Coin Distribution Problem

Problem Statement

Find the minimum number of coins required to form any value between 1 to N, both inclusive. Cumulative value of coins should not exceed N. Coin denominations are 1 Rupee, 2 Rupee and 5 Rupee. Let's Understand the problem using the following example. Consider the value of N is 13, then the minimum number of coins required to formulate any value between 1 and 13, is 6. One 5 Rupee, three 2 Rupee and two 1 Rupee coins are required to realize any value between 1 and 13. Hence this is the answer. However, if one takes two 5 Rupee coins, one 2 rupee coin and two 1 rupee coin, then too all values between 1 and 13 are achieved. But since the cumulative value of all coins equals 14, i.e., exceeds 13, this is not the answer.

- **Input Format:**
  - A single integer value.
- **Output Format:**
  - Four space separated integer values.
    - 1st – Total number of coins.
    - 2nd – number of 5 Rupee coins.
    - 3rd – number of 2 Rupee coins.
    - 4th – number of 1 Rupee coins.
- **Constraints:**
  - 0 < n < 1000

Refer the sample output for formatting

Sample Input

```
13
```

Sample Output

6 1 3 2

Explanation

- The minimum number of coins required is 6 with in it:
  - minimum number of 5 Rupee coins = 1
  - minimum number of 2 Rupee coins = 3
  - minimum number of 1 Rupee coins = 2

Using these coins, we can form any value with in the given value and itself, like below:

Here the given value is 13

- For 1 = one 1 Rupee coin
- For 2 = one 2 Rupee coin
- For 3 = one 1 Rupee coin and one 2 Rupee coins
- For 4 = two 2 Rupee coins
- For 5 = one 5 Rupee coin
- For 6 = one 5 Rupee and one 1 Rupee coins
- For 7 = one 5 Rupee and one 2 Rupee coins
- For 8 = one 5 Rupee, one 2 Rupee and one 1 Rupee coins
- For 9 = one 5 Rupee and two 2 Rupee coins
- For 10 = one 5 Rupee, two 2 Rupee and one 1 Rupee coins
- For 11 = one 5 Rupee, two 2 Rupee and two 1 Rupee coins
- For 12 = one 5 Rupee, three 2 Rupee and one 1 Rupee coins
- For 13 = one 5 Rupee, three 2 Rupee and two 1 Rupee coins