KNAPSACK PROBLEM USING GREEDY APPROACH

```
import java.io.IOException;
import java.util.Scanner;

class Fractional_Knapsack
{
   public static void main(String args[]) throws
IOException
   {
      int i,j=0,max_qty,m,n;
      float sum=0,max;
      Scanner sc = new Scanner(System.in);
      int array[][]=new int[2][20];
      System.out.println("Enter no of items");
      n=sc.nextInt();

      System.out.println("Enter the weights of
each items");
      for(i=0;i<n;i++)
         array[0][i]=sc.nextInt();

      System.out.println("Enter the values of
each items");
      for(i=0;i<n;i++)
         array[1][i]=sc.nextInt();

      System.out.println("Enter maximum
volume of knapsack :");
      max_qty=sc.nextInt();

      m=max_qty;
      while(m>=0)
      {
         max=0;
         for(i=0;i<n;i++)
         {

if(((float)array[1][i])/((float)array[0][i])>max)
            {

max=((float)array[1][i])/((float)array[0][i]);
               j=i;
            }
         }
         if(array[0][j]>m)
         {
            System.out.println("Quantity of item
number: " +  (j+1) + " added is " +m);
            sum+=m*max;
            m=-1;
         }
         else
         {
            System.out.println("Quantity of item
number: " + (j+1) + " added is " + array[0][j]);
            m-=array[0][j];
            sum+=(float)array[1][j];
            array[1][j]=0;
         }
      }
      System.out.println("The total profit is " +
sum);
      sc.close();
   }
}
```