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# **(B. Tech.) Semester-VII AY 2023-24**

**DL Lab Assignment No. 06**

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| **Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **PRN No.: \_\_\_\_\_\_\_\_\_\_\_\_** |
| **Date: (Perform) \_\_\_\_\_ & (Submitted)\_\_\_\_\_\_** | **Faculty:** |

**Problem Statement:** To study and implement the simple Neural Network for predicting output (Use dataset of Assignment 1).

**Objectives:**

1. To understand the architecture of ANN.
2. To study & implement ANN.

**Theory:** (describe the following)

* Simple Neural Network (ANN)
* Activation Functions
* Loss Function
* Gradient Descent Algorithm

**Operations to be performed:**

1. Import the required Python libraries
2. Initialize neural network parameters (weights, bias) and define model hyperparameters (number of iterations, learning rate)
3. Train the learning model
4. Plot Loss value vs Epoch
5. Test the model performance

**Program code: (paste your program code)**

**Output: (paste output screen & graphs plotted)**

**FAQs:**

1. Explain Adam Optimizer.
2. Explain RMSProp Optimizer.
3. Explain loss Function used for classification.

**Conclusion:**

The ANN was implemented and performed successfully for predicting output.