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#include<stdio.h>

int max(int a, int b) {
    if(a>b){
        return a;
    } else {
        return b;
    }
}

int knapsack(int W, int wt[], int val[], int n) {
    int i, w;
    int knap[n+1][W+1];
    for (i = 0; i <= n; i++) {
        for (w = 0; w <= W; w++) {
            if (i==0 || w==0)
                knap[i][w] = 0;
            else if (wt[i-1] <= w)
                knap[i][w] = max(val[i-1] + knap[i-1][w-wt[i-1]], knap[i-1][w]);
            else
                knap[i][w] = knap[i-1][w];
        }
    }
    return knap[n][W];
}

int main() {
    int val[] = {20, 25, 40};
    int wt[] = {25, 20, 30};
    int W = 50;
    int n = sizeof(val)/sizeof(val[0]);
    printf("The solution is : %d", knapsack(W, wt, val, n));
    return 0;
}

```

