Changing type: Sometimes it is necessary to change the type of a variable (type conversion), so you can do stuff with it.

Example:

age = 7 (7 is a whole number, called integer)
print(“Hermione is “ +age+ “ years old.”) >> TypeError: Can't convert 'int' to str implicitly
print(“Hermione is “ +str(age)+ “ years old.”) >> “Hermione is 7 years old”

If you concatenate strings, all the bits have to be strings. You have to change your number 7 into a string “7” to use it in a string concatenation. (The function str() does this.)

#Task 8:

Colour the function that changes a string into a number in blue.

Then colour the functions that change a number into a string in red.

Why do you think guess = int(guess) is necessary? This function changes the variable guess from a string into a whole number (integer).

```
# guess the number
import random

guessesTaken = 0

print('Hello! What is your name?')
myName = input()

number = random.randint(1, 20)
print('Well, ' +myName+ ', I am thinking of a number between 1 and 20.')

while guessesTaken < 6:
    print('Take a guess.')
    guess = input()
    guess = int(guess)

    guessesTaken = guessesTaken + 1

    if guess < number:
        print('Your guess is too low.')

    if guess > number:
        print('Your guess is too high.')

    if guess == number:
        break

if guess == number:
    guessesTaken = str(guessesTaken)
    print('Good job, ' +myName+ '! You guessed my number in ' +guessesTaken+ ' guesses!')

if guess != number:
    number = str(number)
    print('Nope. The number I was thinking of was ' +number)
```