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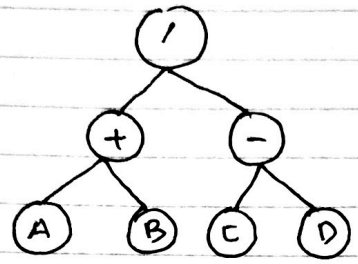
2. Buatlah expression tree untuk aritmatika berikut.
(A + B) / (C - D)

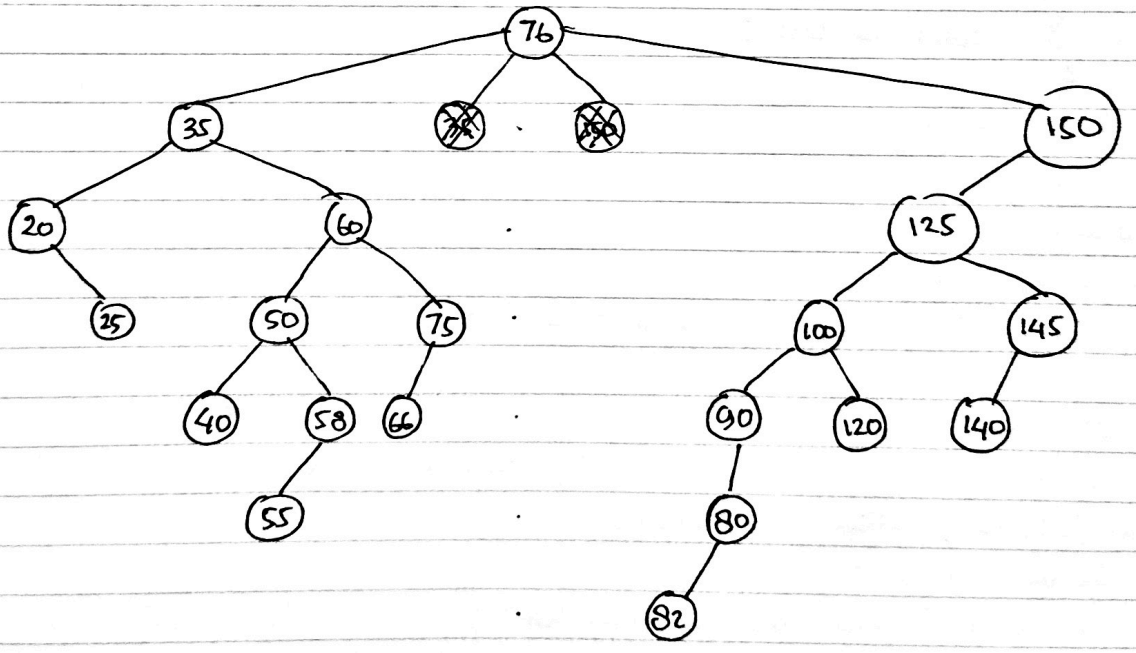


a. Pre Order
/ + - A B C D

b. In Order
A + B / C - D

c. Post Order
A B C D + - /

4. Buatla B-Tree.



1. Buatlah program C++ untuk mengimplementasikan Queue.

```
#include <iostream>
#define MAX 20
using namespace std;

struct Queue {
    int front, rear, data[MAX];
};
bool isFull() {
    return Q.rear == MAX;
}
bool isEmpty() {
    return Q.rear == 0;
}
void printQueue() {
    if (isEmpty()) {
        cout << "Antrian Kosong" << endl;
    } else {
        cout << "Queue : ";
        for (int i = Q.front; i < Q.rear; i++) {
            cout << Q.data[i] << ((Q.rear - 1 == i) ? "" : ", ");
        } cout << endl;
    }
}
void enqueue() {
    if (isFull()) {
        cout << "Antrian penuh" << endl;
    } else {
        int data;
        cout << "Masukkan Data : "; cin >> data;
        Q.data[Q.rear] = data.
        Q.rear++;
        cout << "Data ditambahkan\n";
        printQueue();
    }.
{
```

```
void dequeue() {
    if (isEmpty()) {
        cout << "Antrian masih kosong" << endl;
    } else {
        cout << "Mengambil data \"" << Q.data[Q.front] << "\"..." << endl;
        for(int i = Q.front; i < Q.rear; i++) {
            Q.data[i] = Q.data[i + 1];
        }
        Q.rear --;
        printQueue();
    }
}
int main() {
    int choose;
    do {
        cout << "-------------\n"
             << " Menu Pilihan \n"
             << "-------------\n"
             << "[1] Enqueue \n"
             << "[2] Dequeue \n"
             << "[3] Keluar \n"
             << "Masukkan pilihan : "; cin >> choose;
        switch (choose) {
            case 1 :
                enqueue();
                break;
            case 2 :
                dequeue;
                break;
            case 3 :
                return 0;
                break;
            default :
                cout << "Pilihan tidak tersedia";
                break.
        }
    } while (choose != 3)
    return 0;
}
```