#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 n,i,W;

printf("Enter number of items: ");

scanf("%d",&n);

int weight[n],profit[n];

printf("Enter maximum capacity of knapsack: ");

scanf("%d",&W);

printf("Enter weights of items: \n");

for(i=0;i<n;i++)

{

printf("Enter weight of item %d: ",i+1);

scanf("%d",&weight[i]);

}

printf("Enter profit: ");

for(i=0;i<n;i++)

{

printf("Enter profit of item %d: ",i+1);

scanf("%d",&profit[i]);

}

printf("Maximum profit: %d", knapSack(W, weight, profit, n));

return 0;

}

OUTPUT:

