

Input

Sometimes you will need to get information from the user.

```
In [ ]: name = input("Who are you? ")
        print("hello " + name)
```

```
In [ ]: age = input("how old are you?")
        print(age)
```

how old are you?48
48

This may not work as expected, why?

```
In [ ]: nextyear = age + 1  #this is because input is always a string
        print(nextyear)    #and we cant add a number and a string
```

```
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TypeError                                Traceback (most recent call last)
<ipython-input-9-e9aeeb6db1ca> in <module>()
----> 1 nextyear = age + 1
      2 print(nextyear)
```

TypeError: can only concatenate str (not "int") to str

The error shows str and int cannot be joined together.

What will fix it?

```
In [ ]: nextyear = int(age) + 1  #using int() this will convert the string to a number
        print(nextyear)
```

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An important solution

How can you make sure a person enters a number. Use `int()`, however if they do enter a letter it will crash as we can't change "hello" into a number. To solve this we use a try - except block, this will stop it from crashing.

```
In [ ]: while True:
        n1 = input("Enter a number: ")
        n2 = input("Enter 2nd number: ")
        try:
            n1 = int(n1)
            n2 = int(n2)
            break
        except:
            print("you must enter a number")

        print("Thank you for entering 2 numbers")
```

Enter a number: a

Enter 2nd number: g
you must enter a number
Enter a number: 3
Enter 2nd number: 5
Thank you for entering 2 numbers