

**Department of Information Technology** 

#### DATA MINING & CASE TOOLS LAB

#### **Experiment List**

#### **Data Mining Lab**

Week-1: Demonstrate Apriori based Association Rule Mining Week-2: Demonstrate FP –growth based Association Rule Mining

Week-3: Weather classification using WEKA Tool Week-4: Demonstrate K-means based Clustering

Week-5: Demonstrate PAM based Clustering

Week-6: Credit Risk Assessment

**Description:** The business of banks is making loans. Assessing the credit worthiness of an applicant is of crucial importance. You have to develop a system to help a loan officer decide whether the credit of a customer is good, or bad. A bank's business rules regarding loans must consider two opposing factors. On the one hand, a bank wants to make as many loans as possible. Interest on these loans is the banks profit source. On the other hand, a bank cannot afford to make too many bad loans. Too many bad loans could lead to the collapse of the bank. The bank's loan policy must involve a compromise: not too strict, and not too lenient.

#### **Experiment List**

#### Case Tools Lab

<u>Week 1</u>: Installing UML Argo Software and identifying various components in UML..

Week 2: Design and Construct the Class Diagram of

- (i) ATM System.
- (ii) Unified Library Management System.
- (iii) Airport Management System.

Week 3: Design and Construct the Sequence Diagram

- (i) ATM System.
- (ii) Unified Library Management System.
- (iii) Airport Management System.

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#### Week 4: Design and Construct the Collaboration Diagram

- (i) ATM System.
- (ii) Unified Library Management System.
- (iii) Airport Management System.

#### Week 5: Design and Construct the Use case Diagram

- (i) ATM System.
- (ii) Unified Library Management System.
- (iii) Airport Management System.
- (iv)

#### Week 6: Design and Construct the Activity and State Chart Diagram

- (i) ATM System.
- (ii) Unified Library Management System.
- (iii) Airport Management System.

#### Week 7: Design and Construct the Component and Deployment Diagram

- (i) ATM System.
- (ii) Unified Library Management System.
- (iii) Airport Management System.

#### **References -Data Mining Lab:**

- 1. Data Mining- Concepts and Techniques by Jiawei Han, Micheline Kamber and Jian Pei Morgan Kaufmann publishers —-2nd edition
- 2. Introduction to Data Mining Pang-Ning Tan, Michael Steinbach and Vipin Kumar, Pearson education
- 3. The WEKA Workbench Eibe Frank, Mark A. Hall, and Ian H. Witten

#### **References - Case Tools Mining Lab:**

- 1. Grady Booch, James Rumbaugh, Ivar Jacobson : The Unified Modeling Language User Guide, Pearson Education 2nd Edition
- 2. Analysis and Design and Unified Process, Craig Larman, Pearson Education.
- 3. Object Oriented Analysis, Design and implementation, B. Dathan. S. Ramnath, Universities Press.
- 4. <a href="https://argouml.en.softonic.com/">https://argouml.en.softonic.com/</a>

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