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PROGRAM START

DEFINE gameStart()

        OUTPUT STRING "Do you wish to play Snakes and Ladders?"
        INPUT STRING playerChoice
        RECEIVE playerChoice FROM (STRING) KEYBOARD

        TO LOWER CASE playerChoice

        IF playerChoice EQUALS TO "yes" OR "y"
                CALL gameSystem()
        END IF

DEFINE gameSystem()

        CALL board = gameBoard()

        SET BOOLEAN gameOver TO False
        SET INTEGER PlayerOnePosition TO 0
        SET INTEGER PlayerTwoPosition TO 0
        SET BOOLEAN playerTurn TO True

        REPEAT

                SET INTEGER diceRoll TO RANDOM NUMBER (1, 12)

                IF playerTurn EQUALS TO True
                        SET INTEGER playerOnePosition TO (playerOnePosition + diceRoll) +
                board[playerOnePosition - 1]
                        SET INTEGER playerOnePosition
                ELSE
                        SET INTEGER playerTwoPosition TO (playerTwoPosition + diceRoll) +
                board[playerTwoPosition - 1]
                END IF

                IF playerOnePosition GREATER THAN 99
                        OUTPUT STRING "Player 1 Wins!
                        SET BOOLEAN gameOver TO TRUE
                ELSE IF playerTwoPosition GREATER THAN 99
                        OUTPUT STRING "Player 2 Wins!"
                        SET BOOLEAN gameOver TO TRUE
                END IF
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                    IF playerTurn EQUALS TO True
                            SET BOOLEAN playerTurn TO False
                    ELSE
                            SET BOOLEAN playerTurn TO True

            UNTIL gameOver EQUALS TO True

DEFINE gameBoard()

        SET ARRAY board TO [100]

        FOR Index IN RANGE(100)

                board[Index - 1] = 0

                IF Index == 6
                        board[5] = 12
                ELSE IF Index == 12
                        board[11] = -8
                ELSE IF Index == 28
                        board[27] = -20
                ELSE IF Index == 36
                        board[35] = 13
                ELSE IF Index == 47
                        board[46] = -18
                ELSE IF Index == 54
                        board[53] = 21
                ELSE IF Index == 67
                        board[66] = -15
                ELSE IF Index == 71
                        board[70] = 12
                ELSE IF Index == 82
                        board[81] = - 16
                ELSE IF Index == 92
                        board[91] = 5

        RETURN board

gameStart()

PROGRAM END
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