DSA Mini Project

Group members: Mrudula Kalyankar( COA252 )

Bhagyashree Jagdale( COA249 )

Samruddhi Kharade( COA259 )

Code:

import random

class SnakeLadders:

def \_\_init\_\_(self):

self.snakes = {

16: 6, 47: 26, 49: 11, 56: 53,

62: 19, 64: 60, 87: 24, 93: 73,

95: 75, 98: 78

}

self.ladders = {

3: 22, 8: 30, 28: 84, 58: 77,

75: 86, 80: 99, 90: 91

}

self.player\_positions = [1, 1] # Both players start at position 1

self.current\_player = 0 # Player 1 starts

def roll\_dice(self):

return random.randint(1, 6)

def move\_player(self, player):

roll = self.roll\_dice()

print(f"\n🎲 Player {player + 1} rolled a {roll}")

current\_position = self.player\_positions[player]

new\_position = current\_position + roll

if new\_position > 100:

print(f"❌ Roll exceeded 100. Player {player + 1} stays at {current\_position}")

return

if new\_position in self.snakes:

print(f"🐍 Oh no! Landed on a snake at {new\_position}. Going down to {self.snakes[new\_position]}")

new\_position = self.snakes[new\_position]

elif new\_position in self.ladders:

print(f"🪜 Yay! Found a ladder at {new\_position}. Climbing up to {self.ladders[new\_position]}")

new\_position = self.ladders[new\_position]

self.player\_positions[player] = new\_position

print(f"📍 Player {player + 1} is now at position {new\_position}")

def play\_game(self):

print("🎮 Welcome to Snake and Ladders!")

print("First to reach exactly 100 wins the game.\n")

while True:

input(f"Player {self.current\_player + 1}, press Enter to roll the dice...")

self.move\_player(self.current\_player)

if self.player\_positions[self.current\_player] == 100:

print(f"\n🏆🎉 Player {self.current\_player + 1} wins the game! 🎉🏆")

break

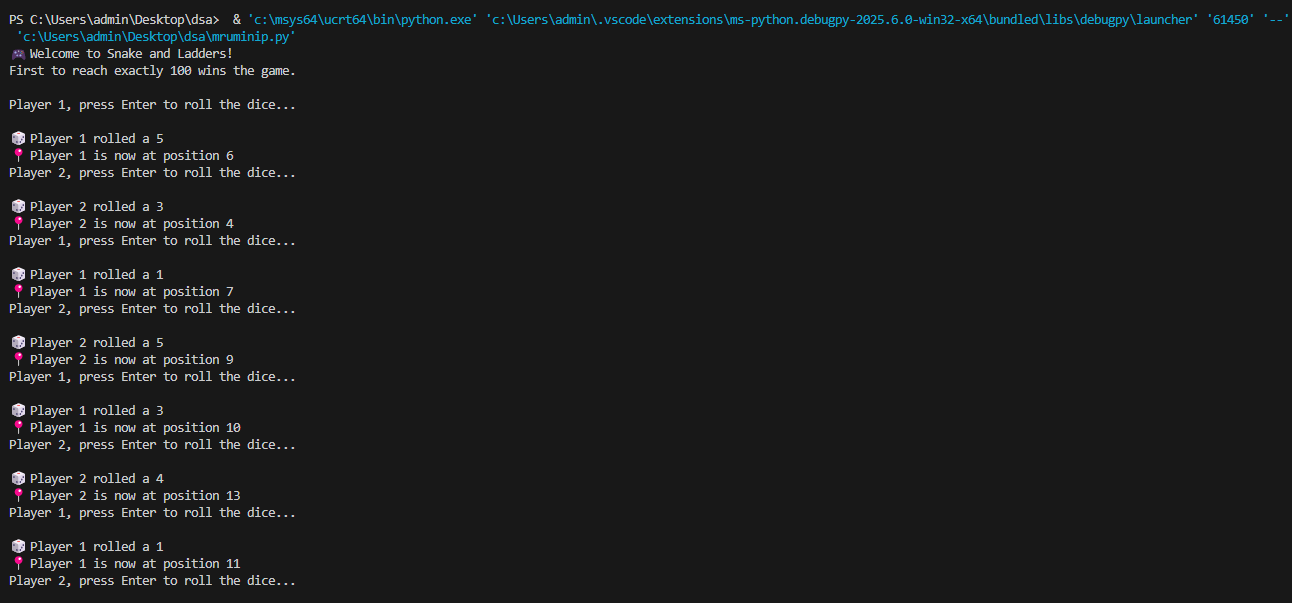
self.current\_player = 1 - self.current\_player # Switch player

# Start the game

if \_\_name\_\_ == "\_\_main\_\_":

game = SnakeLadders()

game.play\_game()

Output:

