KNAPSACK.C - Code::Blocks 20.03

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MULTISTAGE_GRAPH.C | KNAPSACK.C

```c
// BE20E05F062  AKASH SHRIDHARANS
#include<stdio.h>

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

int knapSack(int W, int wt[], int val[], int n)
{
    int i, w;
    int K[n+1][W+1];

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

int main()
{
    int i, n, val[20], wt[20], W;
    printf("Enter number of items:");
    scanf("%d", &n);

    printf("Enter value and weight of items:\n");
    for(i = 0;i < n; ++i){
        scanf("%d%d", &val[i], &wt[i]);
    }

    printf("Enter size of knapsack:");
    scanf("%d", &W);

    printf("%d", knapSack(W, wt, val, n));
    return 0;
}
```

C/C++ | Windows (CR+LF) | WINDOWS-1252 | Line 1, Col 34, Pos 33 | Insert | Read/Write | defa...

C:\Users\akash\Desktop\5th_sem_books&PPTs\DAA\DAA-lab-works\KNAPSACK.exe

```
Enter number of items:5
Enter value and weight of items:
1 5
2 10
3 15
4 20
5 25
Enter size of knapsack:45
9
Process returned 0 (0x0)   execution time : 71.899 s
Press any key to continue.
```

Type here to search

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