Week 3 Homework

1. **Create a dictionary containing the following list of countries in Europe as the keys and the population of that country as the values. (As it is tedious to enter in *all* countries, just pick ten at random)**

   Write a 'for' loop that iterates through each key in the dictionary of countries and prints the population.

Albania	2,877,797
Andorra	77,265
Austria	9,006,398
Belarus	9,449,323
Belgium	11,589,623
Bosnia and Herzegovina	3,280,819
Bulgaria	6,948,445
Croatia	4,105,267
Czechia	10,708,981
Denmark	5,792,202
Estonia	1,326,535
Finland	5,540,720
France	65,273,511
Germany	83,783,942
Greece	10,423,054
Holy See	801
Hungary	9,660,351
Iceland	341,243
Ireland	4,937,786
Italy	60,461,826
Latvia	1,886,198
Liechtenstein	38,128
Lithuania	2,722,289
Luxembourg	625,978
Malta	441,543
Moldova	4,033,963
Monaco	39,242
Montenegro	628,066
Netherlands	17,134,872
North Macedonia	2,083,374
Norway	5,421,241

Poland	37,846,611
Portugal	10,196,709
Romania	19,237,691
Russia	145,934,462
San Marino	33,931
Serbia	8,737,371
Slovakia	5,459,642
Slovenia	2,078,938
Spain	46,754,778
Sweden	10,099,265
Switzerland	8,654,622
Ukraine	43,733,762
United Kingdom	67,886,011

2. **In the same for loop, insert an if-else statement that checks if the population of each country is greater than 5m people. If the population is above 5m, print "Country *X* has a population greater than 5m people" where X is the name of each country.**
   [Bonus point if you write this is in the single-line format, i.e.
   `question ? do_this_if_true : do_this_if_false` **]**

3. **Write a *try-catch* statement where you try to calculate the square root of a negative number [Hint: sqrt()], and print "Squares must be positive" when an error is caught.**

4. **Create an array like so:**
   ```
   Numbas = [-3, 55.2, 12.11]
   ```
   Write a while loop that appends [Hint: append!()] a random number [Hint: rand()] to the end of *Numbas* so long as the length of *Numbas* is less than 30 [Hint: length()].