# WEKA Procedures - Simplified Guide

## Program 1: Creating a Weather Dataset in WEKA

1. Create Dataset (CSV file)  
 - Open Notepad or any text editor.  
 - Copy the dataset values with headers (outlook, temperature, humidity, windy, play).  
 - Save the file as weather.csv.  
  
2. Open Dataset in WEKA  
 - Open WEKA → Tools → ArffViewer → Open.  
 - Select weather.csv.  
  
3. Save as ARFF Format  
 - In ArffViewer: File → Save As → weather.arff.  
  
4. Load Dataset in Explorer  
 - In WEKA: Explorer → Open File → weather.arff.  
  
5. View and Analyze  
 - Dataset loads with attributes.  
 - Explore statistics and visualization options.

## Program 2: Handling Missing Values in Student Dataset

1. Open Dataset  
 - Load the student dataset with missing values in ArffViewer.  
 - Save it as student.arff.  
  
2. Check for Missing Data (Numeric/All Attributes)  
 - Go to Preprocess → Filter → Unsupervised → Attributes → ReplaceMissingValues.  
 - Apply the filter → Missing values should become 0%.  
 - Verify by clicking Edit.  
  
3. Check for Missing Data (String Attributes)  
 - Select string attributes (if any).  
 - Apply filter: Preprocess → Filter → Unsupervised → Attributes → ReplaceMissingWithUserConstant.  
 - Enter a default value (e.g., "unknown").  
  
4. Verify the Data  
 - Open Edit again to confirm all missing values are 0%.

## Program 3: Knowledge Flow with Weather Dataset

Part 1: Creating Weather Dataset (ARFF File)  
1. Open Notepad and type the dataset:  
 @relation weather  
 @attribute outlook {sunny,rainy,overcast}  
 @attribute temperature numeric  
 @attribute humidity numeric  
 @attribute windy {true,false}  
 @attribute play {yes,no}  
 @data  
 sunny,85.0,85.0,false,no  
 overcast,80.0,90.0,true,no  
 sunny,83.0,86.0,false,yes  
 rainy,70.0,86.0,false,yes  
 rainy,68.0,80.0,false,yes  
 rainy,65.0,70.0,true,no  
 overcast,64.0,65.0,false,yes  
 sunny,72.0,95.0,true,no  
 sunny,69.0,70.0,false,yes  
 rainy,75.0,80.0,false,yes  
  
2. Save the file as weather.arff.  
3. Open Weka → Explorer → Open File → select weather.arff.  
4. Click Edit to view the Weather Table.  
  
Part 2: Knowledge Flow Procedure  
1. Open Weka → Knowledge Flow.  
2. Add components:  
 - Data Source → Arff Loader  
 - Filters → Attribute Selection, Normalize  
 - Data Sinks → Arff Saver  
3. Configure Arff Loader → load weather.arff.  
4. Connect components:  
 - Arff Loader → Attribute Selection  
 - Attribute Selection → Normalize  
 - Normalize → Arff Saver  
5. Configure Attribute Selection → choose best attributes.  
6. Configure Arff Saver → set path and filename (e.g., a.arff).  
7. Start Loading from Arff Loader.  
8. Check output file (a.arff) in saved location.  
9. Open a.arff in Weka or Excel.