tutorial1_2027_code

September 20, 2026

1 Tutorial 1 Solutions

1.1 Dictionaries

[ ]:
```
all_students = {}
for i in range(5):
    name = input('Enter the student name ')
    grade = input('Average grade for ' + name + '? ')
    all_students[name] = grade

print(all_students)
```

1.2 Functions

[ ]:
```
def inner_product(a, b):
    if len(a) != len(b):
        return "Error - the 2 lists given as arguments should have the same␣
 ↪number of elements"
    else:
        sum = 0
        for i in range(len(a)):
            sum += a[i]*b[i]
        return sum

print(inner_product([3, 4, 5], [10, 1, 10]))
print(inner_product([3, 4, 5], [10, 1]))
```

1.3 More Functions

[ ]:
```
def my_list(a, n1, n2):
    return [i for i in a if i >= n1 and i<= n2]

my_list([1, 5, 10, 2, 6, 7], 2, 8)
```

1.4 Files

[ ]:
```
def process_file(filename):
    f = open(filename)
    total_chars = 0
    lines = 0
    for i in f:
        total_chars += len(i)
        lines += 1
    f.close()

    print('no of chars: ' + str(total_chars) + ', no of lines: ' + str(lines))


def process_file2(filename, n):
    f = open(filename)
    lines = 1
    for i in f:
        lines += 1
        if lines == n:
            print(i)
    f.close()

def process_file3(filename, n1, n2):
    f = open(filename)
    lines = 1
    for i in f:
        lines += 1
        if lines >= n1 and lines <= n2:
            print(i, end='')
    f.close()


process_file('texput.log')
process_file2('texput.log', 2)
process_file3('texput.log', 2, 5)
```

[ ]:
```

```