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ROLL NO: S -56

SUBJECT: AOA

EXPERIMENT NO: 5

To implement fractional knapsack using greedy method.

```
#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;

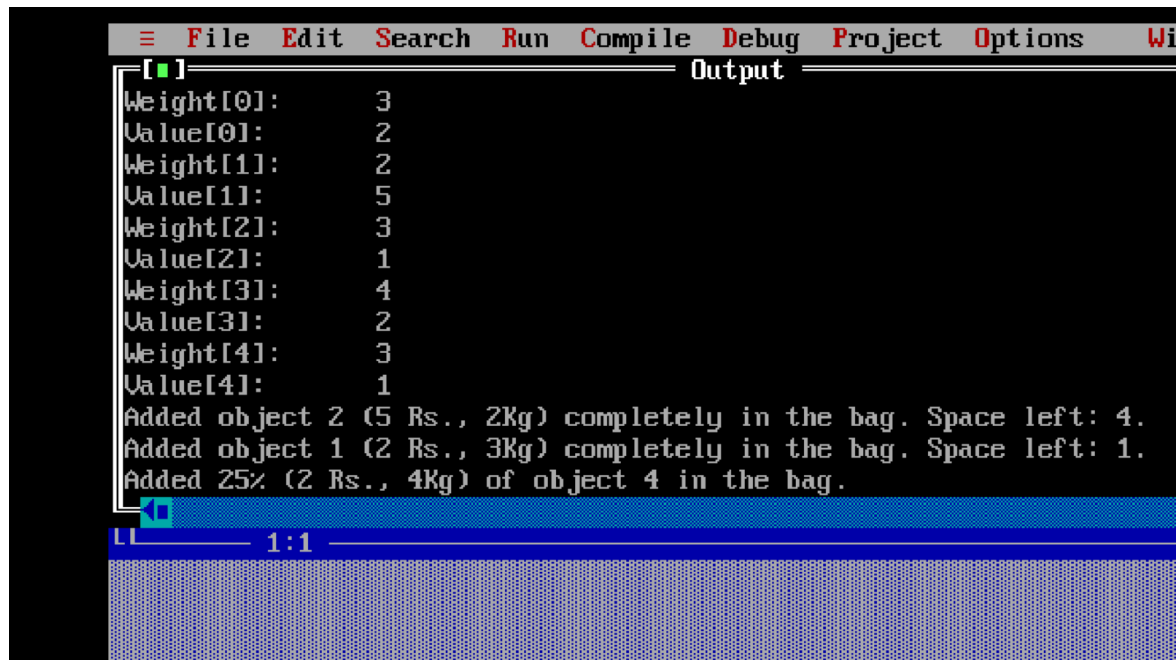
    if (wt[n - 1] > W)
        return knapSack(W, wt, val, n - 1);

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

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

```
    return 0;  
}
```

OUTPUT:



```
File Edit Search Run Compile Debug Project Options Wi  
Output  
Weight[0]:      3  
Value[0]:       2  
Weight[1]:      2  
Value[1]:       5  
Weight[2]:      3  
Value[2]:       1  
Weight[3]:      4  
Value[3]:       2  
Weight[4]:      3  
Value[4]:       1  
Added object 2 (5 Rs., 2Kg) completely in the bag. Space left: 4.  
Added object 1 (2 Rs., 3Kg) completely in the bag. Space left: 1.  
Added 25% (2 Rs., 4Kg) of object 4 in the bag.  
1:1
```