**Arrays Part IV Two-Dimensional Arrays**

Consider a short list of countries:

countries = ["Bangladesh","Belarus","Barbados","Bahrain"]

w = countries[0] #what does this do?

print (w)

What will this example print?

This prints the first country in the array - “Bangladesh”.

But the word “Bangladesh” is itself an array of letters.

countries = ["Bangladesh","Belarus","Barbados","Bahrain"]

w = countries[0]

print (w) #what does this print?

print (w[0]) #what does this print?

So w is the first country in the list of countries and w[0] is the first letter of that country.

We can put this together in one statement:

countries = ["Bangladesh","Belarus","Barbados","Bahrain"]

w = countries[0][2] # country 0, letter 2

print (w) # what does this print?

This prints the THIRD letter of the FIRST country (the “n” in “Bangladesh”). Keep in mind, the first element is always index ZERO.

The following example prints out the third letter in **every** country in the list:

countries = ["Bangladesh","Belarus","Barbados","Bahrain"]

for i in range(4): # for each country

x = countries[i][2] # get the third letter

print (x)

Understand that the variable i represents the index of that country (0 for Bangladesh, 1 for Belarus etc.). The variable i is an integer variable.

The variable x represents a letter - the 3rd letter of each country.

As mentioned before, sometimes you need to track the index. When you don’t, it’s easier to loop through the elements without an index. For example, this code prints the first letters without indexing through the countries:

countries = ["Bangladesh","Belarus","Barbados","Bahrain"]

for country in countries: # for each country

first\_letter = country[0] # get the first letter

print (first\_letter)