**Lab2 Analysis and Code**

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1. **Only 2 states**
2. **Decision 1 over 2**

**(i)Different Initial States:**

21

12

21

12(and so on)

(Hence, they **never** end up in same states, hence B satisfies its condition **(disliking A)** in the end of each step.

**(ii)Same Initial States:**

12

21

12

21(and so on)

(Hence, they **never** end up in same states, hence B satisfies its condition (**disliking A**) in the end of each step.

The above two cases A and B show that the **initial states do not play a role** in predicting which among A and B ends up satisfying its condition. Irrespective of the initial states the pattern is similar.

1. **Decision 2 over 1**

**(i)Different Initial States:**

11

22

11

12(and so on)

(Hence, they **always** end up in same states, hence A satisfies its condition (**liking of B**) in the end of each step)

**(ii)Same Initial States:**

11

22

11

22(and so on)

(Hence, they **always** end up in same states, hence A satisfies its condition (**liking of B**) in the end of each step.

The above two cases A and B show that the **initial states do not play a role** in predicting which among A and B ends up satisfying its condition. Irrespective of the initial states the pattern is similar.

1. **With 3 States: (Including some Non-determinism in the choice of B)**

12

21

13

31

12

21

13(Hence, there is no discernable pattern that emerges)