

Nicholas Rahbany - Algorithm  
UML Class Diagram

+	public
-	private
	package
#	protected
legend	

+	TemplateUpdated
+	<u>main</u> (args:String [])
+	<u>numChecker</u> (userGuess: int, shouldBe: int): string

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Data Table

Main		
Variable	Type	Purpose
args	String[]	Parameter, unused
check	String	If magicNumber = guess
playAgain	String	If user wants to play again
in	Scanner	Scans console for user input
random	Random	Generates random number
range	int	Upper range of random number
magicNumber	int	Computer generated random number
guesses	int	How many times a user can guess magicNumber

numChecker		
Variable	Type	Purpose
userguess	int	The number the user guessed
shouldBe	int	magicNumber for different method
result	String	Used as return variable in numCheck

Algorithm for main(args)

```

main(args)
    in ← Scanner Object
    random ← Random Object
    guesses ← 0
    check ← "not true"
    playAgain ← "no"
    guessAgain ← "no"
    do
        ask for maximum range for random number
        read range
        if range < 10
            range = 10
        magicNumber ← random number in from 0 to range
        ask user for how many guesses
        guesses ← read guesses
        do
            ask user for guess
            read guess
            check ← numChecker guess and magicNumber
            if check is not true
                print out check
                add one to guesses
                ask user to play again
                read guessAgain
                guessAgain to lower case
            else
                print congratulations
                print number of guesses
        while check is not true or guessAgain is yes
        ask user to play again
        read playAgain
        playAgain to lower case
    while playAgain is yes

```

numChecker (int userGuess, int shouldBe)

```

result ← no input
if userGuess equals shouldBe
    result ← true
else
    if userGuess is greater
        result ← too high
    else
        result ← too low
return result

```