1. (Reading). Done

2. (Shift Cipher, 10pt): Write a program (in Python, or any other language of your choice), which implements the shift cipher. Input should be a plaintext string, and a shift 0 ≤ k ≤ 25. Output, a string containing the shifted plaintext.

See my program below. It uses two intermediate functions: encode and decode to turn text into lists of numbers between 0 and 25. That simplifies calculating the shift.

```python
# turn text into list of numbers (ASCII values)
def encode(text):
    # turn to lower case
    text = text.lower()
    # only keep letters
    lst = [(ord(letter) - ord('a')) for letter in text if letter.isalpha()]
    return lst

# turn list of ASCII values into text
def decode(lst):
    text = ''.join([chr(ord('a')+code) for code in lst])
    return text

def shift(pt, k):
    'plaintext pt, shift k'
    ptlst = encode(pt)
    # shift each letter code by 26, and take result mod 26
    ctlst = [(x+k) % 26 for x in ptlst]
    return decode(ctlst)
```

Below is a screenshot of a couple of sample runs of my program:
3. (Affine Cipher, 15pt) ...

```python
>>> shift('hello world', 0)
'helloworld'
>>> shift('hello world', 1)
'ifmmpxpsme'
>>> shift('hello world', 3)
'khoorzuog'
>>> shift('omnia galla est divisa', 13)
'bzavtnynrfqgvivfn'
>>> shift('bzavtnynrfqgvivfn', 13)
'omniagallaestdivisa'
```