```
# username: hb39690n
# Name: Harivardhan Reddy Bokka
#Uid : U01887082
#CRN : 73423
import random

MAX_ROWS = 3
MAX_COLUMNS = 3
MAX_LINES = 3
MAX_BET = 1000
MIN_BET = 1

icon_counts = {
    "$": 2,
    "7": 4,
    "0": 6,
    "!": 8
}

icon_values = {
    "$": 5,
    "7": 4,
    "0": 3,
    "!": 2
}

def determine_winnings(slot_matrix, number_of_lines, current_bet, value_mapping):
    total_winnings = 0
    winning_lines = []
    for line in range(number_of_lines):
        icon = slot_matrix[0][line]
        for column in slot_matrix:
            icon_to_compare = column[line]
            if icon != icon_to_compare:
                break
        else:
            total_winnings += value_mapping[icon] * current_bet
            winning_lines.append(line + 1)

    return total_winnings, winning_lines

def generate_spin_result(rows, columns, icon_distribution):
    all_icons = []
    for icon, count in icon_distribution.items():
        for _ in range(count):
            all_icons.append(icon)

    result_matrix = []
    for _ in range(columns):
        current_column = []
        current_icons = all_icons[:]
        for _ in range(rows):
            picked_icon = random.choice(current_icons)
            current_icons.remove(picked_icon)
            current_column.append(picked_icon)

        result_matrix.append(current_column)

    return result_matrix

def display_slot_machine(slot_matrix):
    for row in range(len(slot_matrix[0])):
        for i, column in enumerate(slot_matrix):
            if i != len(slot_matrix) - 1:
                print(column[row], end=" | ")
            else:
                print(column[row], end="")

        print()

def player_deposit():
    while True:
        deposited_amount = input("How much would you like to deposit? $")
        if deposited_amount.isdigit():
            deposited_amount = int(deposited_amount)
            if deposited_amount > 0:
```

```
                break
            else:
                print("Deposited amount must be greater than 0.")
        else:
            print("Please enter a valid number.")

    return deposited_amount

def select_number_of_lines():
    while True:
        lines = input(
            f"Enter the number of lines to bet on (1-{MAX_LINES})? ")
        if lines.isdigit():
            lines = int(lines)
            if 1 <= lines <= MAX_LINES:
                break
            else:
                print("Enter a valid number of lines.")
        else:
            print("Please enter a number.")

    return lines

def place_bet():
    while True:
        bet_amount = input("How much would you like to bet on each line? $")
        if bet_amount.isdigit():
            bet_amount = int(bet_amount)
            if MIN_BET <= bet_amount <= MAX_BET:
                break
            else:
                print(f"Bet amount must be between ${MIN_BET} - ${MAX_BET}.")
        else:
            print("Please enter a number.")

    return bet_amount

def spin_slot_machine(current_balance):
    selected_lines = select_number_of_lines()
    while True:
        bet_per_line = place_bet()
        total_bet = bet_per_line * selected_lines

        if total_bet > current_balance:
            print(
                f"You do not have enough balance to place this bet. Your current balance is: ${current_balance}")
        else:

            break

    print(
        f"You are betting ${bet_per_line} on {selected_lines} lines. Total bet is equal to: ${total_bet}")

    slots = generate_spin_result(MAX_ROWS, MAX_COLUMNS, icon_counts)
    display_slot_machine(slots)
    won_amount, winning_line_numbers = determine_winnings(slots, selected_lines, bet_per_line, icon_values)
    print(f"You won ${won_amount}.")
    # print(f"You won on line number:", *winning_line_numbers)
    print(f"You won on line number: {winning_line_numbers}" if winning_line_numbers else "You lost all bets")

    return won_amount - total_bet

def slot_machine_game():
    player_balance = player_deposit()
    while True:
        print(f"Current balance is ${player_balance}")
        user_input = input("Press enter to play (q to quit).")
        if user_input.lower() == "q":
            break
        player_balance += spin_slot_machine(player_balance)

    print(f"You left with ${player_balance}")


slot_machine_game()
```

```
How much would you like to deposit? $2000
Current balance is $2000
Press enter to play (q to quit).
Enter the number of lines to bet on (1-3)? 2
How much would you like to bet on each line? $250
You are betting $250 on 2 lines. Total bet is equal to: $500
$ | $ | 0
$ | 7 | !
! | ! | 0
You won $0.
You lost all bets
Current balance is $1500
Press enter to play (q to quit).q
You left with $1500
```