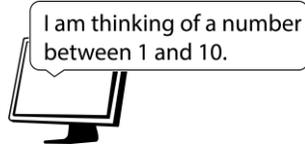


Session 6 Extension Activity: Guess a Number

Logic can be used to make fun games. Try it! Design a game where the player must pick a number between one and ten. Can they guess it?

The code works something like this:



number=pick a random number

guess=type number into input box

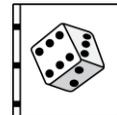
```
#check if the guess is right
if guess==number:
    write("Yes! You are correct!")
else:
    write("No!")
```

1. Open IDLE (Python). Create a new file. Name it **guess**.
2. Import the Turtle library. Label the title bar and hide the Turtle symbol.

```
from turtle import *
title("Guess a Number")
hideturtle()
```

3. Import the Random library to pick a number:

```
from turtle import *
import random
title("Guess a Number")
hideturtle()
```



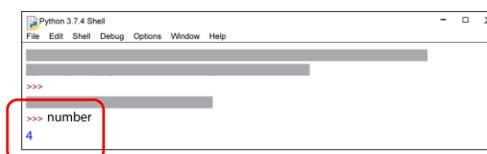
The Random library has a set of commands that pick an unknown number or choice from a list.

4. Pick a number between 1 and 10 and store it as a variable:

```
#pick a number
number=random.randint(1, 10)
```

randint stands for *random integer*. An integer is a number. This code picks a number between 1 and 10.

5. Test that the computer is picking a number:
 - a. From the File menu, select Save.
 - b. From the Run menu, select *Run Module*.
 - c. Close the canvas. It is blank.
 - d. In the Python Shell, type **number**. Press ENTER.

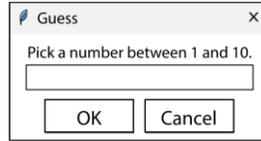


- e. When done, close the Python Shell.

6. Create an input box to store the player's guess as a variable:

```
#guess
guess=numinput("Guess", "Pick a number between 1 and 10.")
```

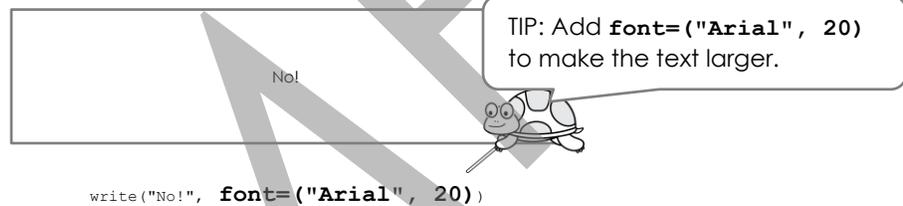
7. Run the program to test the input box.



8. Check to see if the player's guess is correct:

```
#check guess
if guess==number:
    write("Yes! You are correct!")
else:
    write("No!")
```

9. Run the program to play the game. Did you guess the number?



```
write("No!", font=("Arial", 20))
```

10. If the player is wrong, tell them the number.

```
#check guess
if guess==number:
    write("Yes! You are correct!", font=("Arial", 20))
else:
    write("No! The number is " +str(number)+ ".")
```

11. Run the program to play the game again. Did you guess the number?

TIPS:

- When testing the program make the range smaller such as `random.randint(1, 2)`
- Center the text using `align="center"`
- Format the color of the text using `pencolor("green")`
- Program the turtle to do an action if the player is correct:

```
penup()
goto(0, -200)
pendown()
circle(200)
```

12. Close the program.