**Experiment 14: Installation and Basic Usage of WEKA Tool**

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**Aim:**

To install and configure the **WEKA tool**, load a dataset, explore available algorithms, and perform a **simple classification task** to verify successful installation.

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**Theory:**

- **WEKA** is an open-source tool for **data mining and machine learning**.
- Provides **Explorer, Experimenter, KnowledgeFlow** interfaces.
- Supports **classification, clustering, association rules, and pre-processing**.
- Verifying installation ensures the tool is ready for **lab experiments**.

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**Procedure:**

**Step 1: Download and Install WEKA**

1. Open browser and go to WEKA Download Page.
2. Download the **latest stable version** for your operating system (Windows/Mac/Linux).
3. Run the **installer file** and follow instructions:
    - Accept license agreement
    - Choose installation location
    - Complete installation

**Step 2: Launch WEKA**

1. Open the installed WEKA application.
2. The **WEKA GUI Chooser** window appears with options: Explorer, Experimenter, KnowledgeFlow.

**Step 3: Load a Dataset**

1. Click **Explorer → Open File**.
2. Select a dataset (e.g., **iris.arff**).
3. Dataset attributes and instances appear in the Preprocess tab.

**Step 4: Explore Algorithms**

1. Go to **Classify tab → Classifier**.
2. Browse categories:
    - Trees (e.g., J48)

- Bayes (e.g., NaiveBayes)
- Lazy (e.g., k-NN / IBk)

**Step 5: Perform Simple Classification**

1. Select **J48** classifier.
2. Click **Start**.
3. Observe the **decision tree output**, **accuracy**, and **confusion matrix**.

**Step 6: Verify Installation**

- Successful dataset load, algorithm execution, and metric display confirm **WEKA is installed and working correctly**.

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**Result (Sample / Expected):**

- Dataset loaded successfully.
- Classifier executed successfully.
- Accuracy example: 97%
- Confusion matrix displayed
- WEKA installation verified.

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**Conclusion:**

- WEKA installed and configured successfully on the system.
- Dataset can be loaded, algorithms explored, and classification performed.
- Tool ready for **data mining experiments and learning tasks**.