



COMSATS Institute of Information Technology, Islamabad Campus

Department of Computer Science

Theory of Automata– CSC312

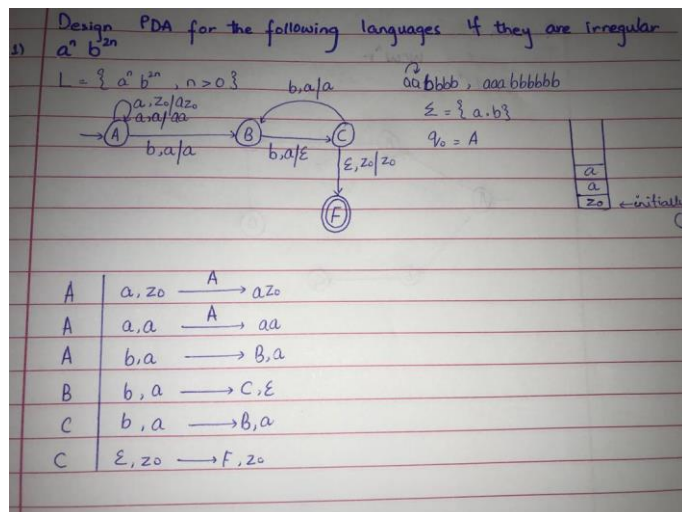
BCS – VI Assignment2

Name: Kulsoom Khurshid

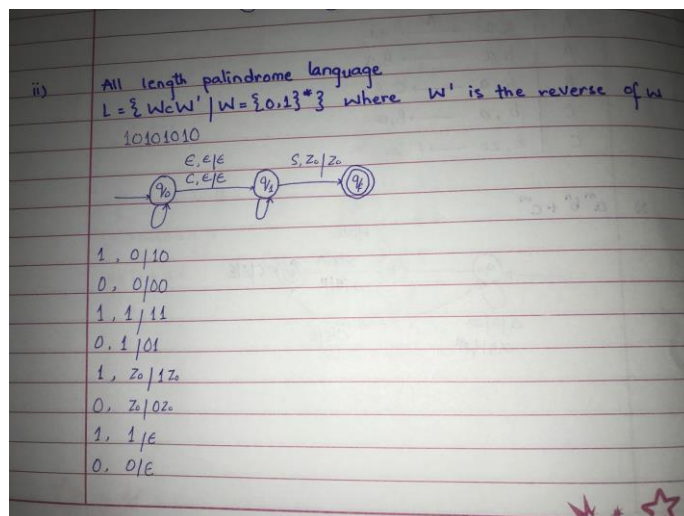
Reg#: SP20-BCS-044

Q1: Design PDA's for the following languages

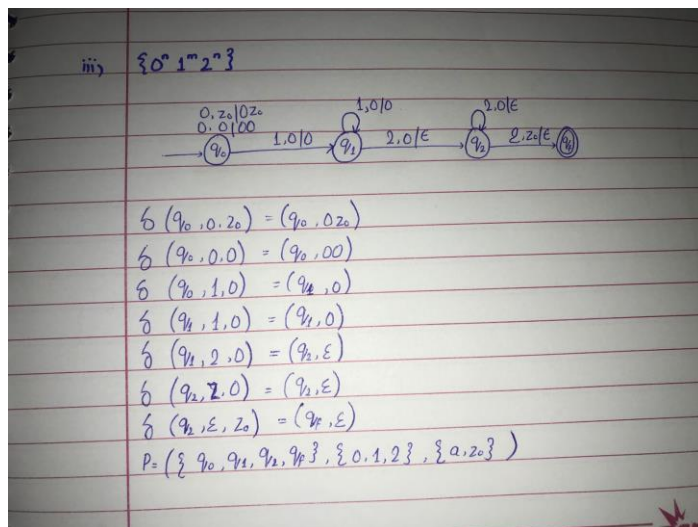
i. $\{a^n b^{2n} \mid n \geq 1\}$



ii. All length palindrome language

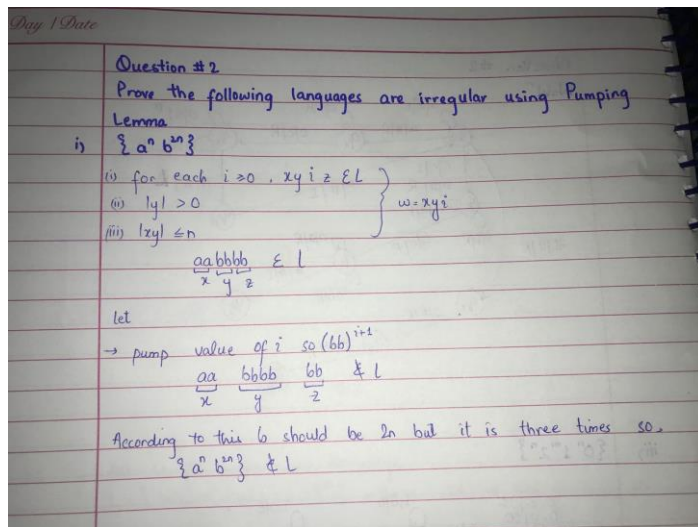


iii. $\{0^n 1^m 2^n \mid n \geq 1, m \geq 1\}$

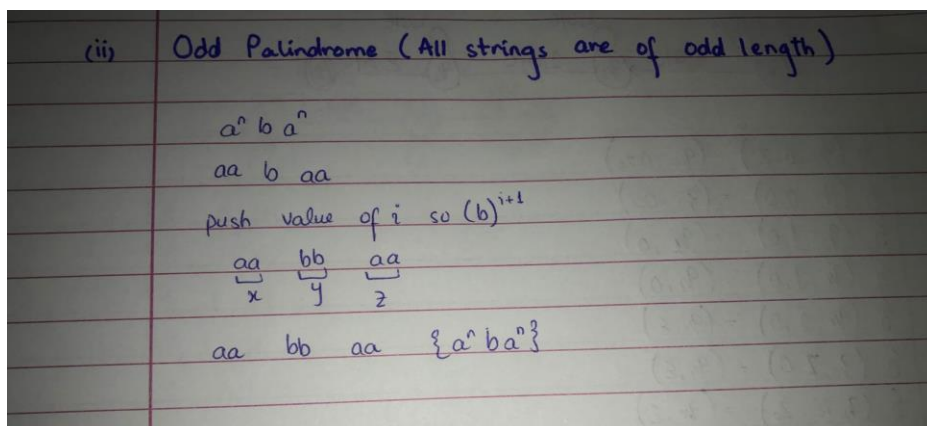


Q2: Prove that following languages are irregular using Pumping Lemma

i. $\{a^n b^{2n}\}$



ii. Odd Palindrome (All strings are of odd length)



Q3: Design Turing machines to recognize the following languages

