# DISTRIBUTED GRAPH REALIZATIONS

A Project Report Submitted

in Partial Fulfilment of the Requirements

for the Degree of

## BACHELOR OF TECHNOLOGY

in

**Mathematics and Computing**

*by*

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# CERTIFICATE

This is to certify that the work contained in this report entitled **"Distributed Graph Realizations"** submitted by **Tejasvee Panwar** (**Roll No: 170123053**) and **Aayush Bansal** (**Roll No: 170123001**) to Department of Mathematics, Indian Institute of Technology Guwahati towards the requirement of the course **MA499 Project** has been carried out by them under my supervision.

Guwahati - 781 039
November 2020

(Dr. Partha Sarathi Mandal)
Project Supervisor

# ABSTRACT

The main aim of the project .....

# Contents

# List of Figures

# Chapter 1

# Introduction

Introductory lines...

## 1.1 Graph Realizations

Some text here ...

**Definition 1.1.1.** Some definition....

**T heorem 1.1.2.** *Some theorem.....*

*Proof.* Proof is as follows.... □

**Corollary 1.1.3.** *A corollary to the theorem is....*

*Remark* 1.1.4. Some remark.....

You may have to type many equations inside the text. The equation can be typed as below.

$$f(x) = \frac{x^2 - 5x + 2}{e^x - 2} = \frac{y^5 - 3}{e^x - 2} \tag{1.1}$$

This can be referred as (1.1) and so on.....

You may have to type a set of equations. For this you may proceed as given below.

$$\begin{aligned} f(x) &= e^{1+2(x-a)} + \dots \\ &= \log(x+a) + \sin(x+y) + \cdots \end{aligned} \tag{1.2}$$

You may have to cite the articles. You may do so as [4] and so on..... Note that you have already created the 'bib.bib' file and included the entry with the above name. Only then you can cite it as above.

## 1.2 Distributed Computing

**Definition 1.2.1.** Some definition....

*Remark* 1.2.2. Some remark.....

### 1.2.1 Applications in Peer-to-Peer Networks

**T heorem 1.2.3.** *Some theorem.....*

*Proof.* Proof is as follows.... □

[The figure will be displayed here.]

Figure 1.1: The correlation coefficient as a function of $\rho$

# Chapter 2

# Chapter-2 Name

Introductory lines...

## 2.1 Section-1 Name

**Definition 2.1.1.** Some definition....

*Remark* 2.1.2. Some remark.....

**T heorem 2.1.3.** *Some theorem.....*

*Proof.* Proof is as follows.... □

## 2.2 Section-2 Name

**Definition 2.2.1.** Some definition....

*Remark* 2.2.2. Some remark.....

### 2.2.1 Subsection name

**T heorem 2.2.3.** *Some theorem.....*

*Proof.* Proof is as follows.... □

# Chapter 3

# Chapter-2 Name

Introductory lines...

## 3.1 Section-1 Name

**Definition 3.1.1.** Some definition....

*Remark* 3.1.2. Some remark.....

**T heorem 3.1.3.** *Some theorem.....*

*Proof.* Proof is as follows.... □

## 3.2 Section-2 Name

**Definition 3.2.1.** Some definition....

*Remark* 3.2.2. Some remark.....

### 3.2.1 Subsection name

**T heorem 3.2.3.** *Some theorem.....*

*Proof.* Proof is as follows.... □

# Chapter 4

# Chapter-2 Name

Introductory lines...

## 4.1 Section-1 Name

**Definition 4.1.1.** Some definition....

*Remark* 4.1.2. Some remark.....

**T heorem 4.1.3.** *Some theorem.....*

*Proof.* Proof is as follows.... □

## 4.2 Section-2 Name

**Definition 4.2.1.** Some definition....

*Remark* 4.2.2. Some remark.....

### 4.2.1 Subsection name

**T heorem 4.2.3.** *Some theorem.....*

*Proof.* Proof is as follows.... □

# Chapter 5

# Chapter-2 Name

Introductory lines...

## 5.1 Section-1 Name

**Definition 5.1.1.** Some definition....

*Remark* 5.1.2. Some remark.....

**T heorem 5.1.3.** *Some theorem.....*

*Proof.* Proof is as follows.... □

## 5.2 Section-2 Name

**Definition 5.2.1.** Some definition....

*Remark* 5.2.2. Some remark.....

### 5.2.1 Subsection name

**T heorem 5.2.3.** *Some theorem.....*

*Proof.* Proof is as follows.... □

# Bibliography

[1] K. Andrews and B. Rajiv. On some applications of eigenvalues of toeplitz matrices. *Journal of Mathematical Analysis and Applications*, 56(2):237–239, 2007.

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[3] Brunella Gerla. Automata over MV-algebras. In *ISMVL '04: Proceedings of the 34th International Symposium on Multiple-Valued Logic*, pages 49–54, Washington, DC, USA, 2004. IEEE Computer Society.

[4] G.H. Golub and C.F. Van Loan. *Matrix Computations*. Second Edition. The John Kopkins University Press, 1989.