

Knapsack Problem

```
#include<stdio.h>

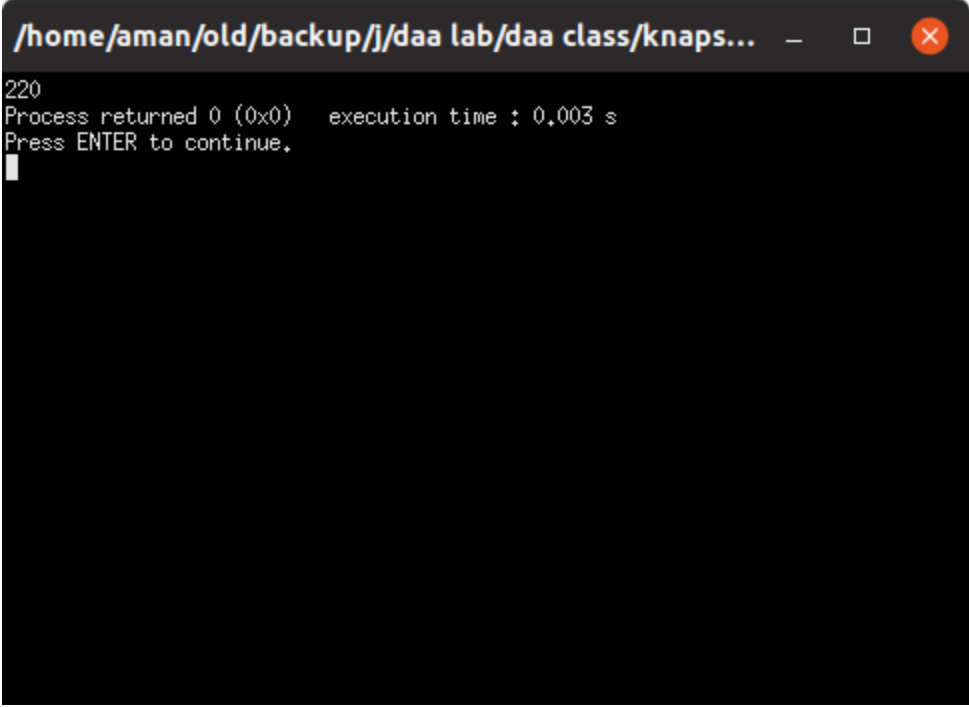
int max(int a, int b) { return (a > b)? a : b; }

int knapSack(int W, int wt[], int val[], int n)
{
    if (n == 0 || W == 0)
        return 0;

    if (wt[n-1] > W)
        return knapSack(W, wt, val, n-1);

    else return max( val[n-1] + knapSack(W-wt[n-1], wt, val, n-1),
                    knapSack(W, wt, val, n-1)
                    );
}

int main()
{
    int val[] = {60, 100, 120};
    int wt[] = {10, 20, 30};
    int W = 50;
    int n = sizeof(val)/sizeof(val[0]);
    printf("%d", knapSack(W, wt, val, n));
    return 0;
}
```



A terminal window with a dark background and light text. The title bar shows the file path `/home/aman/old/backup/./daa lab/daa class/knaps...`. The output of the program is displayed as follows:

```
220
Process returned 0 (0x0)   execution time : 0.003 s
Press ENTER to continue.
```

A cursor is visible on the line following the prompt.