Homework 2:

Q1:

Given Σ = {a; b} and the language L = {w belongs to ∑ | w starts with ‘a’ followed by at least one ‘b’ (maybe more)}.

1. Create a DFA that accepts L and give its graph and transition table.
2. Run your DFA on four inputs of your choice using the extended transition function.

Q2:

Give DFA that accepting the following language L over the alphabet {0, 1}, The set of all strings with three consecutive zeros (000) (not necessarily at the end).

1. Create a DFA that accepts L and give its graph and transition table.
2. Run your DFA on four inputs of your choice using the extended transition function

Q3:

Design a DFA with ∑ = {0, 1} accepts the strings with an even number of 0's followed by single 1.

1. Create a DFA that accepts L and give its graph and transition table.
2. Run your DFA on three inputs of your choice using the extended transition function

Q4:

Build a DFA that accepts only the word “hello” using Dead State

1. Create a DFA that accepts L and give its graph and transition table.
2. Run your DFA on three inputs of your choice using the extended transition function

Q5:

What is the difference between regular languages and non-regular languages give two examples from each one and explain why they are regular or not.