

TI DSP, MCU 및 Xilinx Zynq FPGA 프로그래밍 전문가 과정

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1. AVL Tree – delete 재귀함수 없이 스택으로 구현하기 (그림 그리기)

```
void avl_del(avl **root, int data)
{
```

```
    int cnt = 0, num, i;
    avl **tmp = root;
    stack *top = NULL;
```

```
    while(*tmp)
    {
```

```
        push(&top, tmp);
```

```
        if((*tmp)->data > data)
```

```
            tmp = &(*tmp)->left;
```

```
        else if((*tmp)->data < data)
```

```
            tmp = &(*tmp)->right;
```

```
        else if((*tmp)->left && (*tmp)->right)
```

```
        {
```

```
            find_max(&(*tmp)->left, &num);
```

```
            (*tmp)->data = num;
```

```
            goto lets_rot;
```

```
        }
```

```
        else
```

```
        {
```

```
            int counter = cnt;
```

```
            (*tmp) = chg_node(*tmp, &top);
```

```
            goto lets_rot;
```

```
        }
```

```
    }
```

```
lets_rot:
```

```
while(stack_is_not_empty(top))
```

```
{
```

```
    avl **t = (avl **)pop(&top);
```

```
    (*t)->lev = update_level(*t);
```

```
    if(abs(rotation_check(*t)) > 1)
```

```
    {
```

```
        printf("Delete Rotation!\n");
```

```
        *t = rotation(*t, kinds_of_rot(*t,
```

```
data));
```

```
    }
```

```
}
```

```
}
```

