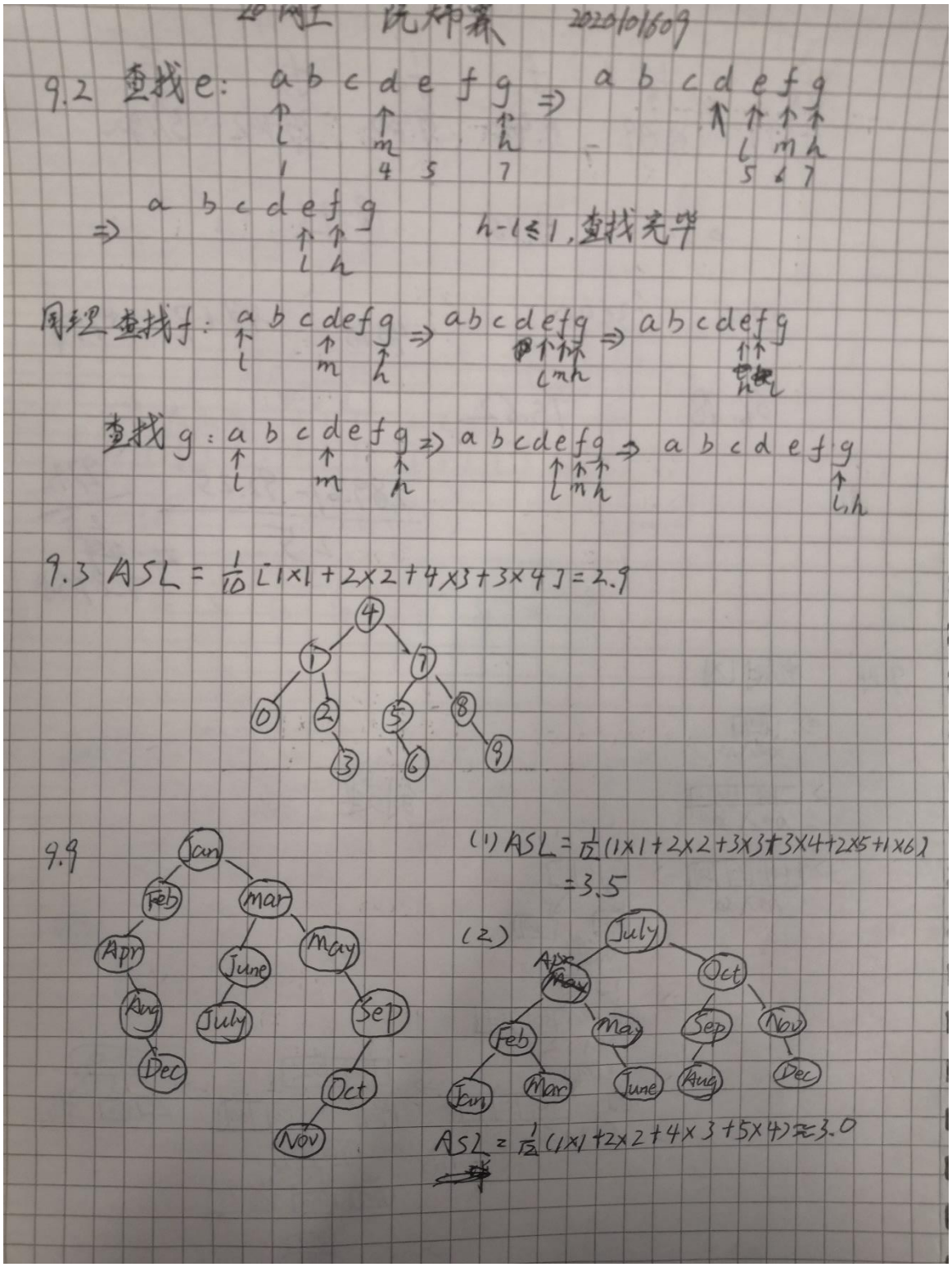
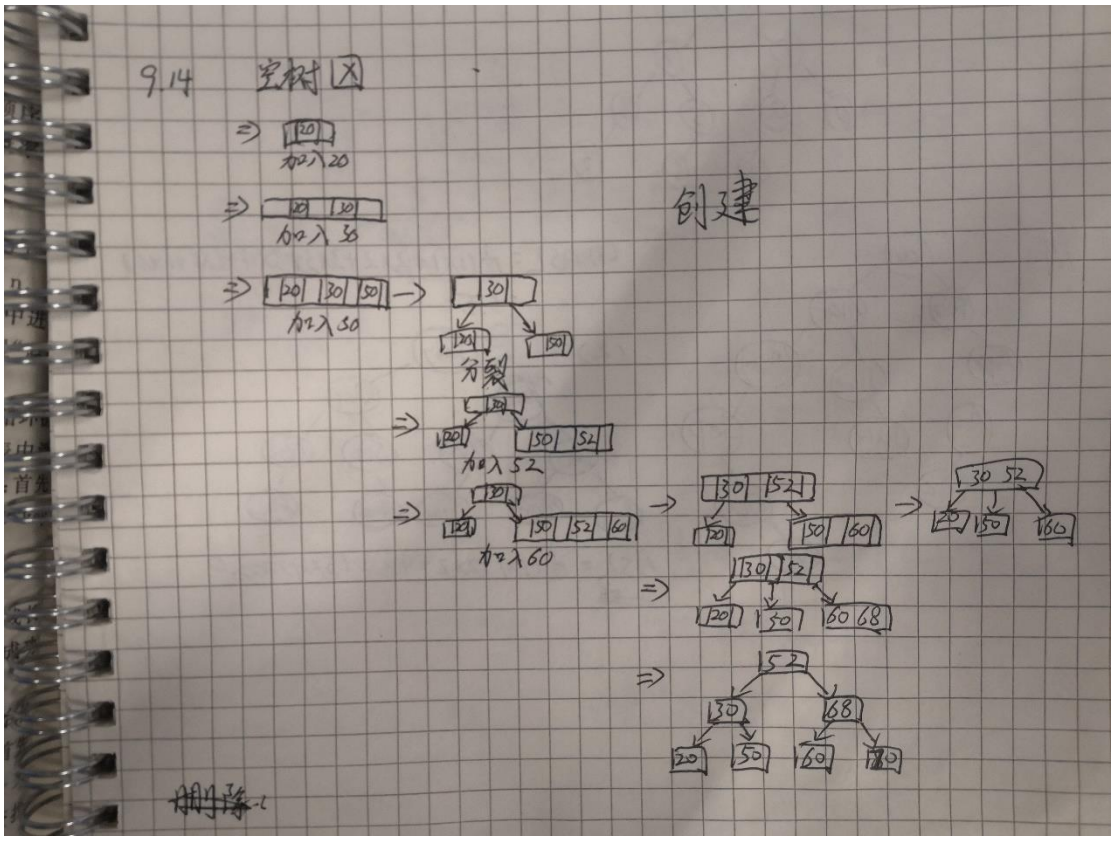
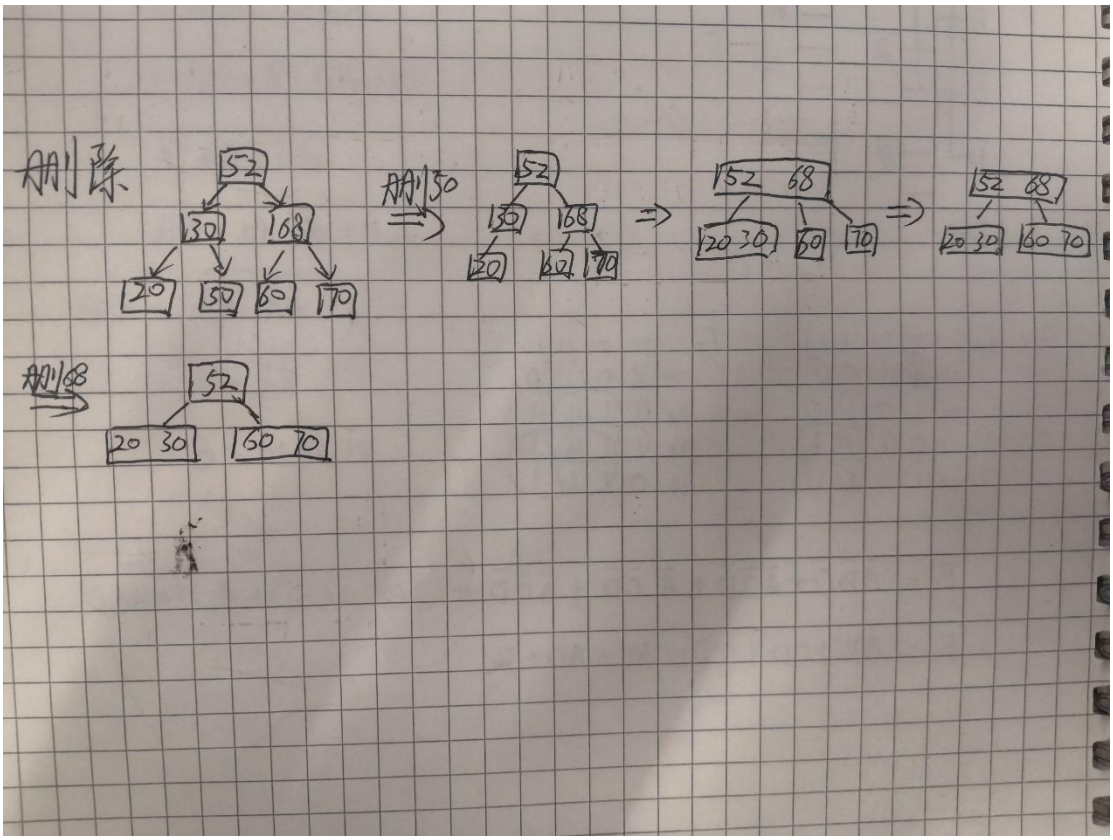
数据结构 第九章 作业 阮炜霖 2020101603 网络工程




9.14
空树
加入20
加入30
加入50
分裂
加入52
加入60
创建
删除


删除
删50
删68

7.26

递归版折半查找.cpp

```cpp
#pragma GCC optimize("Ofast", "inline", "-ffast-math")
#pragma GCC target("avx,sse2,sse3,sse4,mmx")
#include<bits/stdc++.h>
#define inf 0x3f3f3f3f
//#define int long long
using namespace std;
const int N=2e5+7;
int n,num,idx,a[N];

int binsearch(int a[],int key,int ql,int qr){
    int i=ql,j=qr;
    int mid=(ql+qr)>>1;
    if(i>j) return -1;
    if(key==a[mid]) return mid;
    else if(key>a[mid]) return binsearch(a,key,mid+1,j);
    else return binsearch(a,key,i,mid-1);
    return -1;
}
signed main(){
//  ios::sync_with_stdio(0);
//  cin.tie(0);cout.tie(0);
//  freopen("in.cpp","r",stdin);
//  freopen("out.cpp","w",stdout);
    cout<<"递归版折半查找 By 2020101603 rwl\n";
    cout<<"输入元素个数n(范围1e5)，然后依次输入n个整数\n";
    cin>>n;
    for(int i=1;i<=n;i++) cin>>a[i];
    cout<<"请输入你要查找的数字（找到返回下标，否则返回-1）：\n";
    while(cin>>num){
        idx=binsearch(a,num,1,n);
        printf("num的下标是：%d\n",idx);
    }
    cout<<"程序结束\n";
    return 0;
}

```