Y M D PHANI RAJU

RA1911042010104

EXPERIMENT – 3

AIM :

To develop a agent program that is knapsack problem for tackling real world problems

CODE :

#include <iostream>

using namespace std;

int max(int x, int y) {

return (x > y) ? x : y;

}

int knapSack(int W, int w[], int v[], int n) {

int i, wt;

int K[n + 1][W + 1];

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

for (wt = 0; wt <= W; wt++) {

if (i == 0 || wt == 0)

K[i][wt] = 0;

else if (w[i - 1] <= wt)

K[i][wt] = max(v[i - 1] + K[i - 1][wt - w[i - 1]], K[i - 1][wt]);

else

K[i][wt] = K[i - 1][wt];

}

}

return K[n][W];

}

int main() {

cout << "Enter the number of items in a Knapsack:";

int n, W;

cin >> n;

int v[n], w[n];

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

cout << "Enter value and weight for item " << i << ":";

cin >> v[i];

cin >> w[i];

}

cout << "Enter the capacity of knapsack";

cin >> W;

cout << knapSack(W, w, v, n);

return 0;

}

OUTPUT :

