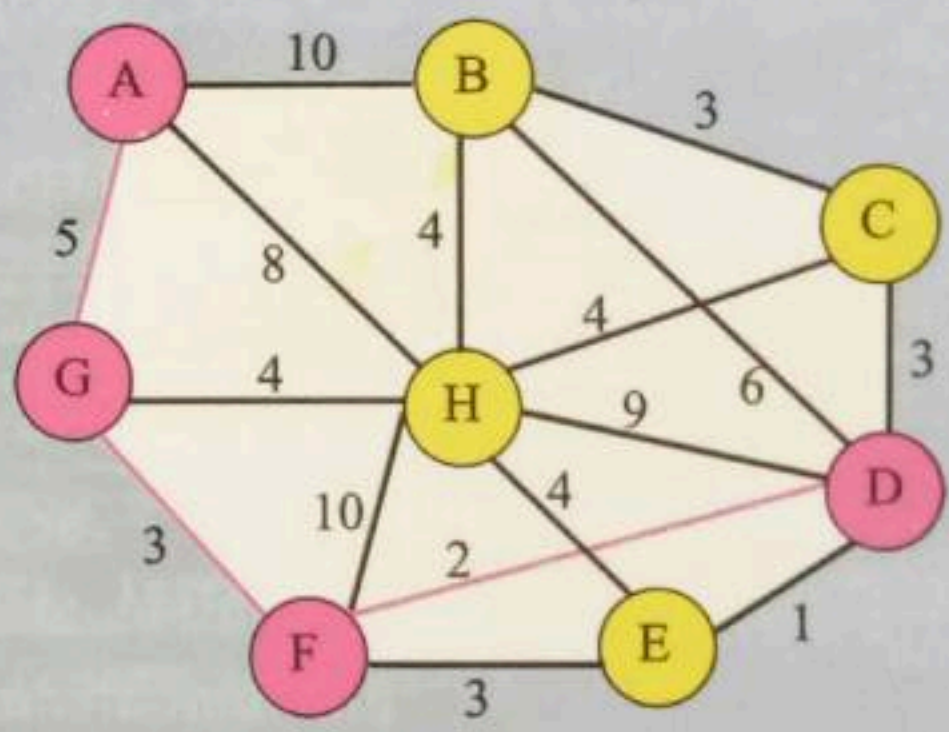
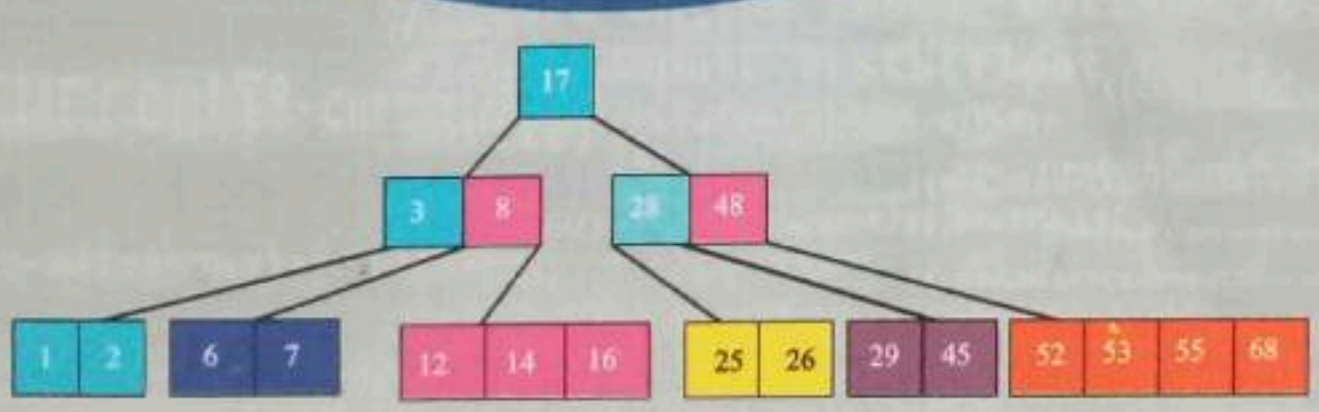
Based on Syllabus of Bachelor's Degree in Computer Engineering (B.E.) TU, KU, POU, PU and B.Sc. CSIT

DATA STRUCTURE & ALGORITHM

The Complete Reference

```
IsFull ( ) :
        If TOS > S_size – 1 then
            return 1
        else
            return 0
Push ( ) :
        If (IsFull ( ))  then
            Print Stack is full message
        else
            TOS ← TOS + 1
            S [TOS] ← data
```





Bal Krishna Nyaupane

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PREFACE

I have used my ten-year experience to complete this book. It gives me great pleasure in presenting the First edition of this book to my esteemed readers. **Data Structure and Algorithm : The Complete Reference**, is a unique book useful for all readers from beginners to advanced users. It is designed to provide all essential information you will need to learn Data Structure. Data Structure and Algorithm is the core subject for undergraduate students for *Bachelor's Degree in Computer Engineering, Bachelor of Science in Computer Science and Information Technology (BSc.CSIT), Bachelor of Computer Application (BCA), Bachelor of Engineering in Information Technology (BE IT), Bachelor of Computer Information System (BCIS), Bachelor of Information Technology (BIT) and Bachelor of Engineering in Software Engineering (BE SE).*This book is significantly different from other books in various ways. Some of the most striking features are as follows:

- Each chapter is designed in a systematic and pragmatic way.
- Each chapter mainly focuses on Algorithm and Examples.
- Simple, Unambiguous and Complete languages.
- Chapters are arranged according to most of the syllabus defined.
- More pragmatic approach for writing algorithm

I express my sincere gratitude to my colleagues, faculties of different engineering colleges who constantly encouraged me to publish this book to address the demand of IT students.

Despite all efforts, some errors might be there. I shall be grateful to the readers if the same are brought to my notice. Suggestions and comments for future improvements of the book will be gratefully acknowledged.

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6. Tree

7. Sorting

8. Searching

9. Growth Functions

10. Graph