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MAIN TREAP (KEY + PRIORITY)

```
310        std::cout << "NODES WITH NO CHILDREN: "

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

versity\.vscode\extensions\ms-vscode.cpptools-1.20.5-
n-30hp1bvi.5ay' '--stdout=Microsoft-MIEngine-Out-30l2
e-Pid-jf00qi40.vei' '--dbgExe=C:\msys64\ucrt64\bin\gd
L--7 (32452)
    |--8 (20596)
    |    |--9 (18763)
    L--4 (21796)
        |--5 (8857)
        |    |--6 (3455)
        L--2 (18103)
            |--3 (10273)
            L--1 (358)
```

REDESIGNED BY HAND (PRIORITY)

```
                    7 (32452)
                   /         \
            4 (21796)        8 (20596)
           /        \                \
      2 (18103)     5 (8857)        9 (18763)
     /        \              \
1 (358)     3 (10273)       6 (3455)
```
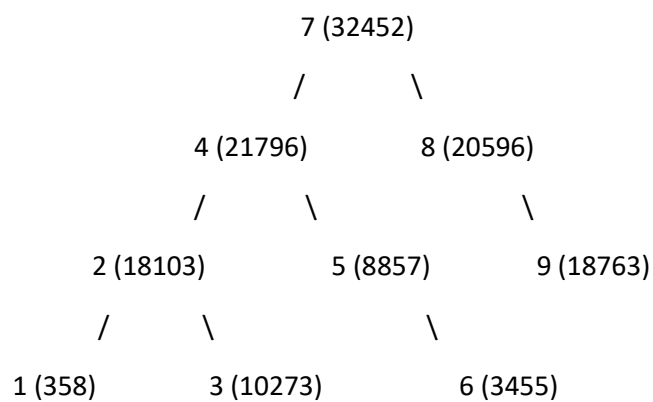
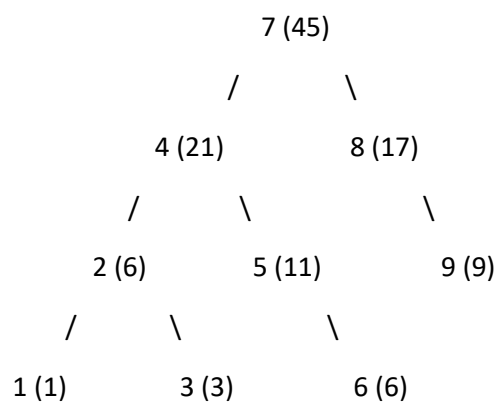**1.**

```
Key: 7, Node Sum (Including + Below): 45
Key: 4, Node Sum (Including + Below): 21
Key: 2, Node Sum (Including + Below): 6
Key: 1, Node Sum (Including + Below): 1
Key: 3, Node Sum (Including + Below): 3
Key: 5, Node Sum (Including + Below): 11
Key: 6, Node Sum (Including + Below): 6
Key: 8, Node Sum (Including + Below): 17
Key: 9, Node Sum (Including + Below): 9
```
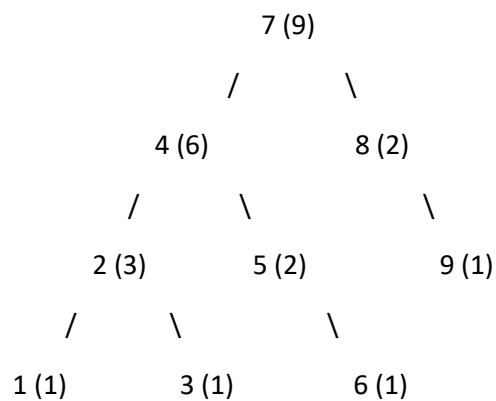
REDESIGNED BY HAND (SUM)

```
                        7 (45)

                    /          \

            4 (21)            8 (17)

         /        \                  \

     2 (6)        5 (11)          9 (9)

    /      \            \

 1 (1)      3 (3)        6 (6)
```

2.

```
Key: 7, Node Count (Including + Below): 9
Key: 4, Node Count (Including + Below): 6
Key: 2, Node Count (Including + Below): 3
Key: 1, Node Count (Including + Below): 1
Key: 3, Node Count (Including + Below): 1
Key: 5, Node Count (Including + Below): 2
Key: 6, Node Count (Including + Below): 1
Key: 8, Node Count (Including + Below): 2
Key: 9, Node Count (Including + Below): 1
```
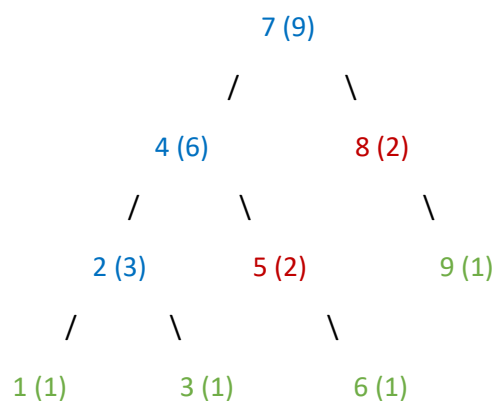
REDESIGNED BY HAND (COUNT)

```
                        7 (9)
                       /      \
              4 (6)              8 (2)
             /      \                 \
         2 (3)        5 (2)             9 (1)
        /    \            \
    1 (1)      3 (1)        6 (1)
```

3, 4, 5.

```
NODES WITH NO CHILDREN: 4
NODES WITH ONE CHILD: 2
NODES WITH TWO CHILDREN: 3
```

REDESIGNED BY HAND (0 = GREEN, 1 = RED, 2 = BLUE)

```
                        7 (9)
                       /      \
              4 (6)              8 (2)
             /      \                 \
         2 (3)        5 (2)             9 (1)
        /    \            \
    1 (1)      3 (1)        6 (1)
```

ENTIRE SCREENSHOT

```
versity\.vscode\extensions\ms-vscode.cpptools-1.20.5-win32-x64\debugAdapters\bin\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-I
n-30hp1bvi.5ay' '--stdout=Microsoft-MIEngine-Out-30l2enb3.zyt' '--stderr=Microsoft-MIEngine-Error-dww30uf0.v2j' '--pid=Microsoft-MIEngin
e-Pid-jf00qi40.vei' '--dbgExe=C:\msys64\ucrt64\bin\gdb.exe' '--interpreter=mi'
L--7 (32452)
     |--8 (20596)
     |   |--9 (18763)
     L--4 (21796)
         |--5 (8857)
         |    |--6 (3455)
         L--2 (18103)
              |--3 (10273)
              L--1 (358)

Key: 7, Node Sum (Including + Below): 45
Key: 4, Node Sum (Including + Below): 21
Key: 2, Node Sum (Including + Below): 6
Key: 1, Node Sum (Including + Below): 1
Key: 3, Node Sum (Including + Below): 3
Key: 5, Node Sum (Including + Below): 11
Key: 6, Node Sum (Including + Below): 6
Key: 8, Node Sum (Including + Below): 17
Key: 9, Node Sum (Including + Below): 9

Key: 7, Node Count (Including + Below): 9
Key: 4, Node Count (Including + Below): 6
Key: 2, Node Count (Including + Below): 3
Key: 1, Node Count (Including + Below): 1
Key: 3, Node Count (Including + Below): 1
Key: 5, Node Count (Including + Below): 2
Key: 6, Node Count (Including + Below): 1
Key: 8, Node Count (Including + Below): 2
Key: 9, Node Count (Including + Below): 1

NODES WITH NO CHILDREN: 4
NODES WITH ONE CHILD: 2
NODES WITH TWO CHILDREN: 3

Key 7 destroyed.
Key 8 destroyed.
Key 9 destroyed.
Key 4 destroyed.
Key 5 destroyed.
Key 6 destroyed.
Key 2 destroyed.
Key 3 destroyed.
Key 1 destroyed.
PS C:\Users\Griffith University\OneDrive - Griffith University\Desktop\Projects\Object Orientated Programming>
```