COMP1002 Assessment 3

Dec 3rd, 2021

Q1

Input: numbers of different coins, list of the coins' value, the sum of the face value

Output: minimum coins required

Assume *x* is the sum of the face value of coins

Assume *coin_value* is a list of the coins' values.

Calculate *x* rounded down with every element in *coin_value*.

Add the result into a list named *res.*

Calculate the sum of the product of the n^{th} element in list *coin_value* multiply value of (n^{th} element+1) in list *res.*

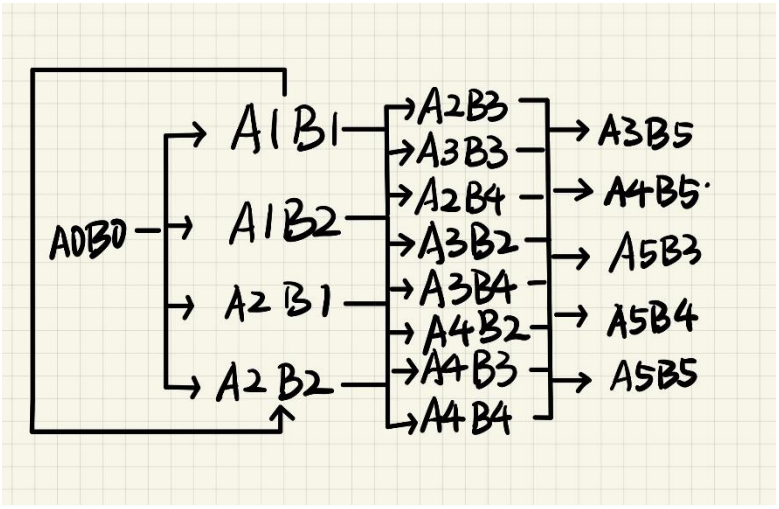
If the sum equals *x*:

The numbers of different coins needed are the elements in list *res*.

Then the minimum value is the sum of the element in list *res.*

Q2

(a) state: a collection of the condition that Alice and Bob call the numbers in the same round.



(b) Yes. Because there's the result when the value of B is bigger than the value of A. For example, Alice calls 1, Bob calls 2. Alice calls 3, then Bob calls 4. Alice calls 4, Bob calls 5. Bob finally wins the game.