Dayananda Sagar College of Engineering

DAYANANDA SAGAR COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

Mini Project Work (18EC6ICMPR)

Presentation on

MULTI-CITY LOAD SHEDDING SYSTEM

Under the guidance of **Dr. Mahesh Kumar N** Asst. Prof. in Dept. of ECE

Being presented by

ANUSHA R SAJJANSHETTAR (1DS18EC012)

ASAAD UR RAHEMAN DODAMANI (1DS18EC014)

MEGHANA S (1DS18EC052)

G CHANDAN (1DS19EC410)

INTRODUCTION

- Electricity has become one of the basic needs of the people.
- Their daily activities, their daily routine, all depends on electricity. Thus to a proper system is required to provide an uninterrupted and fair supply of electricity.
- Our project is used to distribute power from the source grid to everyone by scheduling the supply of power at the possible interval of time to all cities.

OBJECTIVES

- To provide a better load shedding system .
- This system manages the power in critical demand situations so that people can schedule a plan to carry out the work and intended events on time.

LITERATURE SURVEY

- If the load shedding is used efficiently it can help both the utility company and the consumer to conserve energy and reduce cost.
- Blackouts will result if load shedding is not efficiently performed.

EFFECTS OF IMPROPER LOAD SHEDDING

- New Delhi[2012]. Over loading on 400 kv bina– Gwalior–Agra link. Loss of 400kv Bina-Gwalior link.
- Arizona-southern California[2011]: on September 8, 2011, cascading outage occurred due to an 11-minute system disturbance occurred in the pacific southwest, and approximately 2.7 million customers left without power.
- U.S.-Canada[2003]: it affected northeastern united states and parts of southern Canada, from new York north to Toronto and west to detroit in this blackout,

RELATED SURVEY's :

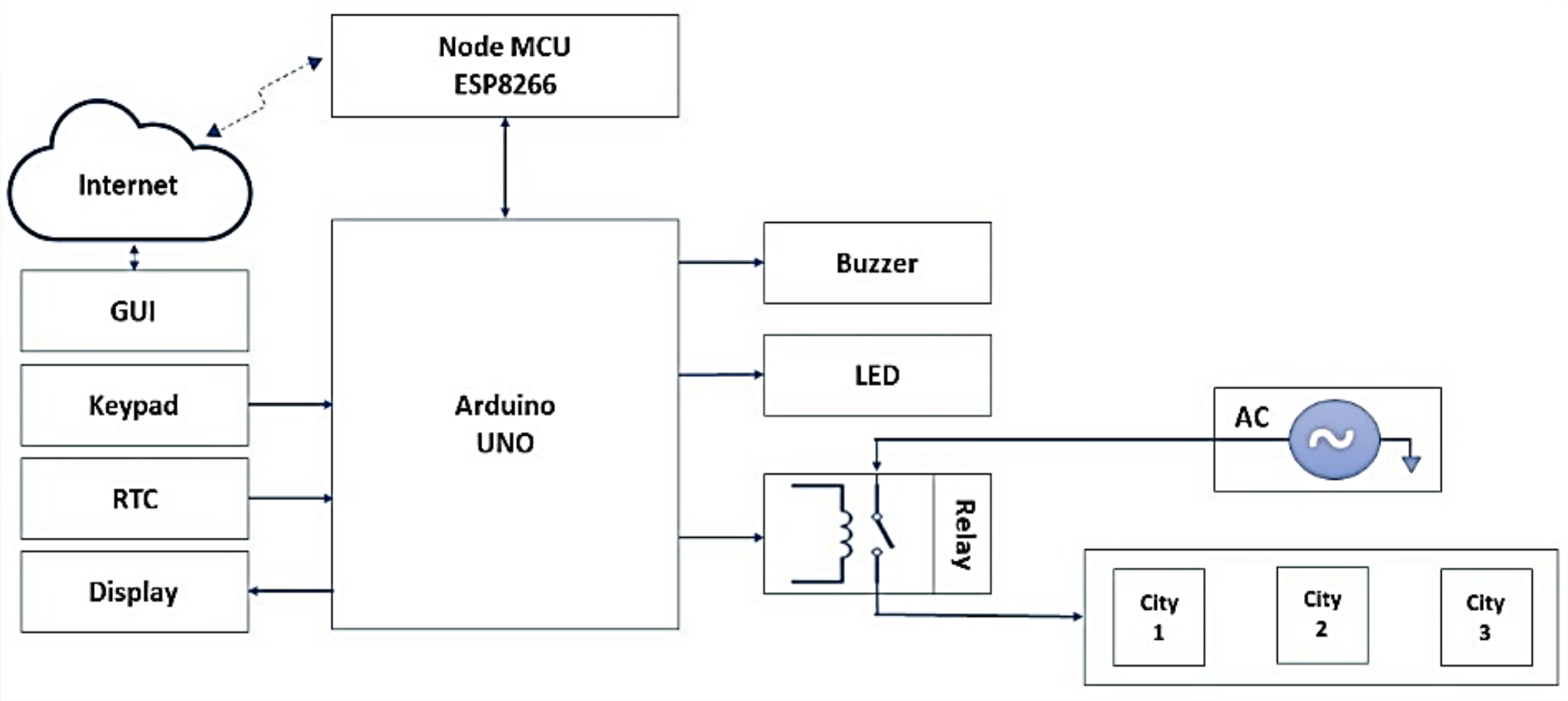
[1] Ron Bartels," Using IoT at homes and industries to mitigate the effects of blackouts and to better resultant incidents of negative consequences", Swinburne university of technology.

[2] Raghu.C.N, G.Raghavendra, Doddabasappa N, Anil Kumar D B :"Situation Analysis of Load Shedding and its Effectiveness in the Area of Power System Security" in International Journal of Applied Engineering Research ISSN 0973-4562 Volume 13, Number 20(2018) pp. 14561-14565 , Research India Publication.

PROBLEMS

What is the problem?	• Unequal distribution of electricity.
Who has this problem?	• Power distributer and consumer.
Why should this problem be solved?	• To overcome the problem faced due to shortage of power.

BLOCK DIAGRAM

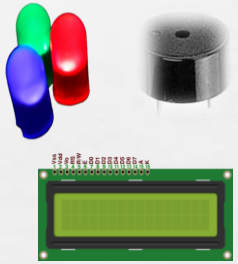


TOOLS AND COMPONENTS

ARDUINO UNO

RTC

NODE MCU
ESP8266

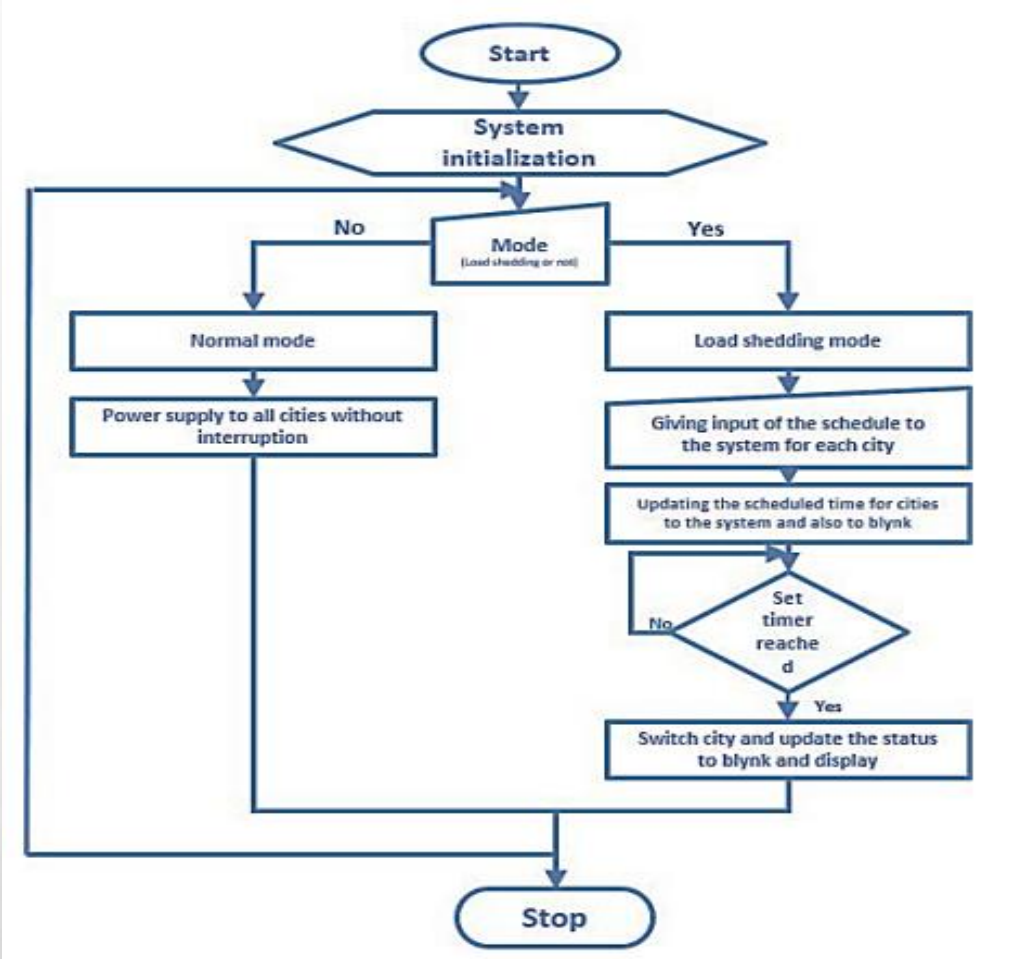


LED, BUZZER, LCD

PROTEUS 8
PROFESSIONAL

IMPLEMENTATION

NORMAL MODE



LOAD SHEDDING MODE

RESULT

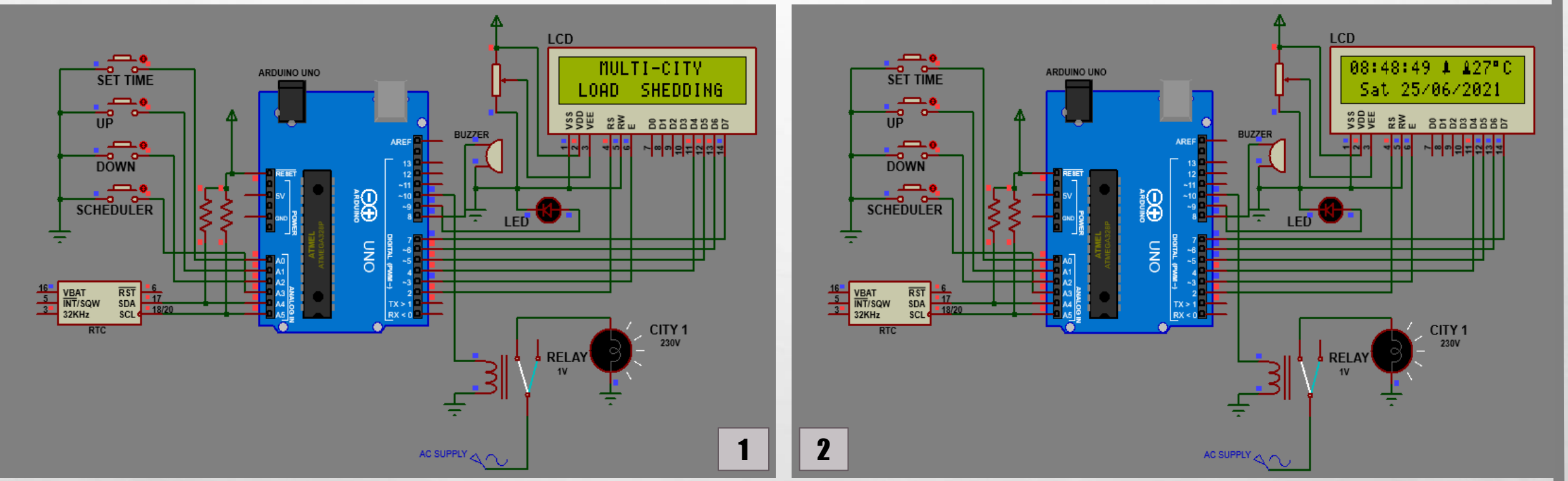
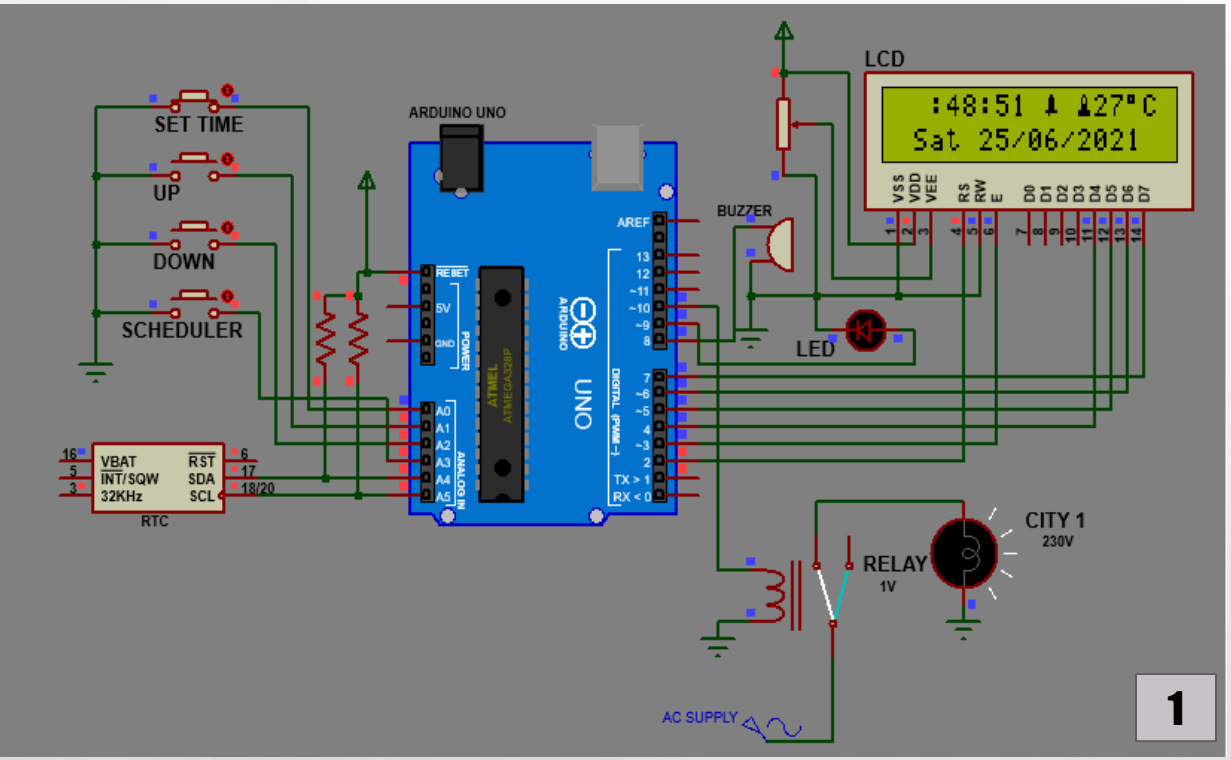


Fig. *Showing system initialization*

RESULT



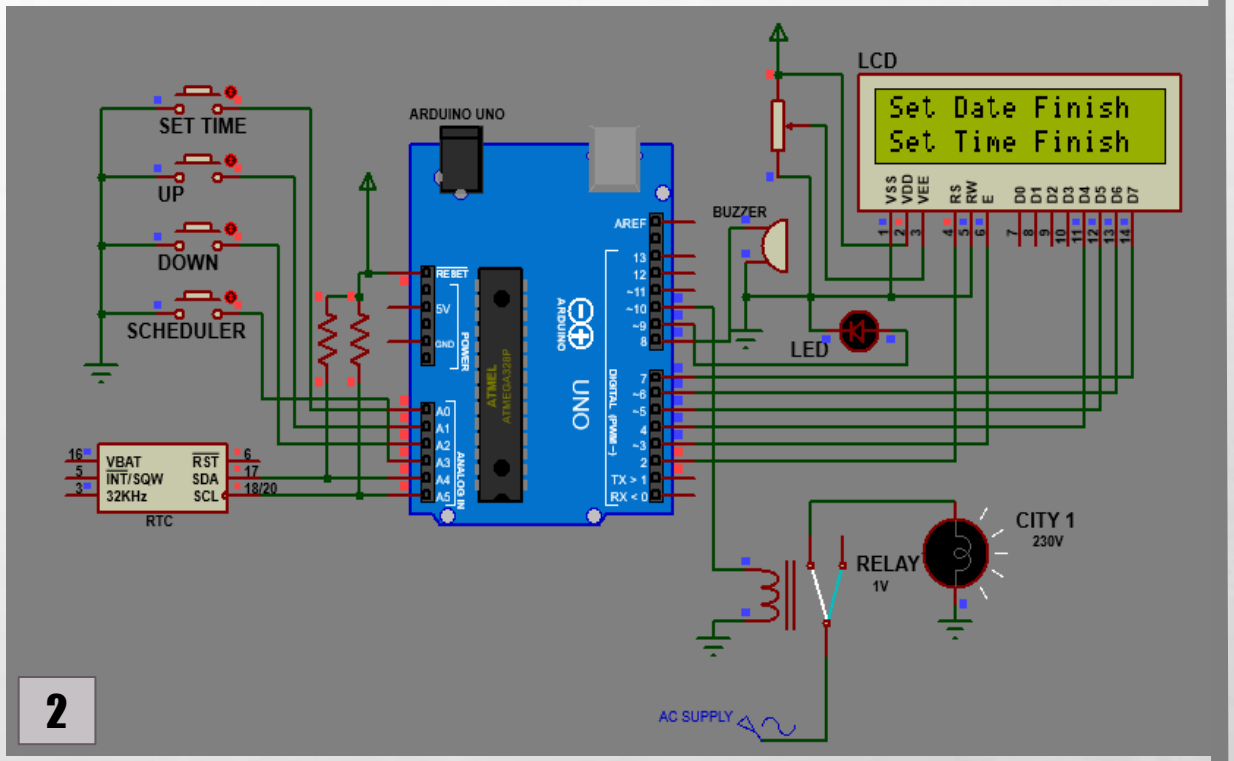


Fig. *Showing the setting of time after initialization.*

RESULT

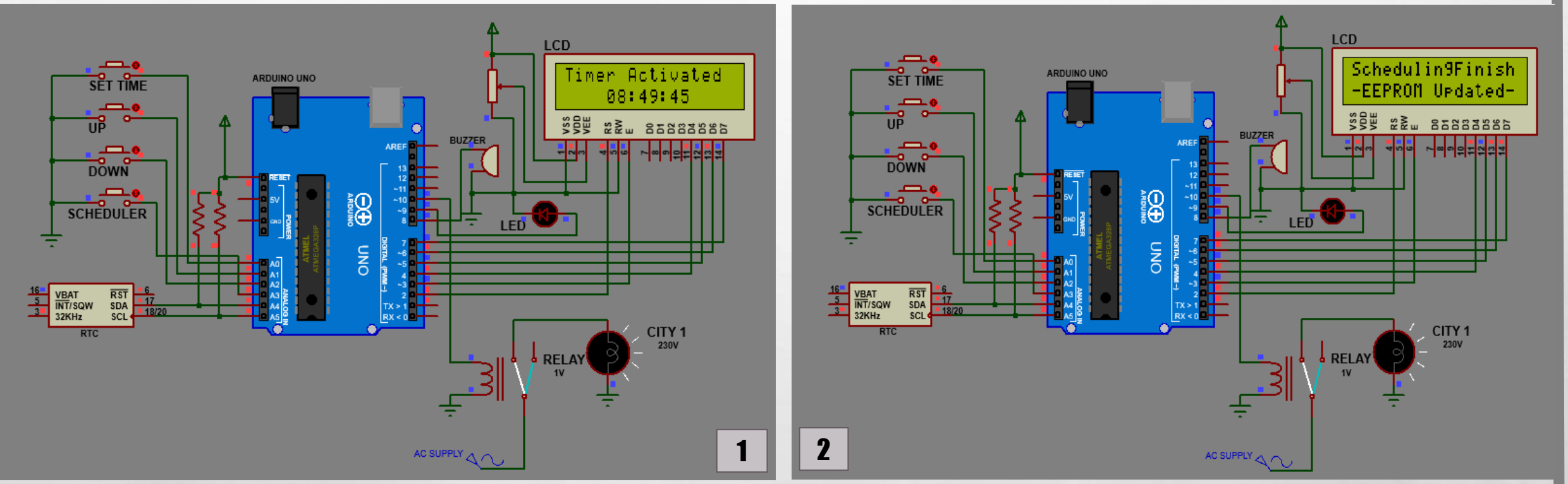


Fig. *Showing the setting of schedule for a city.*

RESULT

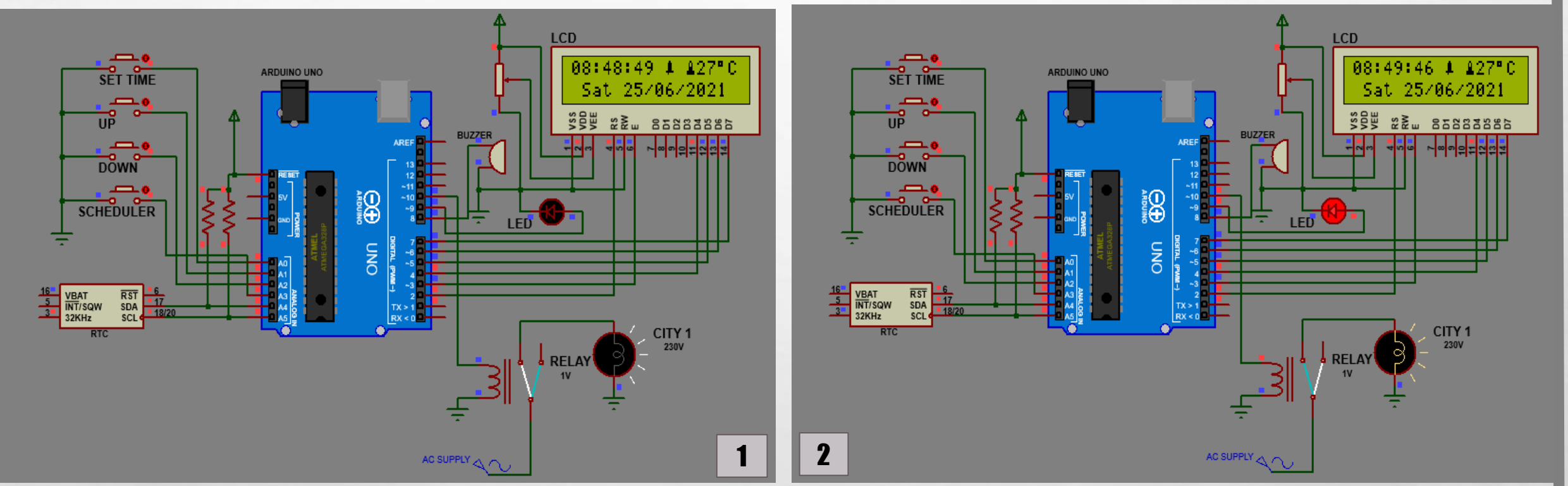


Fig. *Final output during load shedding at the set schedule.*

CONCLUSION

- Our project tried to address importance of load shedding and how it can be improvised through automation and IoT.
- Tried to redefine the conventional load shedding methodology.
- Transforming the energy sector from a central, hierarchical supply chain to a decentralized, smart and optimized system.

ADVANTAGES

- The planned schedules .
- Well informed schedules of the load shedding.
- It reduces the humans risk.
- Conserving time.

FUTURE SCOPE

- The proposed project we brought forward can be further improved with the technological and network advancements.
- Remotely controllable through blynk can be developed.
- The same simulation technique will be implemented through hardware in PHASE-2.

REFERENCES

[1] Ron Bartels," using IoT at homes and industries to mitigate the effects of blackouts and to better resultant incidents of negative consequences", Swinburne University of Technology.

[2] Raghu.C.N, G.Raghavendra, Doddabasappa N, Anil Kumar D B :"Situation Analysis of Load Shedding and its Effectiveness in the Area of Power System Security" in International Journal of Applied Engineering Research ISSN 0973-4562 Volume 13, Number 20(2018) pp. 14561-14565 , Research India Publication.

[3] Itika Sharma, Shavet Sharma : "Load Shedding Management" in International Journal of Trend in Scientific Research and Development (IJTSRD), ISSN: 2456-6470 .

[4] Praveen Raj R.S, Aditya Narayan, Akhil Joshy, Nandu Krishnan RB, Rahul S : "IOT based Load Shedding" in International Journal of Science and Research (IJSR), ISSN:2319-7064, ResearchGate Impact Factor(2018): 0.28 | SJIF(2018): 7.426 .

THANK YOU