Finger Exercises Lecture 23

The questions below are due on Monday December 05, 2022; 03:00:00 PM.

1) Question 1 of 3

Choose the worst case asymptotic order of growth (upper and lower bound) for the following function. Assume `n = a`.

```
def running_product(a):
  """ a is an int """
  product = 1
  for i in range(5,a+5):
    product *= i
    if product == a:
      return True
  return False
```

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You have infinitely many submissions remaining.

2) Question 2 of 3

Choose the worst case asymptotic order of growth (upper and lower bound) for the following function. Assume `n = len(L)`.

```
def tricky_f(L, L2):
  """ L and L2 are lists of equal length """
  inL = False
  for e1 in L:
    if e1 in L2:
      inL = True
  inL2 = False
  for e2 in L2:
    if e2 in L:
      inL2 = True
  return inL and inL2
```

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You have infinitely many submissions remaining.

3) Question 3 of 3

Choose the worst case asymptotic order of growth (upper and lower bound) for the following function.

```
def sum_f(n):
  """ n > 0 """
  answer = 0
  while n > 0:
    answer += n%10
    n = int(n/10)
  return answer
```

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You have infinitely many submissions remaining.

6.100L Introduction to CS and Programming Using Python

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