



॥ ಶ್ರದ್ಧಾಹಿ ಪರಮಾ ಗತಿಃ ॥

## THE NATIONAL COLLEGE JAYANAGAR

Autonomous

Jayanagar, Bangalore -560070

### DEPARTMENT OF ELECTRONICS

#### CERTIFICATE

This is to certify the project report titled "4x4x4 LED Cube Arduino Nano" is a bonafide record of work done by **CHAITHRA L**, as the partial fulfilment of bachelor of Degree from the **THE NATIONAL COLLEGE, Jayanagar, Bangalore** for the academic year, 2020-2021. The project has been approved as it satisfies the academic requirements in respect of the project work prescribed for **VI SEMESTER BSC**

*M. Mahadeva M*

PROF.MAHADEVA M, MSc, MPHIL

(ASSOC.PROF.AND INTERNAL GUIDE)

VALUED BY:

<b>VALUED</b>
Signatures of Examiners
1) <i>[Signature]</i>
2) <i>[Signature]</i>
Date..... 21/09/2021

*[Signature]*

Head of The Dept of Electronics

The National College,  
Prof.CHELUVAPPA S, MSc  
(Autonomous)

Jayanagar, Bengaluru - 560 070  
(HOD AND INTERNAL GUIDE)

NAME: *Chaithra.L*

REG.NO: *18NCS255*

EXAMINATION CENTER: *NCS*

DATE OF EXAM: *21/09/2021*





|| ಶ್ರೀಮತು ವಿದ್ಯಾಕುಮಾರೇ ನಮಃ ||

**THE NATIONAL COLLEGE JAYANAGAR**

Autonomous

Jayanagar, Bangalore -560070

**DEPARTMENT OF ELECTRONICS**

**CERTIFICATE**

This is to certify the project report titled "AUTOMATIC DOOR OPENING USING AURDINO AND PIR SENSOR " is a bonafide record of work done by SAGAR H NADIG,SRUJAN KUMAR REDDY B, HEMANTH REDDY as the partial fulfilment of bachelor of Degree from the THE NATIONAL COLLEGE, Jayanagar, Bangalore for the academic year, 2020-2021. The project has been approved as it satisfices the academic requirements in respect of the project work prescribed for VI SEMESTER BSC .

.....M. Mahadeva M.....

PROF.MAHADEVA M, MSc, MPHIL  
ASSOC.PROF.AND INTERNAL GUIDE)

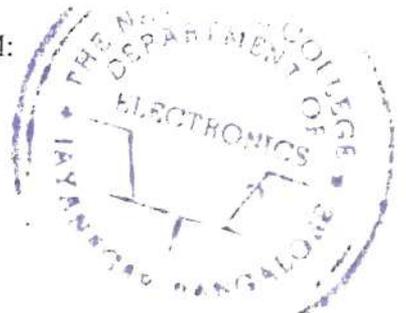
.....Prof. Cheluvappa S.....

Head of The Dept of Electronics  
The National College,  
Jayanagar, Bengaluru - 560 070  
(HOD AND INTERNAL GUIDE)

VALUED BY:

<b>VALUED</b>	
Signatures of Examiners	
1)	
2)	
Date.....	21/9/2021

NAME:  
REG.NO:  
EXAMINATION CENTER:  
DATE OF EXAM:





|| ಶ್ರದ್ಧಾ ಪರಮಾ ಗತಿಃ ||

# THE NATIONAL COLLEGE

Autonomous

Jayanagar, Bangalore-560070

## DEPARTMENT OF ELECTRONICS

### CERTIFICATE

This is to certify the project report titled "HOME AUTOMATION SYSTEM" is a bonafide record of work done by **KEERTHANA JAYAPRAKASH [18NCJS233]** and **YASHURAJ SINGH [18NCJS235]** in partial fulfilment of the requirements of the Bachelor of Science from **THE NATIONAL COLLEGE**, Jayanagar, for the academic year 2020-2021. The project has been approved as it satisfies the academic requirement in the respect of the project work prescribed for the 6<sup>th</sup> Semester B.Sc.

*M. Mahadeva*

*S. Chelluvapa*

PROF. MAHADEV M (MSc, MPhil)  
[ASSOC PROF, and INTERNAL GUIDE ]

PROF. CHELLUVAPA S (MSc)  
[HOD and INTERNAL]  
Head of The Dept of Electronics

VALUED BY:



The National College,  
(Autonomous)  
Jayanagar, Bangalore - 560070

NAME [18NCJS233]

*Yashuraj Singh*

DATE OF EXAM

21/9/21

[18NCJS235]





|| ಶ್ರೀಮತಿ ಜಯನಗರ ||

## THE NATIONAL COLLEGE JAYANAGAR

Autonomous

Jayanagar, Bangalore -560070

### DEPARTMENT OF ELECTRONICS

#### CERTIFICATE

This is to certify the project report titled "FIRE ALARM SYSTEM " is a bonafide record of work done by **LIKITH.V,ROHITH.S** , as the partial fulfilment of bachelor of Degree from the **THE NATIONAL COLLEGE**, Jayanagar, Bangalore for the academic year, 2020-2021. The project has been approved as it satisfies the academic requirements in respect of the project work prescribed for **VI SEMESTER BSC** .

*M. Mahadeva M*

PROF.MAHADEVA M, MSc, MPHIL

(ASSOC.PROF.AND INTERNAL GUIDE)

VALUED BY:

*Cheluvappa S*

Head of The Dept of Electronics

The National College  
(Autonomous)

Jayanagar, Bengaluru - 560 070  
(HOD AND INTERNAL GUIDE)

NAME:

REG.NO:

EXAMINATION CENTER:

DATE OF EXAM:

**VALUED**

Signatures of Examiners

1) *[Signature]*

2) *[Signature]*

Date..... 21/9/2021



# THE NATIONAL COLLEGE

[AUTONOMOUS]

JAYANAGAR, BENGALURU 560070

## DEPARTMENT OF ELECTRONICS

### CERTIFICATE

Certified that the project entitled "SURVEILLANCE ROBOT" is carried out by Darshan C (18NCJS227), Rahul A (18NCJS270), Shivu R (18NCJS229), as the partial fulfillment of bachelor of degree from The National College, Jayanagar, Bengaluru for the academic year, 2020-2021. The project is approved as it satisfies the academic requirements in the respect of the project work prescribed for 6<sup>th</sup> sem Bsc.



*M. Mahadeva*  
PROF. MAHADEVA M, MSc, MPHIL

*Prof. Cheluvappa S*  
PROF. CHELUVAPPA S, MSc

(ASSOC. PROF. AND INTERNAL GUIDE)

(HOD AND INTERNAL GUIDE)  
Head of The Dept of Electronics  
The National College,  
(Autonomous)  
Jayanagar, Bengaluru - 560 070

VALUED	
Signatures of Examiners	
1)	<i>Cheluvappa S</i>
2)	<i>Mahadeva M</i>
Date	<i>21/9/21</i>

THE NATIONAL COLLEGE

(Autonomous)

Jayanagar, Bangalore – 560070

(NAAC Accredited A GRADE)

**CERTIFICATE**

This is to certify that the project work entitled

**“SINGLE-AXIS SOLAR TRACKING SYSTEM”**

**is a bonafide work done by**

**SUHAS D M (18NCJS261)**

**BANDI NAVEEN (18NCJS264)**

**SAKE ASHOK KUMAR (18NCJS266)**

In practical fulfilment for the award of degree of “Bachelor of Science”, from The National College Jayanagar (Autonomous), affiliated to Bangalore University, during the year 2020-2021. It is certified that all corrections/suggestions indicated in the internal assignment have been incorporated in the report. The project report has been approved as it satisfied the academic requirement in respect of project work prescribed for the Bachelor of Science Degree course.

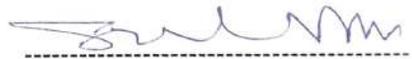
  
-----

**Prof.MAHADEVA.M, MSc, Mphill**

Lecture and Internal Guide,

Department of electronics,

The National College.

  
-----

**Prof.CHELUVAPPA.S ,M.Sc**

H.O.D and Internal Guide,

Department of electronics,

The National College  
Head of The Dept of Electronics

The National College,  
(Autonomous)

Jayanagar, Bangalore - 560 070

Valued – by:

Examination Center :

Date of Examination :

**VALUED**  
Signatures of Examiners  
1)   
2)   
Date: 21/9/21



# THE NATIONAL COLLEGE

(Autonomous)

Jayanagar, Bangalore – 560070

(NAAC Accredited A GRADE)

## CERTIFICATE

This is to certify that the project work entitled  
AUTOMATIC RAILWAY GATE CONTROL USING ARDUINO is a  
bonafide work done by

SHASHANK E (18NCJS260)

YASHWANTH K B (18NCJS262)

In practical fulfilment for the award of degree of “Bachelor of Science”, from The National College Jayanagar (Autonomous), affiliated to Bangalore University, during the year 2020-2021. It is certified that all corrections/suggestions indicated in the internal assignment have been incorporated in the report. The project report has been approved as it satisfied the academic requirement in respect of project work prescribed for the Bachelor of Science Degree course.



**Prof.MAHADEVA.M, MSc, Mphil**

Lecture and Internal Guide,  
Department of electronics,  
The National College.



**Prof.CHELUVAPPA.S, M.Sc**  
(Autonomous)

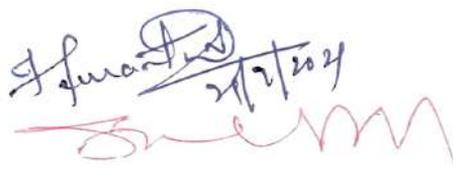
Jayanagar, Bengaluru - 560 070  
H.O.D and Internal Guide,

Department of electronics,  
The National College.

Valued – by :

Examination Center :

Date of Examination :

  
21/2/2024