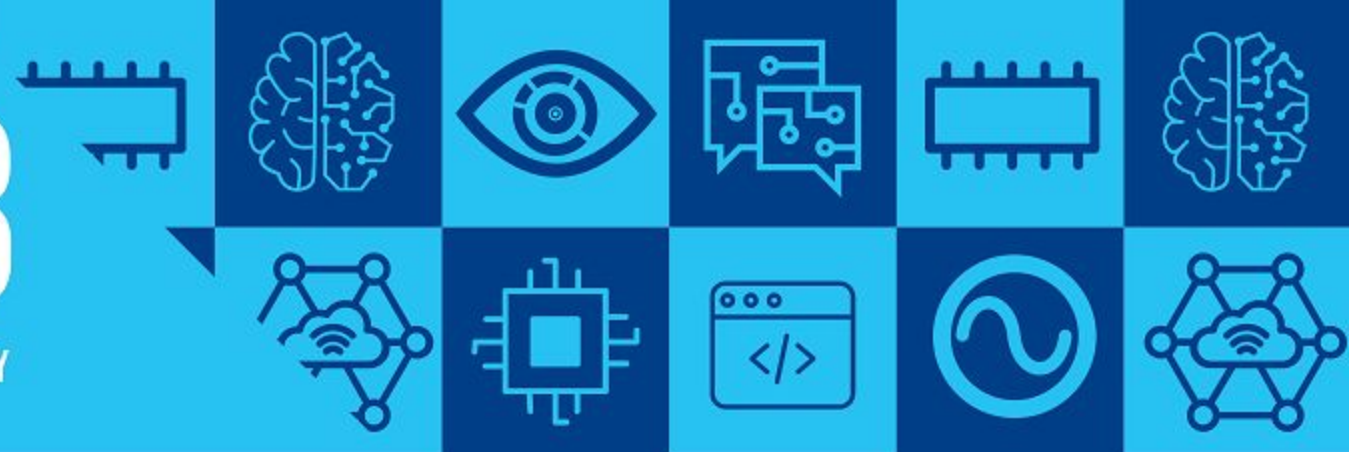




# UDYAM'23

ANNUAL TECHNICAL FEST OF ELECTRONICS ENGINEERING SOCIETY



## ROUND-1

# DigiSim

### Part 1 : Smart EVM Machine

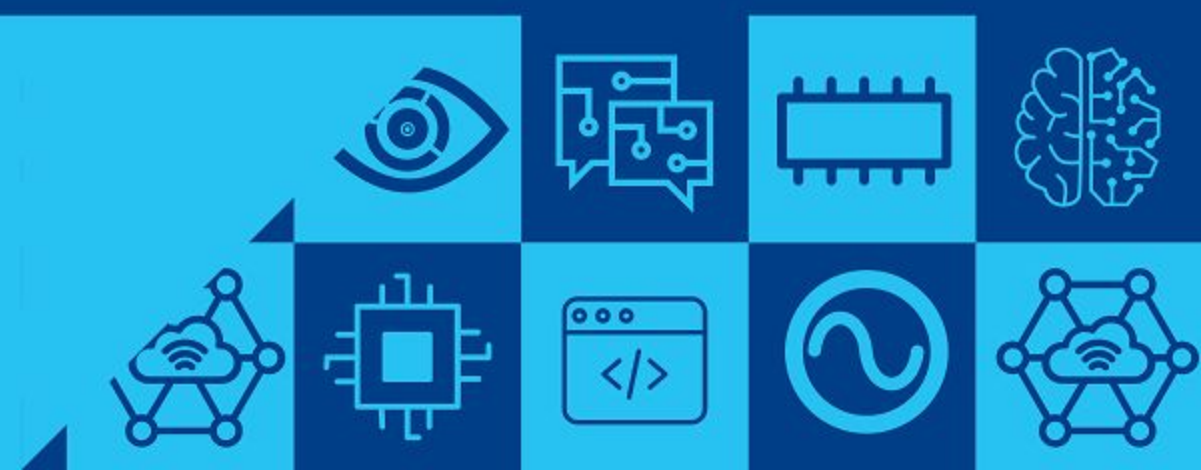
You went to cast your vote for the annual committee elections in Kashi Local Town Hall , however you found out that they still use old school paper and pen based ballot elections .

This has already caught the attention of many townsmen , who criticize the present systems of elections . Pen and paper based ballot elections have lost the faith of the citizens due to cheating in the elections , and have ultimately caused removal of faith from the election system in the city itself .

As a proponent of “Smart Kashi” and a technically budding and aspiring engineer , you decided to take this problem into your hands and make a digital electronic based solution for the same .



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## DigiSim

You are required to implement a Proteus simulation and a PCB design for this

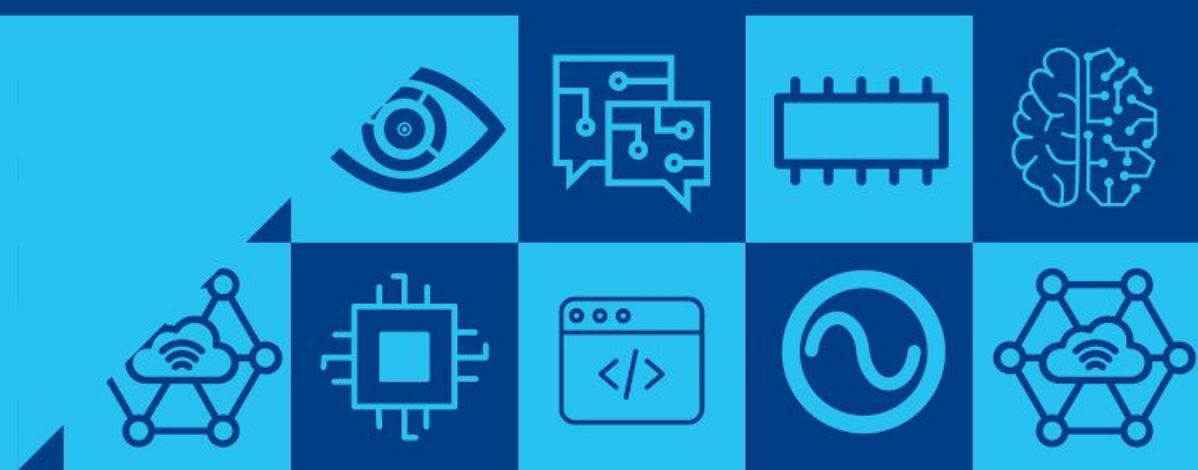
“EVM – Electronic Voting Machine”, and further restore peace to the city of Kashi .

### Circuit Requirements:

- The bare minimum requirement of this circuit would be to be able to store the value of the number of votes of the candidates standing in elections , when the button is pressed the number of votes should increase by 1 for that candidate.
- You are required to make an EVM assuming **4 candidates** only. The schematic should be made using Proteus and the PCB using EagleCAD.
- The simplest solution is attaching 4 push buttons to counters which is also an acceptable solution , but to score more points you are required to think of innovative features that can be added to such a machine .



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## DigiSim

### Circuit Requirements:

- Two mandatory features are:
  - Keep a count button which once pressed compares the votes of the 4 candidates and displays the votes of the winner and the winner as logic-probes. (0 if first candidate wins, 1 if second candidate wins and so on)
  - Disable the machine for the next 3 seconds every time a push button is pressed. This is to account for debouncing which happens in real push buttons.
- Example optional features (you can come up with more):
  - Multiple candidate voting allowed. (Let each candidate have a total voting time of 15 seconds within which he can vote for any number of candidates but at most one vote per candidate. Remember to disable the machine for three seconds every time a button is pressed)
  - Reverse the last vote casted by a candidate.



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