# Data Structures and Algorithms Project

By: Anahit Doshoyan & Elizabeth Vickery

# TABLE OF CONTENTS


01 Introduction

02 What is a Binary Tree?

03 What is Morse Code?

04 Morse Code in a Binary Tree

05 Testing Our Code

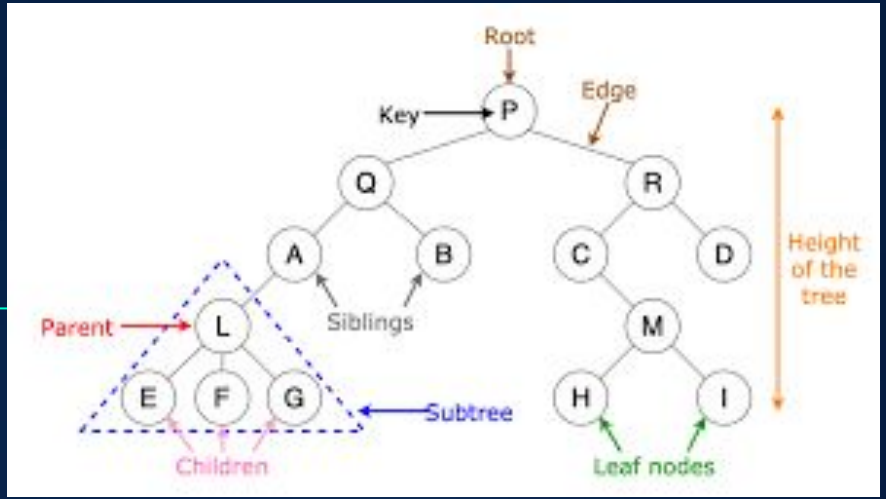
# 01
# Introduction

02
What is a Binary Tree?

# What is a Binary Tree?

## Binary Tree

A binary tree is a data structure which is used for storing data in an organized way.



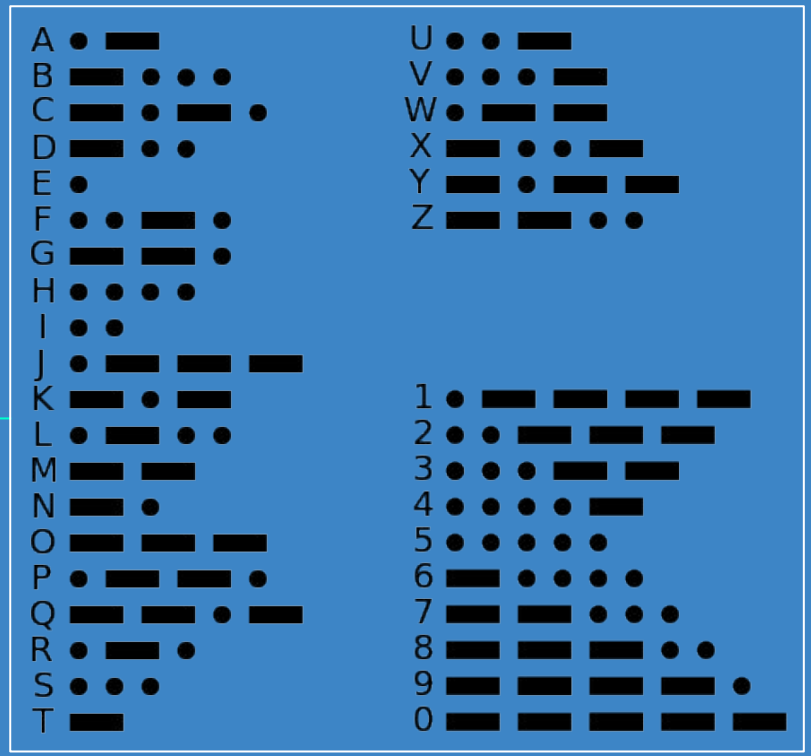
# 03

# What is Morse Code?

# What is Morse Code?

## Morse Code

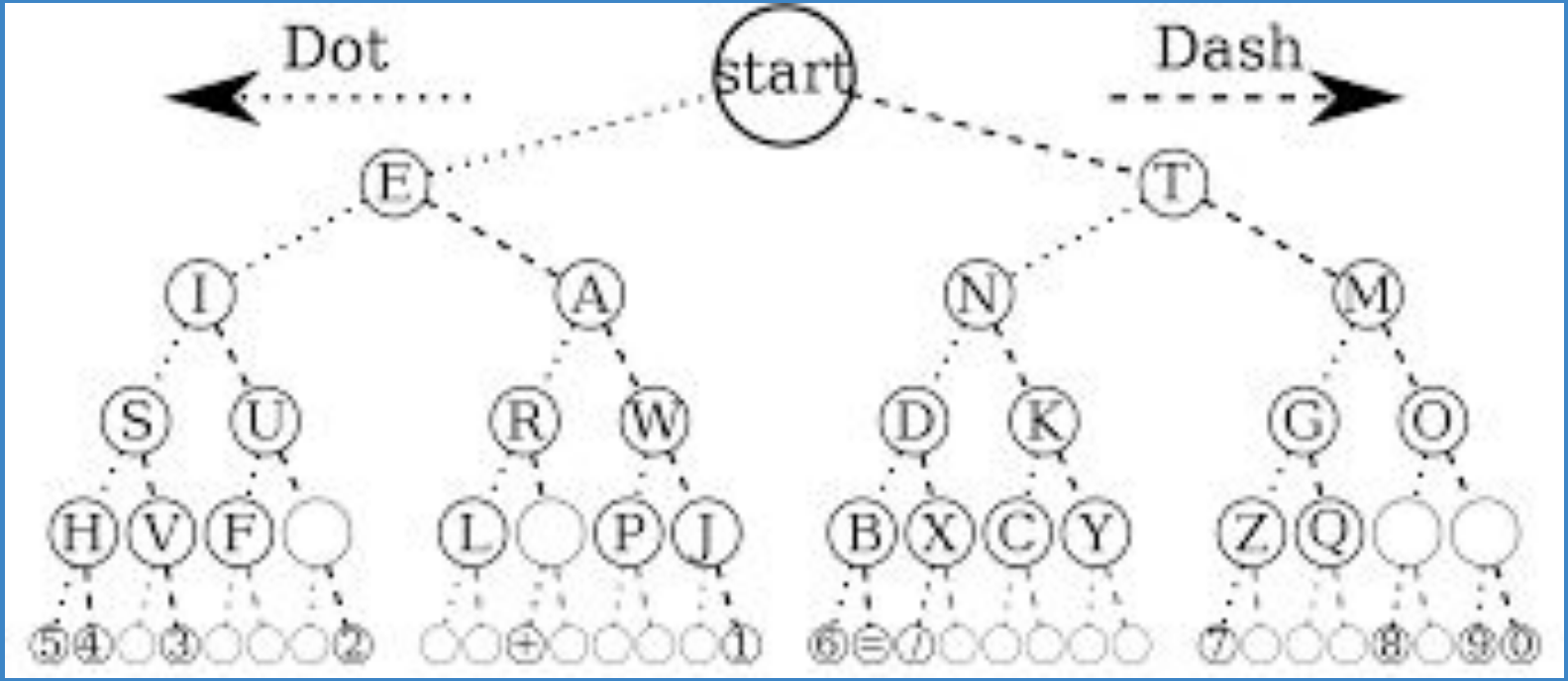
Morse Code is a way of sending messages without using any letters. Morse code uses dots and dashes to show letters, numbers, and punctuation.



# 04

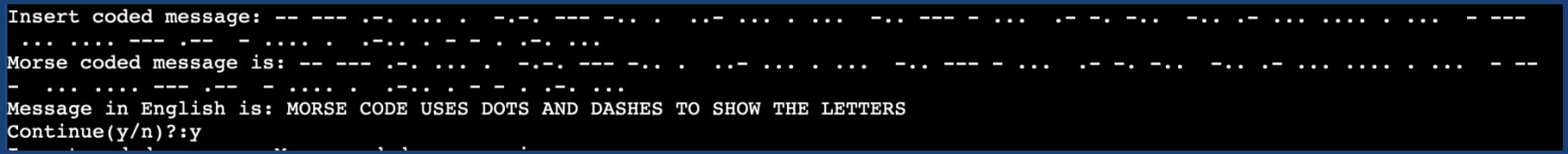
# Morse Code in a Binary Tree and Its Implementation

```
int i;
DataTable[0] = ".-"; DataTable[1] = "-...";
DataTable[2] = "-.-."; DataTable[3] = "-..";
DataTable[4] = "."; DataTable[5] = "..-.";
DataTable[6] = "--"; DataTable[7] = "....";
DataTable[8] = ".."; DataTable[9] = ".---";
DataTable[10] = "-.-"; DataTable[11] = ".-..";
DataTable[12] = "--"; DataTable[13] = "-.";
DataTable[14] = "---"; DataTable[15] = ".--.";
DataTable[16] = "--.-"; DataTable[17] = ".-.";
DataTable[18] = "..."; DataTable[19] = "-";
DataTable[20] = "..-"; DataTable[21] = "...-";
DataTable[22] = ".--"; DataTable[23] = "-..-";
DataTable[24] = "-.--"; DataTable[23] = "--..";
DataTable[0] = ".-"; DataTable[25] = "-...";
```


Dot
start
Dash
E
T
I
A
N
M
S
U
R
W
D
K
G
O
H
V
F
L
P
J
B
X
C
Y
Z
Q
5
4
3
2
1
6
7
8
9
0

# 05

# Testing Our Code




## morse code

```
-- --- .-. ... . -.-. --- -.. .  ..- ... . ...  -.. --- - ...  .-
-. -..  -.. .- ... .... . ...  - ---  ... .... --- .--  - .... .
.-.. . - - . .-. ...
```

## text

```
morsecodeusesdotsanddashestoshowtheletters
```

# THANK YOU!