

## HOMEWORK #1

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**Game Description:**

This roulette wheel game is a 36-slot game starting from 0 to 35. The game starts with entering initial start money. The game will continue as long as the user wants to continue. Initially the game starts with you entering a starting money. Then you need to enter your bet (money). The roulette game allows you to choose the type of bet you want to join.

There are various types of bets:

1. Bet on odd numbers. (pays 1 to 1).
2. Bet on even numbers. (pays 1 to 1).
3. Bet on a specific number. (pays 35 to 1).



Then the wheel spins and the ball falls in a random slot. Based on the random slot that the ball falls in, you win or you lose your bet.

If the ball falls in slot numbered as 0, the user loses the bet.

**Question:**

Write a C code to generate this game. Your program should input start money, bet amount and bet type from user. Then your code should generate a random slot number between 0 and 35 representing each spin. If the player has chosen type 1 for the bet type, check if the random slot number is odd. If so, the player will be paid 1 times the bet amount. If the player has chosen type 2 for the bet type, check if the random slot number is even. If so, the player will be paid 1 times the bet amount. If the player has chosen type 3 for the bet type, check if the random number equals to the specific number defined by the player. If so, the player will be paid 35 times the bet amount. If the random number equals to 0, the player will lose the bet hence lose the bet amount. Your main program should input the start money, and bet amount, call the function fcn. Your main program should also display whether the player won or lost the bet, initial account and final account. The function fcn should receive bet type, and specific number, also return the winning status and slot number that the ball falls in as parameters. If the bet type is selected as 3 by the player, the function should receive the specific number that the player entered. If the player selects 1 or 2 as the bet type, the function should receive the specific number as zero (0). Your function should set the status as "W" if the player won the bet, and "L" if the player lost the bet. Do the necessary error checks as well.

**Hint: Prototype of the fcn function is as follows: void fcn(int bet\_type, int specific\_num, char \*status, int \*slot\_number)**

**Sample Run:**

Spin 1:

Enter a start account for the game \$: 2500

Enter the bet amount \$: 275

Enter '1' to bet on an odd number, '2' to bet on an even number, or '3' to bet on a specific number: 3

Enter a number between 1-35: 24

The ball fell in slot numbered 17.

You lost the bet.

Initial account \$:2500

Final account \$: 2225

Do you want to continue? Enter Y or N: Y

Spin 2:

Enter the bet amount \$: 300

Enter '1' to bet on an odd number, '2' to bet on an even number, or '3' to bet on a specific number: 2

The ball fell in slot numbered 16.

You won the bet.

Initial account \$:2225

Final account \$: 2525

Do you want to continue? Enter Y or N: N

Thank you for playing the game.