UML Class Diagram

|  |  |
| --- | --- |
| + | public |
| - | private  package |
| # | protected |

legend

|  |  |
| --- | --- |
| + | GuessingGame |
|  |  |
| +  + | main(args:String [])  checkGuess(userGuess: char) |

Data Table

Data Table for main(args)

|  |  |  |
| --- | --- | --- |
| Variable or Constant Type | | Purpose |
| args String [] | | parameter, unused |
| guesses Integer | | Number of guesses available |
| upperLimit int | | User defined limit for the random number |
| magicNumber final int | | Random generated number |
| guess int | | User’s guess |
| userGuess | int | User’s guess used in checkGuess method |
| compNumber | int | The computer’s random number for checkGuess method |
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Algorithm for main(args)

main(args)

create Random

create Scanner

print for user input of the upper limit

set upper limit

if upper is less than 10

set upper = 10

final integer magicNumber = random upperLimit + 1

print for user to enter number of guesses

if the guesses are greater than 4

guesses = 4

while you still have guesses, ask for the user’s guess

check if guess is right with checkGuess method

if guess is right

player wins

else,

subtract one from guesses

if player has guesses, ask for another guess

else if there are no guesses, player loses

checkGuess(int userGuess, int compNumber)

define userGuess

define compNumber

if userGuess = compNumber, return true

else, return false