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**Department of Computer Science and
Engineering**

ACTIVITY BASED LEARNING REPORT

B.Tech Sem. IV

Branch: CSE

Subject Name: Theory of Automata and Formal Languages

Paper Code: NCS-402

Time: 1 Hrs

Section: IV D

Date: 12/04/2017

- 1. Title :** Formation of human chain for the understanding of PDAs (Role Play)
- 2. Methodology:** In this activity we have represented three problems of DFAs.
 - (a) Generate PDA for the language $\{a^n b^n \text{ where } n \geq 1\}$.
 - (b) Generate PDA for the language $\{w \text{ where } n_a(w) = n_b(w)\}$.
 - (c) Generate PDA for the language $\{a^n b^n c^m \text{ where } n, m \geq 1\}$.
- 3. Procedure for conducting the activity:** We prepared banners for Z_0 , Controller and Epsilon. For these three problems we created three teams, and each team had max five members. I gave 15 minutes to each team to prepare the logic for the problem and plan their activity. Each student in the team decided their roles according to the given problem. At the time of activity, they hold the banners and arranged themselves accordingly. They started playing their roles according to the problem and performed push and pop accordingly, they acted like a real Pushdown Automata solving the problem.
- 4. Result and Analysis:** Students enjoyed this activity session, and learned these complex problems with fun. At the end of the session I asked few question to the students related to the given problems and they gave correct answers.



1. Photograph :





