program -12

#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[] = { 20, 10, 30 };

int W = 50;

int n = sizeof(val) / sizeof(val[0]);

printf("%d", knapSack(W, wt, val, n));

return 0;

}

output:

[shilpa@shilpa-linux ADA\_LAB-PROG-main]$ gcc -o knapsack knapsack.c

[shilpa@shilpa-linux ADA\_LAB-PROG-main]$ ./knapsack

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[shilpa@shilpa-linux ADA\_LAB-PROG-main]$