University of Dhaka
Institute of Information Technology (IIT)
Bachelor of Science in Software Engineering (BSSE)

Course: **SE312 Theory of Computing (Section: A)**
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Lab 08

1. Write a C program to prove that the following are not regular languages using pumping lemma:

   a. $\{0^n1^n \mid n >= 1\}$

   b. $\{0^n1^{2n} \mid n >= 1\}$

   Your program should take the input as the following format:

   i. 0^n 1^n

   ii. 0^n 1^2n

   Then you need to pick a string w in L and break w into three strings w = xyz such that y is not empty and $|xy| <= n$. Next, you have to generate strings xy^kz for all $k>=0$ by pumping using a function and verify whether the string is also in L using another function.