Lab6 Questions

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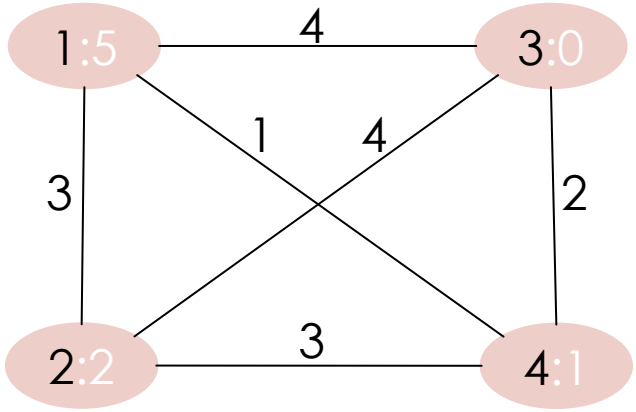
Lab6.A:Bunnytopia Mini

- Satori was obsessed with a game called Bunnytopia recently. Today she invited her friend FluffyBunny to compete.
- There are N villages in the world of Bunnytopia, which are connected by M undirected edges.
- Initially all the villages are free, and the two players take turns to capture villages. In each turn, the current player capture exactly one village. Once one player has captured village i, she can gain a_i coins **this turn** and this village cannot be captured by both players ever again. In addition, if the two villages connected by edge j are captured by the current player(and of course, one of the village is the one that the current player captures this turn), she will receive b_j coins **this turn**. Let S be the total coins the player receives in the k^{th} turn, and she will add $c_k \oplus S$ to her final points.(Here $\oplus$ means exclusive OR)
- As FluffyBunny is fairly confident about her skills, she asks Satori to take the first move.
- Assume P = Satori's final points minus FluffyBunny's final points. Satori wants to maximum P while FluffyBunny wants to minimize P. You know the two girls are super smart; they always choose the optimal strategy. Can you calculate P for them?

Sample Input

4 6
5 2 0 1
1 2 3
1 3 4
1 4 1
2 3 4
2 4 3
3 4 2
1 4 3 4

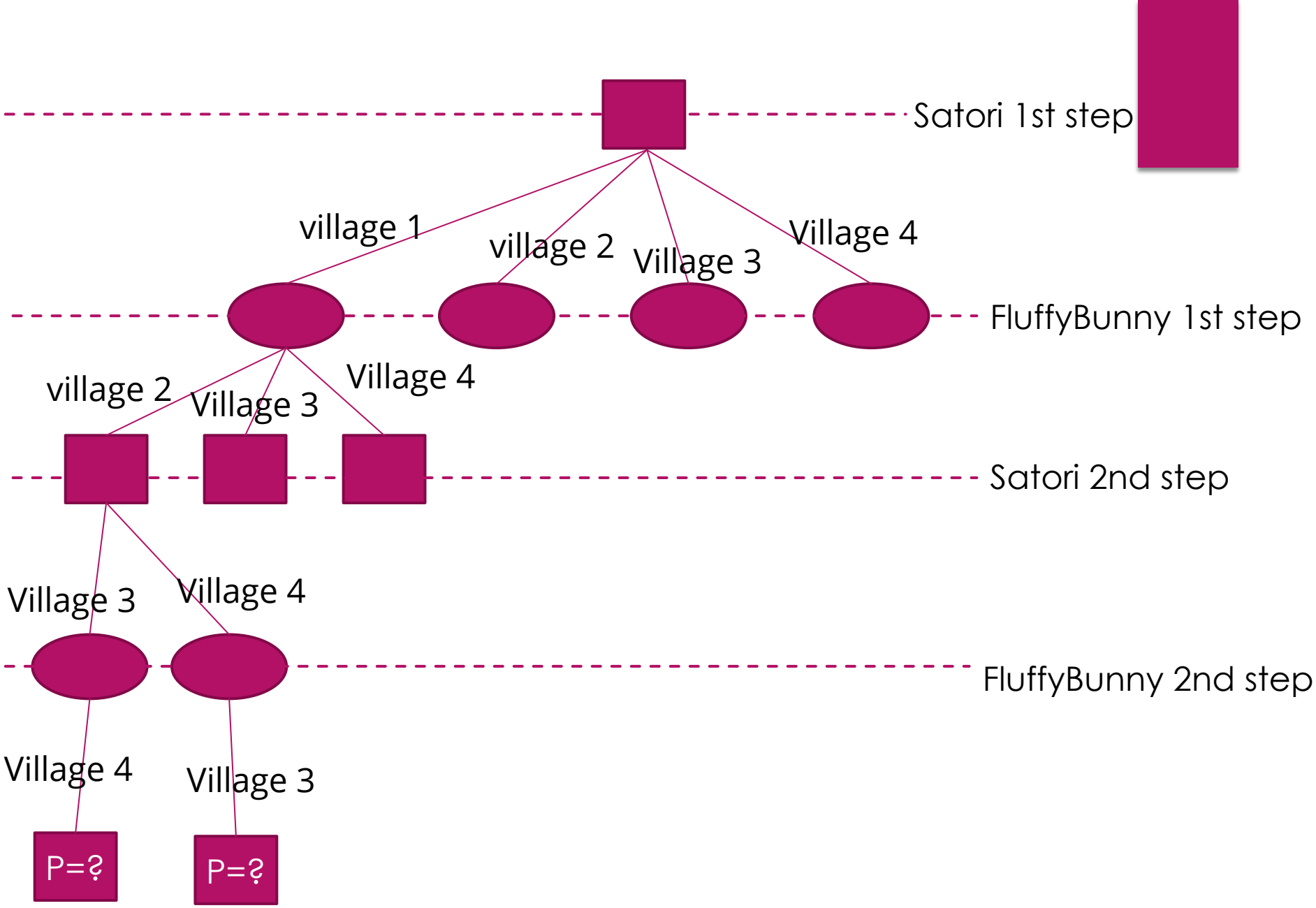


c1	c2	c3	c4
1	4	3	4

Sample Output
3

Sample Input

4 6
5 2 0 1
1 2 3
1 3 4
1 4 1
2 3 4
2 4 3
3 4 2
1 4 3 4

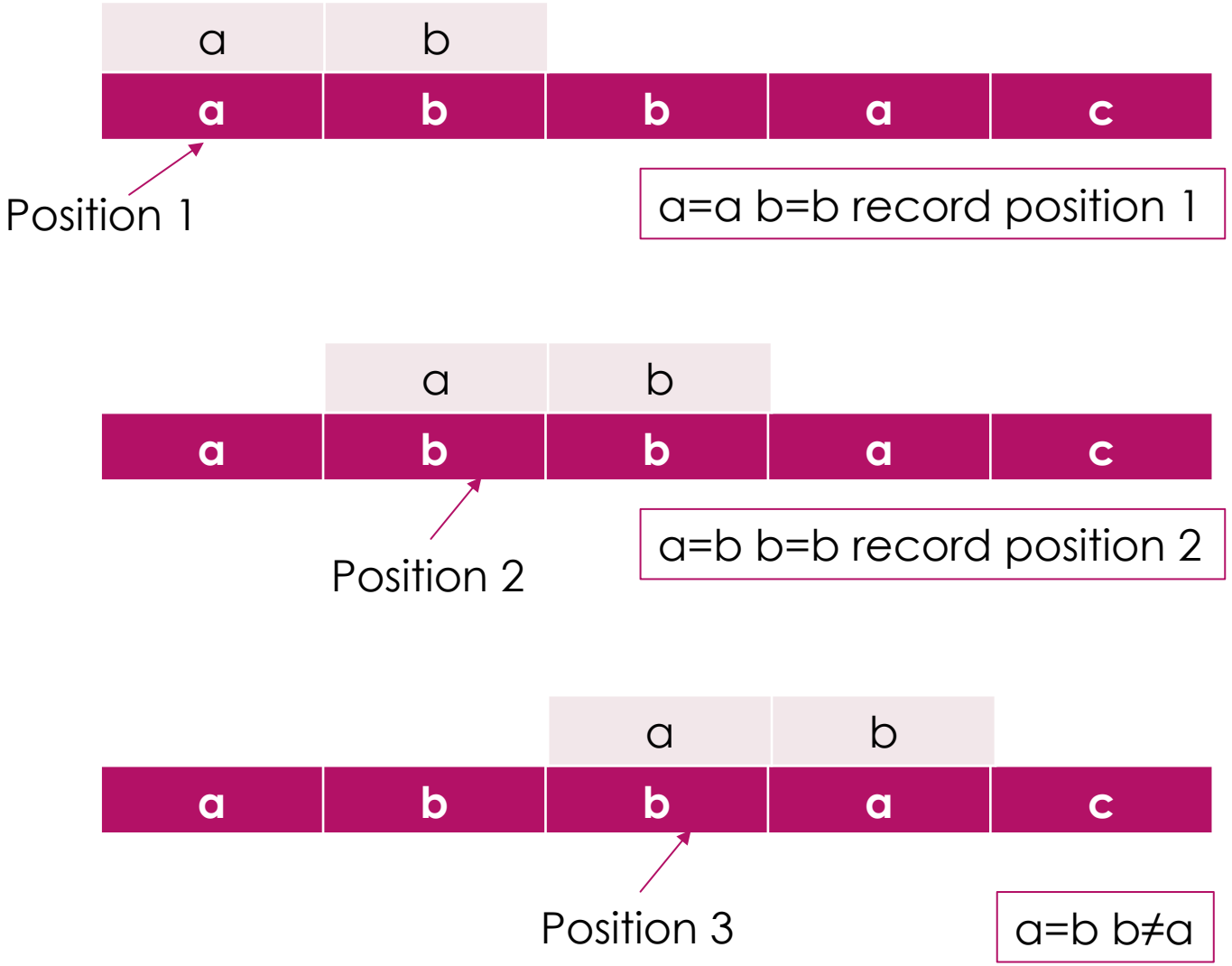


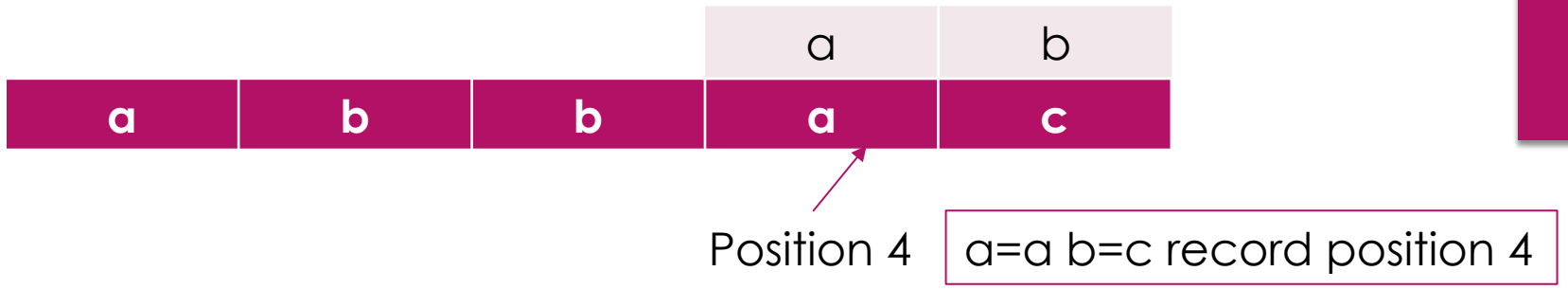
Lab6.B: Myopia

- **RUN** is matching two English lowercase letter strings A and B.
- He hopes to find all position i such that $A_{i\ldots i+|B|-1} = B_{1\ldots|B|}$.
- However, **RUN** has severe myopia. A character c_a in A and a character c_b in B is considered identical, if and only if one of the following rules is satisfied:
  - $c_a = c_b$
  - c_a is the character next to c_b in the alphabet (for $c_b \neq$ 'z')
- Help **RUN** match these two strings in a myopia way.

Sample Input

abbac
ab





Sample Output

3
1 2 4