**C** MultiServer main(String[] args): void © ServerOneClient socket: Socket in: ObjectInputStream out: ObjectOutputStream clustering shouldClose: boolean ServerOneClient(Socket s) **I** Serializable run(): void handleGUIClient(): void handleCLIClient(): void loadTableFromCLIClient(List<String> tableStrings): String handleLoadRequest(String table, String fileName): void handleCalculateRequest(String table, int depth, int distanceInt, boolean isCLI, boolean save, String fileName): void retrieveTableStrings(): List<String> generateJsonFromTableStrings(List<String> tableStrings): String C HierachicalClusterMiner shared Dendrogram dendrogram String dataChecksum **C** Request HierachicalClusterMiner(int depth) load(String filename): HierachicalClusterMiner • loadFromFile(FileInputStream inFile): HierachicalClusterMiner • getHeader(): String save(String fileName): void getData(): Map<String, Object> mine(Data data, ClusterDistance distance): void • validateData(Data data): boolean toString(): String toString(Data data): String **C** Dendrogram exceptions \ ClusterSet[] tree Dendrogram(int depth) X InvalidSizeException X InvalidDepthException X DataNotMatchingException • setClusterSet(ClusterSet c, int level): void getClusterSet(int level): ClusterSet getDepth(): int toString(): String toString(Data data): String **C** ClusterSet Cluster[] C □ int lastClusterIndex **I** Iterable **I** Cloneable ClusterSet(int k) uses • add(Cluster c): void getLength(): int • get(int i): Cluster mergeClosestClusters(ClusterDistance distance, Data data): ClusterSet toString(): String • toString(Data data): String uses data KK C Data **C** Cluster □ List<Example> data |distance Set<Integer> clusteredData int numberOfExamples • iterator(): Iterator<Integer> ClusterDistance Data(String tableName) Iterable uses addData(int id): void • getNumberOfExamples(): int getSize(): int • getExample(int exampleIndex): Example • distance(Cluster c1, Cluster c2, Data d): double o clone(): Object generateChecksum(): String mergeCluster(Cluster c): ClustertoString(): String distance(): double[][] toString(): String toString(Data data): String • main(String[] args): void √database \ **C** DbAccess **C** Example String DRIVER\_CLASS\_NAME □ String DBMS List<Double> example exceptions String SERVER **C** TableData Example() String DATABASE **©** SingleLinkDistance **C** AverageLinkDistance X DatabaseConnectionException iterator(): Iterator<Double> X EmptySetException MissingNumberException int PORT TableData(DbAccess db) add(Double v): void ☐ String USER\_ID • distance(Cluster c1, Cluster c2, Data d): double • distance(Cluster c1, Cluster c2, Data d): double getTables(): List<String> get(int index): Double ☐ String PASSWORD getDistinctTransactions(String table): List<Example> getLength(): int Connection conn distance(Example newE): double initConnection(): void toString(): String getConnection(): Connection closeConnection(): void