# Knapsack Problem

Write a Genetics program to solve http://en.wikipedia.org/wiki/**Knapsack\_problem**.

In this problem, you will be given set of objects and benefit from them

And size of your knapsack. you are to select items that fit in knapsack and give you maximum benefit!

Input will be in following format

**C the number of test cases (Maximum 20 test)**

**N** the number of items (**Maximum 50 item**)

**S** size of knapsack

**N pair values** (weight, benefit)

Input (just example):

1

3

10

4 4

7 6

5 3

(e.g. we have 1 test case, in the first case, we have an item with weight 7 and benefit 6)

Output

**Case ID:**  total benefit

**M** number of items

**M pair values** (weight, benefit) selected

Output (just example):

**Case 1: 7**

**2**

**4 4**

**5 3**

\*\* You will be graded based on your output (the higher values, the higher grades)

\*\* The assignment is groups of 3-4

\*\* The assignment should be solved before coming to lab