**Question Link:-** [**https://workat.tech/machine-coding/practice/snake-and-ladder-problem-zgtac9lxwntg**](https://workat.tech/machine-coding/practice/snake-and-ladder-problem-zgtac9lxwntg)

**Problem Statement**

Create a snake and ladder application. The application should take as input (from the command line or a file):

* Number of snakes (s) followed by s lines each containing 2 numbers denoting the head and tail positions of the snake.
* Number of ladders (l) followed by l lines each containing 2 numbers denoting the start and end positions of the ladder.
* Number of players (p) followed by p lines each containing a name.

After taking these inputs, you should print all the moves in the form of the current player name followed by a random number between 1 to 6 denoting the die roll and the initial and final position based on the move.  
Format: <player\_name> rolled a <dice\_value> and moved from <initial\_position> to <final\_position>

When someone wins the game, print that the player won the game.  
Format: <player\_name> wins the game

**Rules of the game**

* The board will have 100 cells numbered from 1 to 100.
* The game will have a six sided dice numbered from 1 to 6 and will always give a random number on rolling it.
* Each player has a piece which is initially kept outside the board (i.e., at position 0).
* Each player rolls the dice when their turn comes.
* Based on the dice value, the player moves their piece forward that number of cells. Ex: If the dice value is 5 and the piece is at position 21, the player will put their piece at position 26 now (21+5).
* A player wins if it exactly reaches the position 100 and the game ends there.
* After the dice roll, if a piece is supposed to move outside position 100, it does not move.
* The board also contains some snakes and ladders.
* Each snake will have its head at some number and its tail at a smaller number.
* Whenever a piece ends up at a position with the head of the snake, the piece should go down to the position of the tail of that snake.
* Each ladder will have its start position at some number and end position at a larger number.
* Whenever a piece ends up at a position with the start of the ladder, the piece should go up to the position of the end of that ladder.
* There could be another snake/ladder at the tail of the snake or the end position of the ladder and the piece should go up/down accordingly.

**Assumptions you can take apart from those already mentioned in rules**

* There won’t be a snake at 100.
* There won’t be multiple snakes/ladders at the same start/head point.
* It is possible to reach 100, i.e., it is possible to win the game.
* Snakes and Ladders do not form an infinite loop.

**Sample Input**

9

62 5

33 6

49 9

88 16

41 20

56 53

98 64

93 73

95 75

8

2 37

27 46

10 32

51 68

61 79

65 84

71 91

81 100

2

Gaurav

Sagar

**Sample Output**

Gaurav rolled a 6 and moved from 0 to 6

Sagar rolled a 1 and moved from 0 to 1

Gaurav rolled a 6 and moved from 6 to 12

Sagar rolled a 4 and moved from 1 to 5

Gaurav rolled a 4 and moved from 12 to 16

Sagar rolled a 6 and moved from 5 to 11

Gaurav rolled a 5 and moved from 16 to 21

Sagar rolled a 4 and moved from 11 to 15

Gaurav rolled a 1 and moved from 21 to 22

Sagar rolled a 6 and moved from 15 to 21

Gaurav rolled a 6 and moved from 22 to 28

Sagar rolled a 2 and moved from 21 to 23

Gaurav rolled a 6 and moved from 28 to 34

Sagar rolled a 6 and moved from 23 to 29

Gaurav rolled a 5 and moved from 34 to 39

Sagar rolled a 2 and moved from 29 to 31

Gaurav rolled a 2 and moved from 39 to 20

Sagar rolled a 5 and moved from 31 to 36

Gaurav rolled a 3 and moved from 20 to 23

Sagar rolled a 5 and moved from 36 to 20

Gaurav rolled a 6 and moved from 23 to 29

Sagar rolled a 3 and moved from 20 to 23

Gaurav rolled a 2 and moved from 29 to 31

Sagar rolled a 3 and moved from 23 to 26

Gaurav rolled a 3 and moved from 31 to 34

Sagar rolled a 5 and moved from 26 to 31

Gaurav rolled a 3 and moved from 34 to 37

Sagar rolled a 4 and moved from 31 to 35

Gaurav rolled a 2 and moved from 37 to 39

Sagar rolled a 5 and moved from 35 to 40

Gaurav rolled a 2 and moved from 39 to 20

Sagar rolled a 5 and moved from 40 to 45

Gaurav rolled a 2 and moved from 20 to 22

Sagar rolled a 6 and moved from 45 to 68

Gaurav rolled a 3 and moved from 22 to 25

Sagar rolled a 3 and moved from 68 to 91

Gaurav rolled a 5 and moved from 25 to 30

Sagar rolled a 2 and moved from 91 to 73

Gaurav rolled a 5 and moved from 30 to 35

Sagar rolled a 6 and moved from 73 to 79

Gaurav rolled a 5 and moved from 35 to 40

Sagar rolled a 1 and moved from 79 to 80

Gaurav rolled a 4 and moved from 40 to 44

Sagar rolled a 2 and moved from 80 to 82

Gaurav rolled a 5 and moved from 44 to 9

Sagar rolled a 4 and moved from 82 to 86

Gaurav rolled a 1 and moved from 9 to 32

Sagar rolled a 6 and moved from 86 to 92

Gaurav rolled a 3 and moved from 32 to 35

Sagar rolled a 4 and moved from 92 to 96

Gaurav rolled a 1 and moved from 35 to 36

Sagar rolled a 1 and moved from 96 to 97

Gaurav rolled a 1 and moved from 36 to 37

Sagar rolled a 5 and moved from 97 to 97

Gaurav rolled a 6 and moved from 36 to 42

Sagar rolled a 3 and moved from 97 to 100

Sagar wins the game

