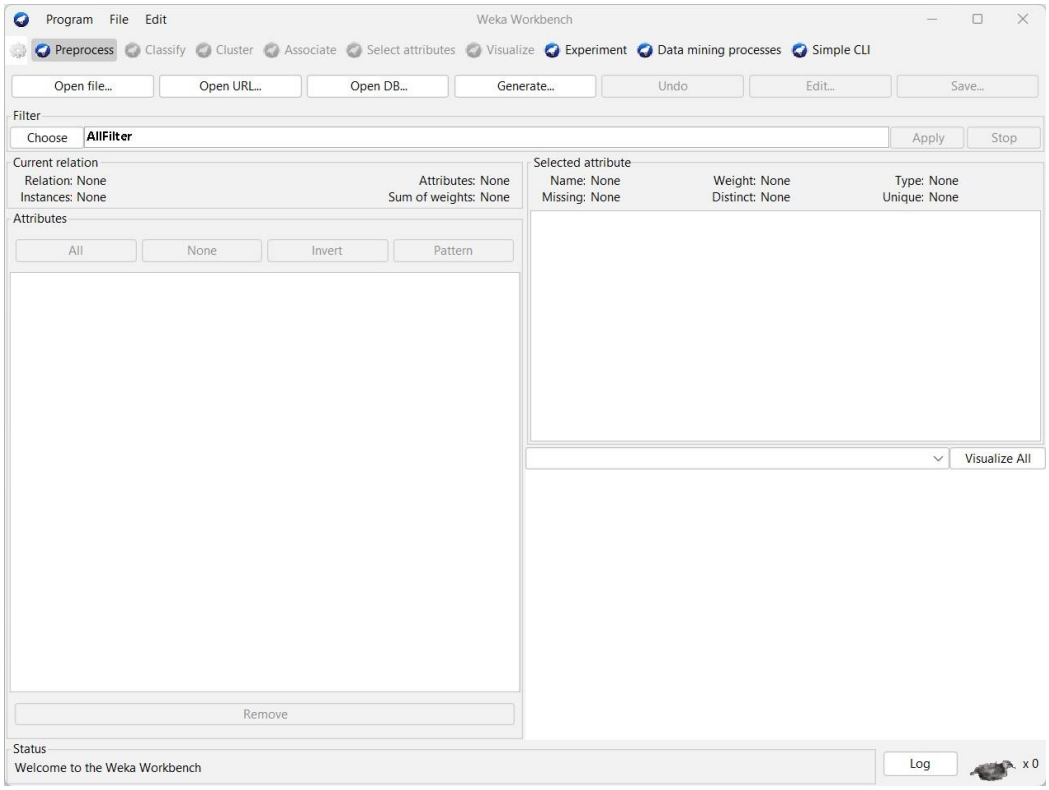

**Experimenter tab: The experimenter configures the test options for you with sensible defaults.**



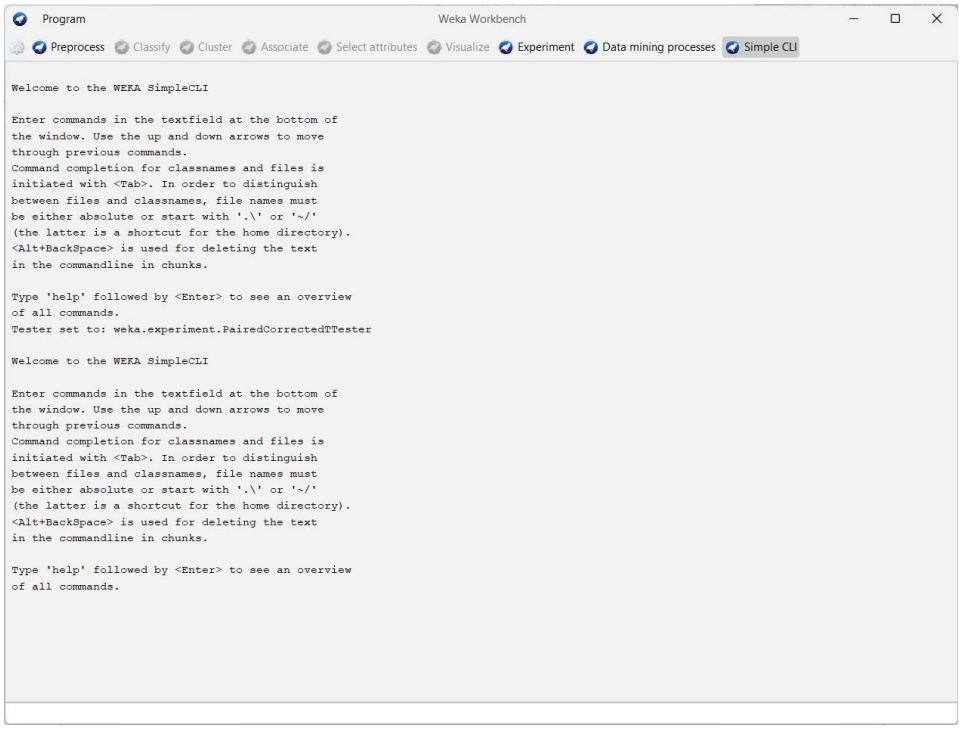

**KnowledgeFlow tab: It presents a "data-flow" inspired interface to Weka**



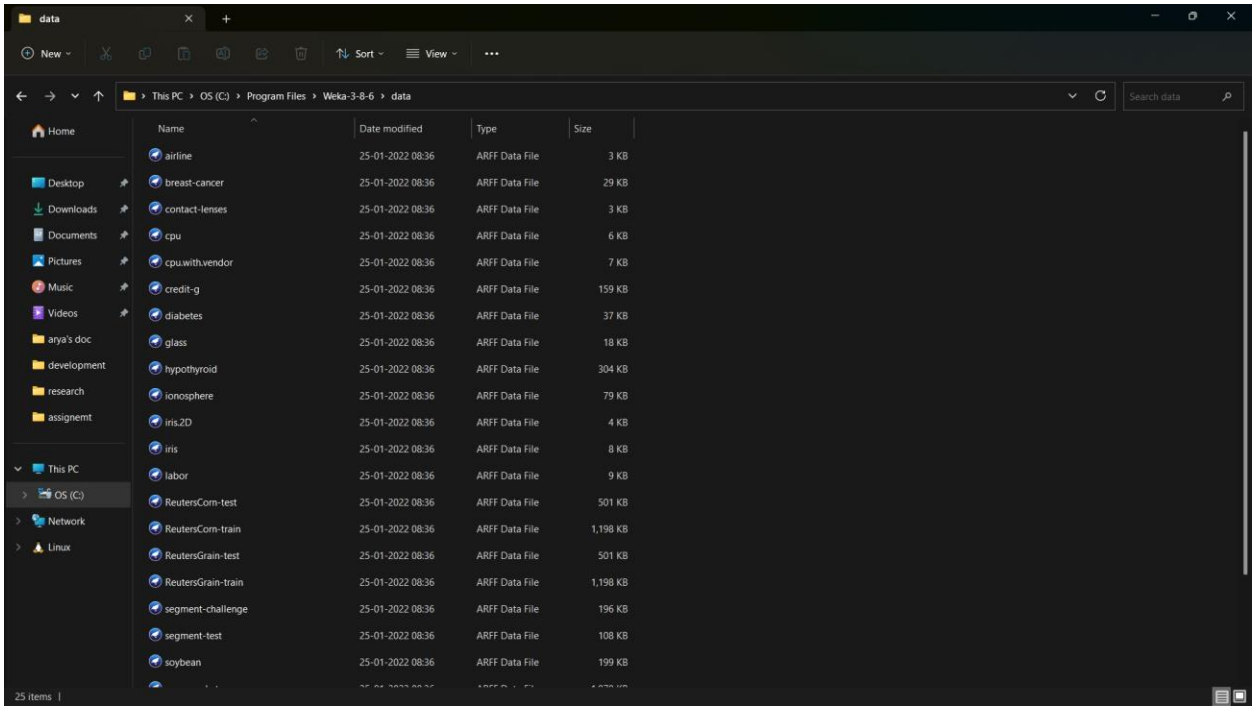

**Workbench tab It contains a collection of data pre-processing tools and machine learning algorithms wrapped in an easy-to-use graphical interface.**




# Simple CLI




# WEKA DATASETS:

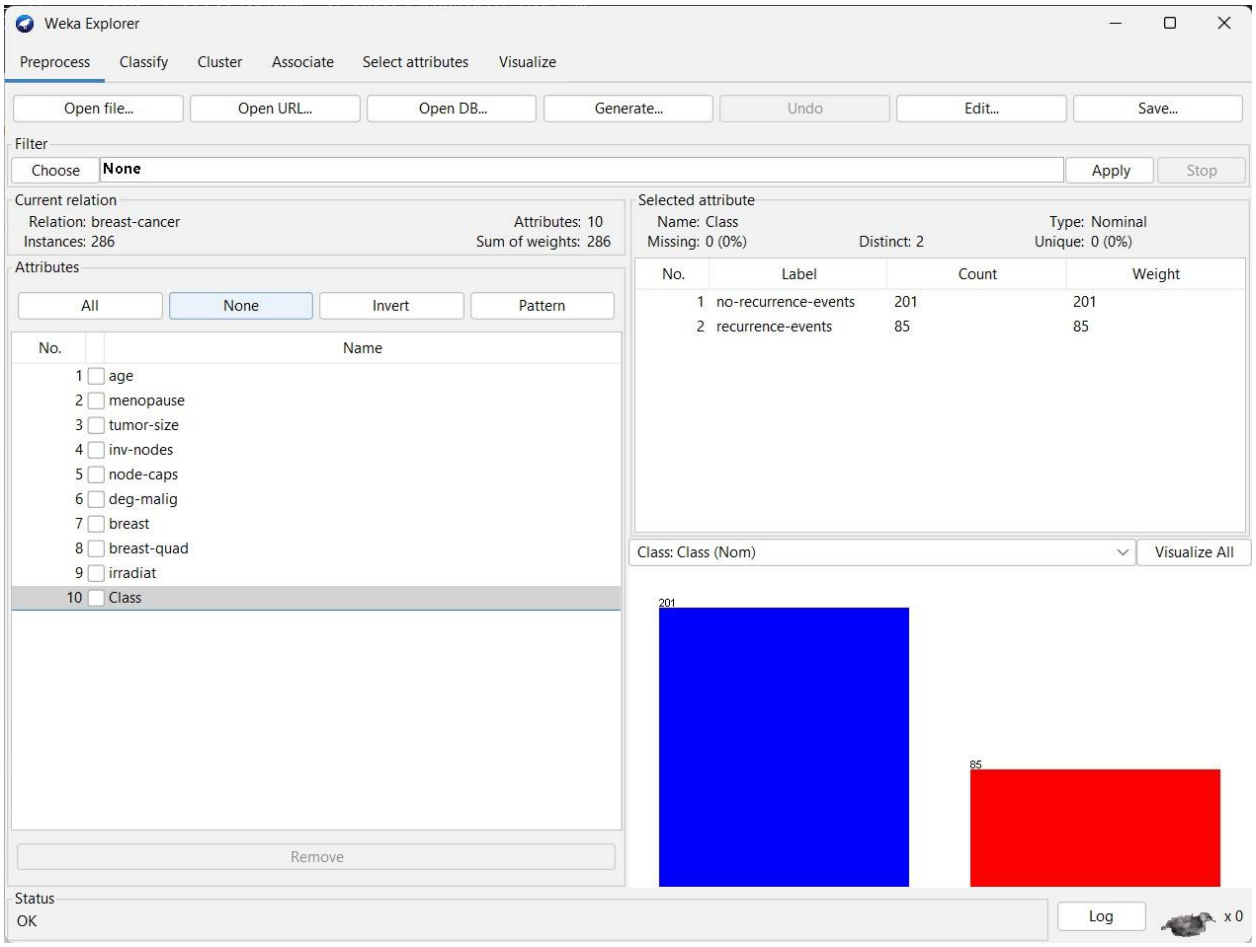



## Choosing dataset - We have chosen a breast cancer.arff dataset which contains 3 attributes with yes or no questions and 7 continuous regression matrix.

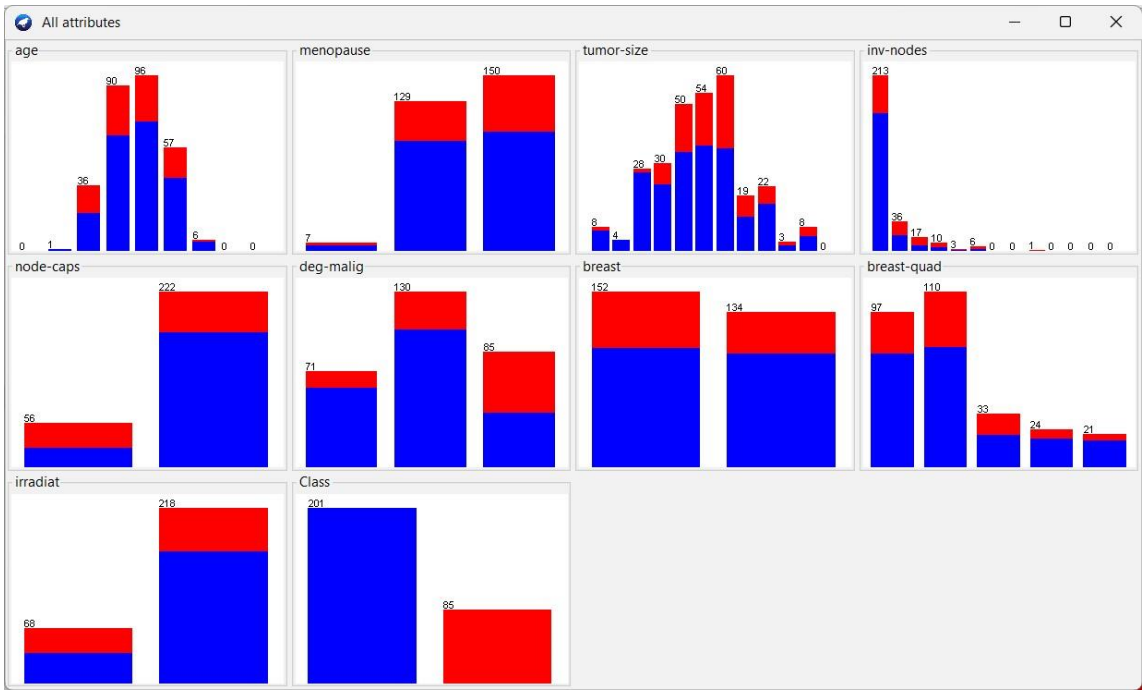
The breast cancer dataset contains ten attributes that describe various characteristics of breast cancer patients and their tumors. Here's a brief description of each attribute:

1. age: The age of the patient at the time of diagnosis.
2. menopause: The menopausal status of the patient at the time of diagnosis.
3. tumor-size: The size of the tumor, measured in centimeters.
4. inv-nodes: The number of axillary lymph nodes involved in the cancer.
5. node-caps: Whether or not the cancer has spread to the lymph node capsule.
6. deg-malig: The degree of malignancy of the tumor, ranging from 1 (low) to 3 (high).
7. breast: The affected breast (left or right).
8. breast-quad: The quadrant of the breast where the tumor is located.
9. irradiat: Whether or not the patient received radiation therapy.
10. Class: The classification of the tumor as benign or malignant.

These attributes provide important information for assessing the severity and treatment options for breast cancer. Age, menopause, and tumor size can provide insights into the progression of the disease, while inv-nodes, node-caps, and deg-malig can help determine the stage and aggressiveness of the cancer. The breast and breast-quad attributes can help locate the tumor, while irradiat can indicate the type of treatment received. Finally, the Class attribute is the target variable that is used to classify the tumor as either benign or malignant.


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Open file...
Open URL...
Open DB...
Generate...
Undo
Edit...
Save...
Filter
Choose
None
Apply
Stop
Current relation
Relation: breast-cancer
Instances: 286
Attributes: 10
Sum of weights: 286
Selected attribute
Name: Class
Missing: 0 (0%)
Distinct: 2
Type: Nominal
Unique: 0 (0%)
Attributes
All
None
Invert
Pattern
No. Name
1 age
2 menopause
3 tumor-size
4 inv-nodes
5 node-caps
6 deg-malig
7 breast
8 breast-quad
9 irradiat
10 Class
Remove
No. Label Count Weight
1 no-recurrence-events 201 201
2 recurrence-events 85 85
Class: Class (Nom)
Visualize All
201
85
Status
OK
Log
x 0

## PREPROCESSING DATA:




## Applying apriori algorithm:


## VISUALISING THE DATSET:


**Conclusion: Learned how to use Weka to Visualize and associate the dataset using FilteredAssociator Algo also explored the Cli of Weka.**