Topic 5.3: List Exercises 1

1. Write a line of code that will:

a) create an empty list called "`empty`"

b) create a list called "`primes`" that contains the prime numbers from `2` until `13`.

c) create a list called "`mixed`" containing an integer, a float, a string, and a boolean.

d) create a list called "`nested`" containing two lists: the first list containing the integers `1` and `2`, the second list containing the integers `3` and `4`.

2. Given the list:

```
fruits = ["apple", "banana", "orange", "grape", "kiwi"]
```

Write a line of code that will print the:

a) first element

b) last element using negative indexing

c) third element

d) second-to-last element using negative indexing

e) number of elements in the list

3. Given the list:

```
colours = ["red", "green", "blue", "yellow"]
```

Write a line code that will:

a) change `"green"` to `"purple"`

b) change the last element to `"orange"` using negative indexing

c) change the first two elements to "pink" and "brown"

4. Given the list:

```
tasks = ["write code", "test code"]
```

Write a line of code that will:

a) add `"debug code"` to the end using `append()`

b) add `"plan project"` at the beginning using `insert()`

c) add `"review"` and `"commit"` to the end using `extend()`

d) insert `"document"` at index `2` using `insert()`

4. Given the list:

```
numbers = [10, 20, 30, 40, 50, 30, 60]
```

Write a line of code that will:

a) remove the last element and save it into a variable named `x`

b) remove the element at index `2` and save it into a variable named `y`

c) remove the first occurrence of the value `30` from the list

d) remove all elements from the list without creating a new list

4. Given the list:

```
letters = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h']
```

Write a line of code that will:

a) get first three elements using slicing save them into a `list` variable named `abc`

b) get elements from index 2 to 5 (inclusive) and save them into a `list` variable named `cdef`

c) get last three elements using negative indexes and save them into a `list` variable named `fgh`

d) get the elements with even indexes and save them to a `list` variable named `aceg`

e) get the elements with odd indexes and save them to a `list` variable named `bdfh`

f) get the list in reverse order using slicing and save them to a `list` variable named `h_to_a`