UCS 2201 Fundamentals and Practice of Software Development

Tut2B: Mini Project – Roulette Game

Batch 2021-2025

Academic Year 2021-2022 Even Dr. R. Kanchana

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Learning Outcome :

To be proficient in solving problems in C

a) using the right data representations
b) using suitable programming constructs

To design before coding

To develop the program in a modular and incremental fashion.

Roulette is played with a wheel containing 38 different squares along its circumference. Two of these squares, numbered 0 and 00, are green; 18 squares are red, and 18 are black. The red and black squares alternate in color, and are numbered 1 through 36 in a random order.

A small marble is spun within the wheel, which eventually comes to rest within a groove beneath one of the squares. The game is played by betting on the outcome of each spin, in any one of the following ways.

(i) By selecting a single red or black square, at 35-to-1 odds. Thus, if a player were to bet Rs.100 and win, he or she would receive a total of Rs.3600: the original Rs.100, plus an additional Rs.3500.

(ii) By selecting a color, either red or black, at 1-to-1 odds. Thus if a player chose red on a Rs.100 bet, he or she would receive Rs.200 if the marble came to rest beneath any red square.

(iii) By selecting either the odd or the even numbers (excluding 0 and 00), at 1-to-1 odds.

(iv) By selecting either the low 18 or the high 18 numbers at 1-to-1 odds.

The player will automatically lose if the marble comes to rest beneath one of the green squares (0 or 00).

Write an interactive C program that will simulate a roulette game. Allow the players to select whatever type of bets they wish by choosing from a menu. Then print the outcome of each game followed by an appropriate message indicating whether each player has won or lost.

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If you try to solve problems yourself, then you will learn many things automatically.
Spend few minutes and then enjoy the study.

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