

This is to certify that, *Miss Arti AnilraoGonge*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "AIR QUALITY MONITORING SYSTEM" during the academic year 2019-2020.

This work has been completed under the supervision and guidance of *Dr.S.V.Dudul, Professor and Head, Department of Applied Electronics.*Candidate was using the research laboratory of the Post Graduate Department of Applied Electronics at Sant Gadge Baba Amravati University in order to carry out this research work.

This project report embodies the original work done by the candidate in partial fulfilment of the requirements of the M.Sc. (Applied Electronics) degree if the Sant Gadge Baba Amravati University and to the best of my knowledge and belief, work embodied in this project report has not formed earlier the basis for the award of any Degree or similar title of this or any other University or examining body.

Date:12.11.2020

Dr.S.V.Dudul Professor & Head

P.G.Teaching Department of Applied Electronics Sant Gadge Baba Amrayati University

Ospartment of Applied Electronics
Sant Gadge Baba Amravati University

Amravati.



This is to certify that, *Miss.Jayshree Suresh Khadse*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "AIR QUALITY MONITORING SYSTEM" during the academic year 2019-2020.

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Date:12.11.2020

Dr.S.V.Dudul Professor & Head

P.G.Teaching Department of Applied Electronics
Sant Gadge Raba Amrayati University

Department Autrenvall Electronics
ont Gadge Baba Amravati University
Amravati.



This is to certify that, *Miss.Pratiksha D.Patil* has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "AIR QUALITY MONITORING SYSTEM" during the academic year 2019-2020.

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Date:12.11.2020

Dr.S.V.Dudul Professor & Head

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Pepartment of Applied Electronics
Ont Gadge Baba American University

Amravati.



<u>Certificate</u>

This is to certify that, *Mr. Ameen Shah Z.Hussain*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "AIR QUALITY MONITORING SYSTEM" during the academic year 2019-2020.

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Date:12.11.2020

Dr.S.V.Dudul Professor & Head

P.G.Teaching Department of Applied Electronics Sant Gadge Baba Amrayati University

Professor & Head
Department of Applied Electronics
and Gadge Baba Amravati University
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This is to certify that, *Miss.Anjali S.Paikrao*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "IOT BASED SMART DUSTBIN" during the academic year 2019-2020.

This work has been completed under the supervision and guidance of *Dr.Mrs.R.D.Raut, Professor and Head,* Department of Applied Electronics. Candidate was using the research laboratory of the Post Graduate Department of Applied Electronics at Sant Gadge Baba Amravati University in order to carry out this research work.

This project report embodies the original work done by the candidate in partial fulfilment of the requirements of the M.Sc. (Applied Electronics) degree if the Sant Gadge Baba Amravati University and to the best of my knowledge and belief, work embodied in this project report has not formed earlier the basis for the award of any Degree or similar title of this or any other University or examining body.

Date:12.11.2020

Dr.Mrs.R.D.Raut Professor

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Department Wayard Electronics

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This is to certify that, *Mr.Gaurav S.Range*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "IOT BASED SMART DUSTBIN" during the academic year 2019-2020.

This work has been completed under the supervision and guidance of *Dr.Mrs.R.D.Raut, Professor and Head,* Department of Applied Electronics. Candidate was using the research laboratory of the Post Graduate Department of Applied Electronics at Sant Gadge Baba Amravati University in order to carry out this research work.

This project report embodies the original work done by the candidate in partial fulfilment of the requirements of the M.Sc. (Applied Electronics) degree if the Sant Gadge Baba Amravati University and to the best of my knowledge and belief, work embodied in this project report has not formed earlier the basis for the award of any Degree or similar title of this or any other University or examining body.

Date:12.11.2020

Dr.Mrs.R.D.Raut Professor

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Department of Applied Electronics

ant Gadge Beba Amravati University

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This is to certify that, Miss.Nikita S.Nandankar, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "IOT BASED **SMART DUSTBIN"** during the academic year 2019-2020.

This work has been completed under the supervision and guidance of Dr.Mrs.R.D.Raut, Professor and Head, Department of Applied Electronics. Candidate was using the research laboratory of the Post Graduate Department of Applied Electronics at Sant Gadge Baba Amravati University in order to carry out this research work.

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Date:12.11.2020

Dr.Mrs.R.D.Raut **Professor**

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Department of Applied Electronics Sant Gadge Baba Amravati University **Amravati**

Dr.S.V.Dudul **Professor & Head**

P.G.Teaching Department of Applied Electronics Sant Gadge Beleas Amayati University tmena of Applitic Electronics adge Baba Amravati University

Amravati.



This is to certify that, *Miss.Aboli S.Khode*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "DESIGN OF 4 BIT ARITHMETIC LOGIC UNIT" during the academic year 2019-2020.

This work has been completed under the supervision and guidance of *Dr.Mrs.S.N.Kale, Associate Professor,* Department of Applied Electronics. Candidate was using the research laboratory of the Post Graduate Department of Applied Electronics at Sant Gadge Baba Amravati University in order to carry out this research work.

This project report embodies the original work done by the candidate in partial fulfilment of the requirements of the M.Sc. (Applied Electronics) degree if the Sant Gadge Baba Amravati University and to the best of my knowledge and belief, work embodied in this project report has not formed earlier the basis for the award of any Degree or similar title of this or any other University or examining body.

Date:12.11.2020

Dr.Mrs.S.N.Kale Associate Professor

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Department of Applied Electronics
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This is to certify that, *Mr.Rakesh W.Patil*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "DESIGN OF 4 BIT ARITHMETIC LOGIC UNIT" during the academic year 2019-2020.

This work has been completed under the supervision and guidance of *Dr.Mrs.S.N.Kale, Associate Professor,* Department of Applied Electronics. Candidate was using the research laboratory of the Post Graduate Department of Applied Electronics at Sant Gadge Baba Amravati University in order to carry out this research work.

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Date:12.11.2020

Dr.Mrs.S.N.Kale Associate Professor

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<u>Certificate</u>

This is to certify that, Miss.Neha P.Bhoge, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "DESIGN OF 4 BIT **ARITHMETIC LOGIC UNIT"** during the academic year 2019-2020.

This work has been completed under the supervision and guidance of Dr.Mrs.S.N.Kale, Associate Professor, Department of Applied Electronics. Candidate was using the research laboratory of the Post Graduate Department of Applied Electronics at Sant Gadge Baba Amravati University in order to carry out this research work.

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Date:12.11.2020

Dr.Mrs.S.N.Kale **Associate Professor**

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Dr.S.V.Dudul **Professor & Head**

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Department of applied Electronics Sand Gudge Baba Azeravad University Annavati



This is to certify that, *Miss.Vaishnavi A.Gonge*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc.(Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology on the topic entitled as "DESIGN OF 4 BIT ARITHMETIC LOGIC UNIT" during the academic year 2019-2020.

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Date:12.11.2020

Dr.Mrs.S.N.Kale Associate Professor

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Dr.S.V.Dudul Professor & Head

P.G.Teaching Department of Applied Electron Sant Gadge Baba Amravati University

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Department of Applied Electronics
Sent Godge Bebs Americal University
Approval



This is to certify that, Miss. Anjali S. Mangale, has satisfactorily completed the project work towards the partial fulfilment of M.Sc. (Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology under the Faculty of Science and Technology on the topic entitled as "COMPUTER NUMERICAL CONTROL(CNC) ENGRAVER" during the academic year 2019-20.

This work has been completed under the supervision and guidance of Mr.K.D.Chinchkhede. Assistant Professor, Department of Applied Electronics Candidate was using the research laboratory of the Post Graduate Department of Applied Electronics at Sant Gadge Baba Amravati University in order to carry out this research work.

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Date:12.11.2020

Guided By Assistant Professor P.G.Teaching Department of Applied Electronics
Sant Cardistant Afficial Property Department of Applied Electronics

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Dr.S.V.Dudul Professor & Head

P.G.Teaching Department of Applied Electronics Sant Gadge Baba Amravati University

Professival Head Department of Applied Electronics et Gadge Baha Amravad University Amravati.



This is to certify that, *Miss.Aboli P.Tayade*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc. (Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology under the Faculty of Science and Technology on the topic entitled as "COMPUTER NUMERICAL CONTROL(CNC) ENGRAVER" during the academic year 2019-20.

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Date:12.11.2020

Mr.K.D.Chiříchkhede Guided By Assistant Professor eaching Department of Applied Elec

P.G.Teaching Department of Applied Electronics
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Professorati Head Department of Applied Electronice Sant Gadge Baba Amravati University Amravati.



This is to certify that, Miss. Kajal M. Patel, has satisfactorily completed the project work towards the partial fulfilment of M.Sc. (Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology under the Faculty of Science and Technology on the topic entitled as "COMPUTER NUMERICAL CONTROL(CNC) ENGRAVER" during the academic year 2019-20.

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Date:12.11.2020

Mr.K.D.Chinchkhede **Guided By Assistant Professor**

P.G. Teaching Persistent of Application of the Communication of the Comm Sant Gaden Baba Ampaneti Enecuritics

Sant Gadge Baba Amravati University Amraveti

Dr.S.V.Dudul **Professor & Head**

P.G.Teaching Department of Applied Electronics Sant Gadge Baba Amravati University
Professor of Head
Department of Applied Electronics

Sant Gedge Baba Amraveti University Amravati.



This is to certify that, *Miss.Vaishnavi A.Berad*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc. (Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology under the Faculty of Science and Technology on the topic entitled as "COMPUTER NUMERICAL CONTROL(CNC) ENGRAVER" during the academic year 2019-20.

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Date:12.11.2020

Mr.K.D.Chinchkhede Guided By Assistant Professor

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Department of Applied Electronics
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This is to certify that, *Mr.Shubham S.Bambal*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc. (Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology under the Faculty of Science and Technology on the topic entitled as "COMPUTER NUMERICAL CONTROL(CNC) ENGRAVER" during the academic year 2019-20.

This work has been completed under the supervision and guidance of *Mr.K.D.Chinchkhede*, *Assistant Professor*, Department of Applied Electronics Candidate was using the research laboratory of the Post Graduate Department of Applied Electronics at Sant Gadge Baba Amravati University in order to carry out this research work.

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Date: 12.11.2020

Mr.K.D.Chinichkhede
Guided By
Assistant Professor
P.G.Teaching Department of Applied Electronics
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Dr.S.V.Dudul Professor & Head

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Department of Applied Electronics

Department of Applied Electronics
Sant Gadge Baba Amravad University
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This is to certify that, *Mr.Kunal R.Dharmale*, has satisfactorily completed the project work towards the partial fulfilment of M.Sc. (Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology under the Faculty of Science and Technology on the topic entitled as "COMPUTER NUMERICAL CONTROL(CNC) ENGRAVER" during the academic year 2019-20.

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Date:12.11.2020

Mr.K.D.Chinchkhede
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Assistant Professor
G.Teaching Department of Applied Elec

P.G.Teaching Department of Applied Electronics
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Department of Applied Electronics
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Dr.S.V.Dudul
Professor & Head

P.G.Teaching Department of Applied Electronics Sant Gadge Raba Angayati University

Department Of Applete Electronics Sant Gadge Baba Amravati University Apple 2005.



This is to certify that, Mr.Amarkumar S.Shinde, has satisfactorily completed the project work towards the partial fulfilment of M.Sc. (Applied Electronics) degree of the Sant Gadge Baba Amravati University under the Faculty of Science and Technology under the Faculty of Science and Technology on the topic entitled as "COMPUTER NUMERICAL CONTROL(CNC) ENGRAVER" during the academic year 2019-20.

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Date:12.11.2020

Guided By **Assistant Professor** P.G.Teaching Papartment of Applied Electronics Sanb Gadge Baba Amrayati University

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Dr.S.V.Dudul **Professor & Head**

P.G.Teaching Department of Applied Electronics Sant Gadge Baba Amravati University

Professoris Head Department of Applied Electronics ant Gadge Baba Amravati University