Practical-2

AIM: In a far away Galaxy of Tilky Way, there was a planet Tarth where the sport of Competitive Coding was very popular. According to legends, there lived a setter known for loving knapsack type problems. N objects in a row, with weights W1,W2,…,WN, you need to find the maximum number of consecutive objects you can fill in a bag of maximum capacity C such that the total weight of objects taken is at least K. In other words, pick objects such that-The total weight of collected objects is at least K. The total weight does not exceed C. The objects picked must be consecutive (i.e. a subarray of the objects need to be picked) The number of objects is maximized. You need to print this maximum value.

- Program

```
#include<bits/stdc++.h>
using namespace std;

int main(){
    int n, k, c;
    int maxi = 0;
    int total, count;
    cin >> n >> c >> k;
    int w[n];
    for(int i=0;i<n;i++){
        cin >> w[i];
    }
    for(int i=0;i<n;i++){
        total = 0;
        count = 0;
        for(int j=i; j<n; j++){
            total = total + w[j];
            count++;
            if(total > c){
                break;
            }
            else if(total >= k and total <= c){
                maxi = max(maxi, count);
            }
        }
    }
    cout << maxi;
}
```

Output

```
This prorgram is developed by 22CE097_ShivangPatel
2
5 5 5
5 4 3 2 1
2

5 5 4
1 4 1 1 1
2
```

- Conclusion

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Student Signature Faculty Signature Marks