PDS Assignment

M.Sc. Data Science

Last Date of Submission: 18-01-2023

1. Cows N’ Bulls

The game involves two players, a coder and a cracker. The coder (either a person or a computer) chooses 4 digit number with all different digits and keeps it secret. The cracker tries to guess the secret number. After a guess, the coder gives you information about number of digits which were correctly guessed but on the wrong place (called cows) and how many are both the right digit and in the correct place (called ‘Bulls’).

Ex. If the coder chooses the secret number 0419 and the cracker guess 6039, then the coder scores this as 1 cow, since 0 is a digit in the secret number that’s on the wrong place and 1 bull (9 is in the right place).

Count the no. of cows and bulls.

1. Computer will generate a random number within the given range. A user will be asked to guess a number within that range.

If the User could able to guess the number in a first attempt the message should come “GENIOUS- Take a BOW”.

If the guessed number is equal to the system generated random number then the message should come “ YOU WIN with \_\_\_\_attempts” (“\_\_\_\_\_\_” must be filled with number of attempts made)

If the guessed number is more than the system generated random number then the message should come “ TOO BIG”

If the guessed number is less than the system generated random number then the message should come “ TOO SMALL”

Assume that the system has n components. For each incorrect attempt the system looses one component. When all components of the system are lost the system should generate the message “ YOU ARE A LOOSER”.