**CODE QUESTION - 10 MARKS**

**Q1. Fractional Knapsack:**

**For getting values with maximum profits in the knapsack with fraction of product/s. You are required to complete a method** doFractionalKnapsack().

**You are given a knapsack of maximum weight capacity W, and you have to take N items in your knapsack. Provide the product profit PP and product weight PW for each item, then find the most valuable combination of items to include in the knapsack without exceeding its weight capacity.**

**Public Case:**

|  |  |  |
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| **CASE #01** |  |  |
| **INPUT**  W: 10  N: 3  PW[3]: 2 5 3  PP[3]: 7 1 3 |  |  |
| **OUTPUT**  Max Profit: 11.0 |  |  |

**Private Cases:**

|  |  |  |
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| **CASE #01** | **CASE #02** | **CASE #03** |
| **INPUT**  W: 10  N: 5  PW[5]: 2 8 3 1 6  PP[5]: 5 2 7 2 1 | **INPUT**  W: 15  N: 4  PW[4]: 5 10 10 5  PP[4]: 10 5 5 10 | **INPUT**  W: 25  N: 5  PW[5]: 5 5 5 5 5  PP[5]: 1 2 3 4 5 |
| **OUTPUT**  Max Profit: 15.0 | **OUTPUT**  Max Profit: 22.5 | **OUTPUT**  Max Profit: 15.0 |