05-F4

二叉树

中序遍历：后继与前驱

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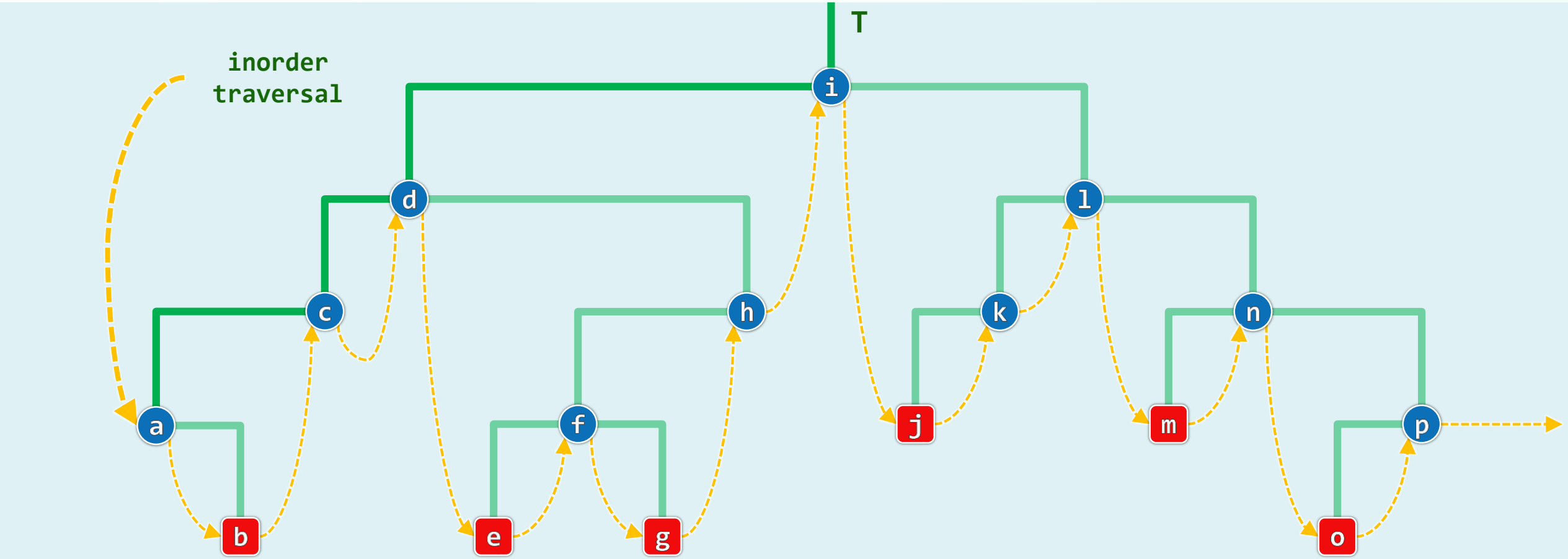
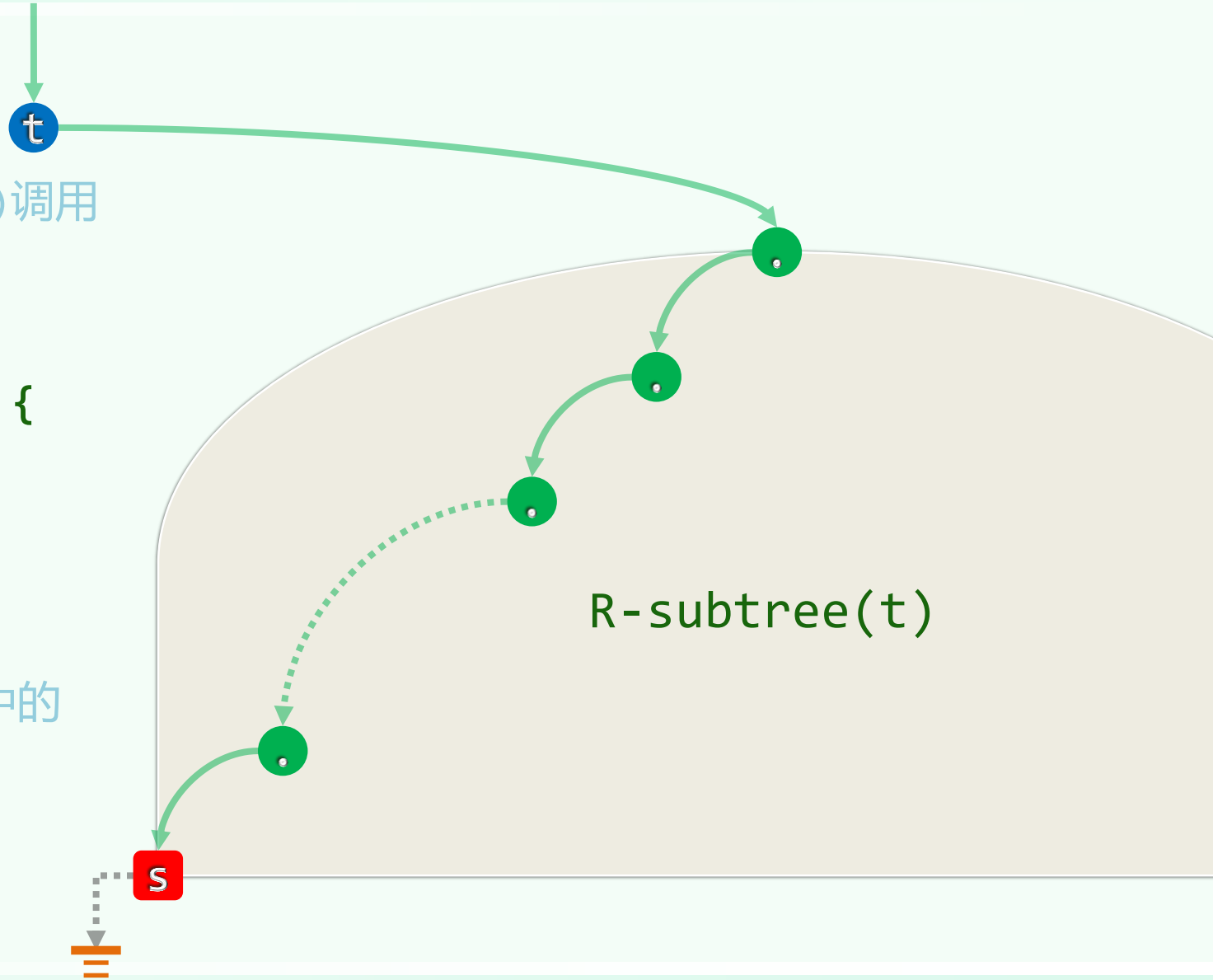
```
for ( BinNodePosi<T> t = first(); t; t = t->succ() )
```

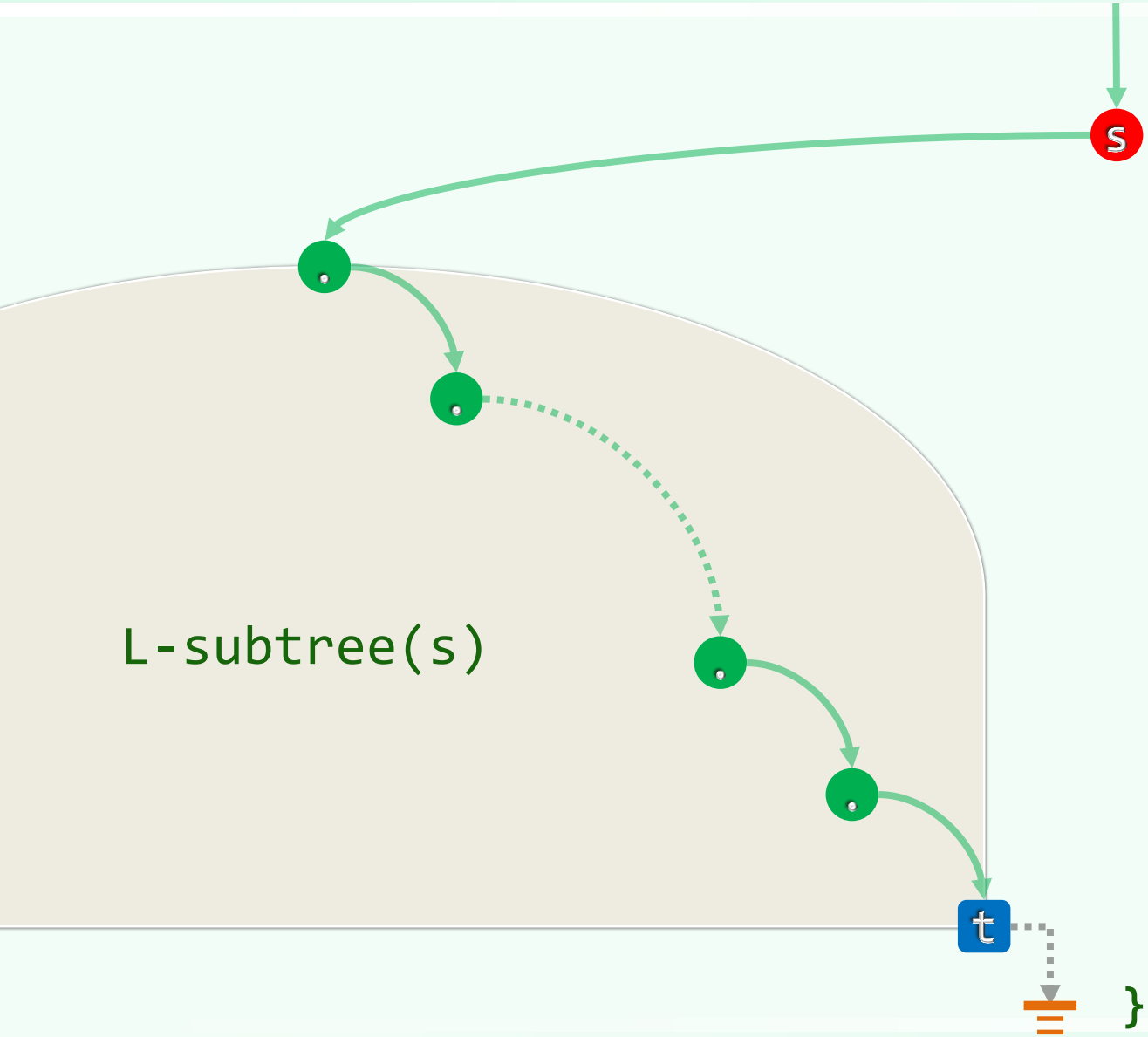


直接后继：最靠左的右后代

```
//在中序遍历意义下的直接后继
//稍后将被BST::remove中的removeAt()调用
template <typename T>
BinNodePosi<T> BinNode<T>::succ() {
   BinNodePosi<T> s = this;
   if ( rc ) { //若有右孩子，则
      s = rc; //直接后继必是右子树中的
      while ( HasLChild( * s ) )
         s = s->lc; //最小节点
   } else /* ... */
```



直接后继：最低的左祖先




```
} else { //否则
   //后继应是“以当前节点为直接前驱者”
   while ( IsRChild( * s ) )
      s = s->parent; //不断朝左上移动
   //最后再朝右上移动一步
   s = s->parent; //可能是NULL
}
return s; //两种情况下，运行时间分别为
} //当前节点的高度与深度，不过𝒪(h)
```