

Assignment 11

8.1

In [12]:

```
# Import packages

import pandas as pd
import numpy as np
from tensorflow import keras
from tensorflow.keras import layers
import random
import sys
```

In [2]:

```
# 8.1

def reweight_distribution(original_distribution, temperature=0.5):
    distribution = np.log(original_distribution) / temperature
    distribution = np.exp(distribution)
    return distribution / np.sum(distribution)
```

In [5]:

```
# 8.2

path = keras.utils.get_file(
    'nietzsche.txt',
    origin='https://s3.amazonaws.com/text-datasets/nietzsche.txt')
text = open(path).read().lower()
```

Downloading data from https://s3.amazonaws.com/text-datasets/nietzsche.txt
606208/600901 [=====] - 0s 0us/step

In [6]:

```
print("Corpus length", len(text))
```

Corpus length 600901

In [7]:

```
# 8.3

maxlen = 60
step = 3
sentences = []
next_chars = []

for i in range(0, len(text) - maxlen, step):
    sentences.append(text[i: i + maxlen])
    next_chars.append(text[i + maxlen])

print("Number of sequences:", len(sentences))

chars = sorted(list(set(text)))
print("Unique characters:", len(chars))
char_indices = dict((char, chars.index(char)) for char in chars)

print("Vectorization...")
x = np.zeros((len(sentences), maxlen, len(chars)), dtype=np.bool)
y = np.zeros((len(sentences), len(chars)), dtype=np.bool)
for i, sentence in enumerate(sentences):
    for t, char in enumerate(sentence):
```

```
        x[i, t, char_indices[char]] = 1
        y[i, char_indices[next_chars[i]]] = 1
```

Number of sequences: 200281
Unique characters: 59
Vectorization...

In [9]:

```
# 8.4
```

```
model = keras.models.Sequential()
model.add(layers.LSTM(128, input_shape=(maxlen, len(chars))))
model.add(layers.Dense(len(chars), activation="softmax"))
```

In [10]:

```
# 8.5
```

```
optimizer = keras.optimizers.RMSprop(lr=0.01)
model.compile(loss='categorical_crossentropy', optimizer=optimizer)
```

In [11]:

```
# 8.6
```

```
def sample(preds, temperature=1.0):
    preds = np.asarray(preds).astype('float64')
    preds = np.log(preds) / temperature
    exp_preds = np.exp(preds)
    preds = exp_preds / np.sum(exp_preds)
    probas = np.random.multinomial(1, preds, 1)
    return np.argmax(probas)
```

In [17]:

```
# 8.7
```

```
for epoch in range(1, 60):
    print('\nepoch', epoch, '\n-----\n')
    model.fit(x, y, batch_size=128, epochs=1)
    start_index = random.randint(0, len(text) - maxlen - 1)
    generated_text = text[start_index: start_index + maxlen]
    print("\n--- Generating with seed: \"" + generated_text + "\"")

    for temperature in [0.2, 0.5, 1.0, 1.2]:
        print('\n----- temperature:', temperature)
        sys.stdout.write(generated_text)

    for i in range(400):
        sampled = np.zeros((1, maxlen, len(chars)))
        for t, char in enumerate(generated_text):
            sampled[0, t, char_indices[char]] = 1

        preds = model.predict(sampled, verbose=0)[0]
        next_index = sample(preds, temperature)
        next_char = chars[next_index]

        generated_text += next_char
        generated_text = generated_text[1:]

        sys.stdout.write(next_char)
```

epoch 1

Train on 200281 samples
200281/200281 [=====] - 214s 1ms/sample - loss: 1.4272

--- Generating with seed: "mpletely; secondly in the way in which
the total issummed u"

```
----- temperature: 0.2
mpletely; secondly in the way in which
the total is summed u
----- temperature: 0.5
mpletely; secondly in the way in which
the total is summed u
----- temperature: 1.0
mpletely; secondly in the way in which
the total is summed u
----- temperature: 1.2
mpletely; secondly in the way in which
the total is summed u
epoch 2
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 200s 1000us/sample - loss: 1.4103
```

```
--- Generating with seed: "have been more interesting to men and even to philosophers--"
```

```
----- temperature: 0.2
have been more interesting to men and even to philosophers--
----- temperature: 0.5
have been more interesting to men and even to philosophers--
----- temperature: 1.0
have been more interesting to men and even to philosophers--
----- temperature: 1.2
have been more interesting to men and even to philosophers--
epoch 3
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 204s 1ms/sample - loss: 1.3963
```

```
--- Generating with seed: "ized nations. he may even have been a sin against romanticis"
```

```
----- temperature: 0.2
ized nations. he may even have been a sin against romanticis
----- temperature: 0.5
ized nations. he may even have been a sin against romanticis
----- temperature: 1.0
ized nations. he may even have been a sin against romanticis
----- temperature: 1.2
ized nations. he may even have been a sin against romanticis
epoch 4
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 232s 1ms/sample - loss: 1.3828
```

```
--- Generating with seed: "e
persistence, to all contempt. it is, finally, also true th"
```

```
----- temperature: 0.2
e
persistence, to all contempt. it is, finally, also true th
----- temperature: 0.5
e
persistence, to all contempt. it is, finally, also true th
----- temperature: 1.0
e
persistence, to all contempt. it is, finally, also true th
----- temperature: 1.2
e
persistence, to all contempt. it is, finally, also true th
epoch 5
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 216s 1ms/sample - loss: 1.3750
```

```
--- Generating with seed: "o with unhinged will "undergoes" the performance of
```

```
Generating with seed: o, with unhinged will, undergoes the performance of
"trist"

----- temperature: 0.2
o, with unhinged will, "undergoes" the performance of
"trist
----- temperature: 0.5
o, with unhinged will, "undergoes" the performance of
"trist
----- temperature: 1.0
o, with unhinged will, "undergoes" the performance of
"trist
----- temperature: 1.2
o, with unhinged will, "undergoes" the performance of
"trist
epoch 6
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 212s 1ms/sample - loss: 1.3640
```

```
--- Generating with seed: "ts,
nor even sufficiently germans, we good europeans, and fr"
```

```
----- temperature: 0.2
ts,
nor even sufficiently germans, we good europeans, and fr
----- temperature: 0.5
ts,
nor even sufficiently germans, we good europeans, and fr
----- temperature: 1.0
ts,
nor even sufficiently germans, we good europeans, and fr
----- temperature: 1.2
ts,
nor even sufficiently germans, we good europeans, and fr
epoch 7
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 206s 1ms/sample - loss: 1.3587
```

```
--- Generating with seed: "ence, in order that such immodest
gross errors--as, for inst"
```

```
----- temperature: 0.2
ence, in order that such immodest
gross errors--as, for inst
----- temperature: 0.5
ence, in order that such immodest
gross errors--as, for inst
----- temperature: 1.0
ence, in order that such immodest
gross errors--as, for inst
----- temperature: 1.2
ence, in order that such immodest
gross errors--as, for inst
epoch 8
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 206s 1ms/sample - loss: 1.3520
```

```
--- Generating with seed: " to
judge is tantamount to being unjust. this applies as wel"
```

```
----- temperature: 0.2
to
judge is tantamount to being unjust. this applies as wel
----- temperature: 0.5
to
judge is tantamount to being unjust. this applies as wel
----- temperature: 1.0
```

```

temperature: 1.0
to
judge is tantamount to being unjust. this applies as wel
----- temperature: 1.2
to
judge is tantamount to being unjust. this applies as wel
epoch 9
-----

Train on 200281 samples
200281/200281 [=====] - 206s 1ms/sample - loss: 1.3444

--- Generating with seed: " comfortable time of it; eventually, however, he finds
that "

----- temperature: 0.2
comfortable time of it; eventually, however, he finds
that
----- temperature: 0.5
comfortable time of it; eventually, however, he finds
that
----- temperature: 1.0
comfortable time of it; eventually, however, he finds
that
----- temperature: 1.2
comfortable time of it; eventually, however, he finds
that
epoch 10
-----

Train on 200281 samples
200281/200281 [=====] - 204s 1ms/sample - loss: 1.3396

--- Generating with seed: "f this sort of greatness. as the
conquest of the most hardly"

----- temperature: 0.2
f this sort of greatness. as the
conquest of the most hardly
----- temperature: 0.5
f this sort of greatness. as the
conquest of the most hardly
----- temperature: 1.0
f this sort of greatness. as the
conquest of the most hardly
----- temperature: 1.2
f this sort of greatness. as the
conquest of the most hardly
epoch 11
-----

Train on 200281 samples
200281/200281 [=====] - 207s 1ms/sample - loss: 1.3352

--- Generating with seed: "s
understood in its full profundity all that there requires "

----- temperature: 0.2
s
understood in its full profundity all that there requires
----- temperature: 0.5
s
understood in its full profundity all that there requires
----- temperature: 1.0
s
understood in its full profundity all that there requires
----- temperature: 1.2
s
understood in its full profundity all that there requires
epoch 12
-----

Train on 200281 samples

```

Train on 200281 samples
200281/200281 [=====] - 206s 1ms/sample - loss: 1.3291

--- Generating with seed: "id,
for the highest degree of human intelligence that has ye"

----- temperature: 0.2
id,
for the highest degree of human intelligence that has ye
----- temperature: 0.5
id,
for the highest degree of human intelligence that has ye
----- temperature: 1.0
id,
for the highest degree of human intelligence that has ye
----- temperature: 1.2
id,
for the highest degree of human intelligence that has ye
epoch 13

Train on 200281 samples
200281/200281 [=====] - 206s 1ms/sample - loss: 1.3263

--- Generating with seed: "distrust as deep as mine, seeming, as i do, not simply the t"

----- temperature: 0.2
distrust as deep as mine, seeming, as i do, not simply the t
----- temperature: 0.5
distrust as deep as mine, seeming, as i do, not simply the t
----- temperature: 1.0
distrust as deep as mine, seeming, as i do, not simply the t
----- temperature: 1.2
distrust as deep as mine, seeming, as i do, not simply the t
epoch 14

Train on 200281 samples
200281/200281 [=====] - 206s 1ms/sample - loss: 1.3232

--- Generating with seed: "they require--for
instance: the portion of independence and "

----- temperature: 0.2
they require--for
instance: the portion of independence and
----- temperature: 0.5
they require--for
instance: the portion of independence and
----- temperature: 1.0
they require--for
instance: the portion of independence and
----- temperature: 1.2
they require--for
instance: the portion of independence and
epoch 15

Train on 200281 samples
200281/200281 [=====] - 209s 1ms/sample - loss: 1.3197

--- Generating with seed: ", homely, prosaic and
even discouraging is the aspect of the"

----- temperature: 0.2
, homely, prosaic and
even discouraging is the aspect of the
----- temperature: 0.5
, homely, prosaic and
even discouraging is the aspect of the
----- temperature: 1.0
, homely, prosaic and
even discouraging is the aspect of the

even discouraging is the aspect of the
----- temperature: 1.2
, homely, prosaic and
even discouraging is the aspect of the
epoch 16

Train on 200281 samples

200281/200281 [=====] - 208s 1ms/sample - loss: 1.3144

--- Generating with seed: "e
necessary to attest the moral phenomena and their richest "

----- temperature: 0.2
e
necessary to attest the moral phenomena and their richest
----- temperature: 0.5
e
necessary to attest the moral phenomena and their richest
----- temperature: 1.0
e
necessary to attest the moral phenomena and their richest
----- temperature: 1.2
e
necessary to attest the moral phenomena and their richest
epoch 17

Train on 200281 samples

200281/200281 [=====] - 207s 1ms/sample - loss: 1.3131

--- Generating with seed: " the
will to "creation of the world," the will to the causa "

----- temperature: 0.2
the
will to "creation of the world," the will to the causa
----- temperature: 0.5
the
will to "creation of the world," the will to the causa
----- temperature: 1.0
the
will to "creation of the world," the will to the causa
----- temperature: 1.2
the
will to "creation of the world," the will to the causa
epoch 18

Train on 200281 samples

200281/200281 [=====] - 207s 1ms/sample - loss: 1.3104

--- Generating with seed: "ism of the subject
and predicate conception--that is to say,"

----- temperature: 0.2
ism of the subject
and predicate conception--that is to say,
----- temperature: 0.5
ism of the subject
and predicate conception--that is to say,
----- temperature: 1.0
ism of the subject
and predicate conception--that is to say,
----- temperature: 1.2
ism of the subject
and predicate conception--that is to say,
epoch 19

Train on 200281 samples

200281/200281 [=====] - 210s 1ms/sample - loss: 1.3064

--- Generating with seed: "he term. and to speak in all seriousness, i
see such new phi"

----- temperature: 0.2
he term. and to speak in all seriousness, i
see such new phi
----- temperature: 0.5
he term. and to speak in all seriousness, i
see such new phi
----- temperature: 1.0
he term. and to speak in all seriousness, i
see such new phi
----- temperature: 1.2
he term. and to speak in all seriousness, i
see such new phi
epoch 20

Train on 200281 samples
200281/200281 [=====] - 209s 1ms/sample - loss: 1.3044

--- Generating with seed: " understand that the greatest advances made
by mankind have "

----- temperature: 0.2
understand that the greatest advances made
by mankind have
----- temperature: 0.5
understand that the greatest advances made
by mankind have
----- temperature: 1.0
understand that the greatest advances made
by mankind have
----- temperature: 1.2
understand that the greatest advances made
by mankind have
epoch 21

Train on 200281 samples
200281/200281 [=====] - 209s 1ms/sample - loss: 1.3004

--- Generating with seed: " the
rhythm-determining syllables, that one should feel the "

----- temperature: 0.2
the
rhythm-determining syllables, that one should feel the
----- temperature: 0.5
the
rhythm-determining syllables, that one should feel the
----- temperature: 1.0
the
rhythm-determining syllables, that one should feel the
----- temperature: 1.2
the
rhythm-determining syllables, that one should feel the
epoch 22

Train on 200281 samples
200281/200281 [=====] - 209s 1ms/sample - loss: 1.2987

--- Generating with seed: "instance, who are at present living apart from religion in g"

----- temperature: 0.2
instance, who are at present living apart from religion in g
----- temperature: 0.5
instance, who are at present living apart from religion in g
----- temperature: 1.0
instance, who are at present living apart from religion in g
----- temperature: 1.2

temperature: 1.2
instance, who are at present living apart from religion in g
epoch 23

Train on 200281 samples
200281/200281 [=====] - 208s 1ms/sample - loss: 1.2948

--- Generating with seed: "dinal instinct of an organic
being. a living thing seeks abo"

----- temperature: 0.2
dinal instinct of an organic
being. a living thing seeks abo
----- temperature: 0.5
dinal instinct of an organic
being. a living thing seeks abo
----- temperature: 1.0
dinal instinct of an organic
being. a living thing seeks abo
----- temperature: 1.2
dinal instinct of an organic
being. a living thing seeks abo
epoch 24

Train on 200281 samples
200281/200281 [=====] - 209s 1ms/sample - loss: 1.2933

--- Generating with seed: "his qualities, such as
public spirit, kindness, deference, i"

----- temperature: 0.2
his qualities, such as
public spirit, kindness, deference, i
----- temperature: 0.5
his qualities, such as
public spirit, kindness, deference, i
----- temperature: 1.0
his qualities, such as
public spirit, kindness, deference, i
----- temperature: 1.2
his qualities, such as
public spirit, kindness, deference, i
epoch 25

Train on 200281 samples
200281/200281 [=====] - 210s 1ms/sample - loss: 1.2899

--- Generating with seed: "lish itself in the relations
of science and philosophy. i me"

----- temperature: 0.2
lish itself in the relations
of science and philosophy. i me
----- temperature: 0.5
lish itself in the relations
of science and philosophy. i me
----- temperature: 1.0
lish itself in the relations
of science and philosophy. i me
----- temperature: 1.2
lish itself in the relations
of science and philosophy. i me
epoch 26

Train on 200281 samples
200281/200281 [=====] - 214s 1ms/sample - loss: 1.2881

--- Generating with seed: "d
of flight a means and artifice for withdrawing successful"

of flight, a means and artifice for withdrawing successful

----- temperature: 0.2

d
of flight, a means and artifice for withdrawing successful

----- temperature: 0.5

d
of flight, a means and artifice for withdrawing successful

----- temperature: 1.0

d
of flight, a means and artifice for withdrawing successful

----- temperature: 1.2

d
of flight, a means and artifice for withdrawing successful
epoch 27

Train on 200281 samples

200281/200281 [=====] - 209s 1ms/sample - loss: 1.2867

--- Generating with seed: "ed to go to the bottom of the question of pessimism and free"

----- temperature: 0.2

ed to go to the bottom of the question of pessimism and free

----- temperature: 0.5

ed to go to the bottom of the question of pessimism and free

----- temperature: 1.0

ed to go to the bottom of the question of pessimism and free

----- temperature: 1.2

ed to go to the bottom of the question of pessimism and free
epoch 28

Train on 200281 samples

200281/200281 [=====] - 211s 1ms/sample - loss: 1.2871

--- Generating with seed: "ature, nor more than nature. to be sure, this
requires, as a"

----- temperature: 0.2

ature, nor more than nature. to be sure, this
requires, as a

----- temperature: 0.5

ature, nor more than nature. to be sure, this
requires, as a

----- temperature: 1.0

ature, nor more than nature. to be sure, this
requires, as a

----- temperature: 1.2

ature, nor more than nature. to be sure, this
requires, as a

epoch 29

Train on 200281 samples

200281/200281 [=====] - 211s 1ms/sample - loss: 1.2820

--- Generating with seed: "one another: we must also employ the same words for the same"

----- temperature: 0.2

one another: we must also employ the same words for the same

----- temperature: 0.5

one another: we must also employ the same words for the same

----- temperature: 1.0

one another: we must also employ the same words for the same

----- temperature: 1.2

one another: we must also employ the same words for the same
epoch 30

Train on 200281 samples

200281/200281 [=====] - 211s 1ms/sample - loss: 1.2816

--- Generating with seed: " beyond the things that immediately engage him to the final "

----- temperature: 0.2
beyond the things that immediately engage him to the final
----- temperature: 0.5
beyond the things that immediately engage him to the final
----- temperature: 1.0
beyond the things that immediately engage him to the final
----- temperature: 1.2
beyond the things that immediately engage him to the final
epoch 31

Train on 200281 samples
200281/200281 [=====] - 210s 1ms/sample - loss: 1.2781

--- Generating with seed: "nn, with his taste, which was fundamentally a petty taste (t"

----- temperature: 0.2
nn, with his taste, which was fundamentally a petty taste (t
----- temperature: 0.5
nn, with his taste, which was fundamentally a petty taste (t
----- temperature: 1.0
nn, with his taste, which was fundamentally a petty taste (t
----- temperature: 1.2
nn, with his taste, which was fundamentally a petty taste (t
epoch 32

Train on 200281 samples
200281/200281 [=====] - 211s 1ms/sample - loss: 1.2769

--- Generating with seed: " out of their equally constant practice of obeying and comma"

----- temperature: 0.2
out of their equally constant practice of obeying and comma
----- temperature: 0.5
out of their equally constant practice of obeying and comma
----- temperature: 1.0
out of their equally constant practice of obeying and comma
----- temperature: 1.2
out of their equally constant practice of obeying and comma
epoch 33

Train on 200281 samples
200281/200281 [=====] - 211s 1ms/sample - loss: 1.2760

--- Generating with seed: ". the deception of the acting individual as regards himself,"

----- temperature: 0.2
. the deception of the acting individual as regards himself,
----- temperature: 0.5
. the deception of the acting individual as regards himself

```
regards himself,  
----- temperature: 1.0  
. the deception of the acting individual as  
regards himself,  
----- temperature: 1.2  
. the deception of the acting individual as  
regards himself,  
epoch 34  
-----
```

```
Train on 200281 samples  
200281/200281 [=====] - 212s 1ms/sample - loss: 1.2738
```

```
--- Generating with seed: "sary; because he always requires  
himself anew--and makes him"
```

```
----- temperature: 0.2  
sary; because he always requires  
himself anew--and makes him  
----- temperature: 0.5  
sary; because he always requires  
himself anew--and makes him  
----- temperature: 1.0  
sary; because he always requires  
himself anew--and makes him  
----- temperature: 1.2  
sary; because he always requires  
himself anew--and makes him  
epoch 35  
-----
```

```
Train on 200281 samples  
200281/200281 [=====] - 217s 1ms/sample - loss: 1.2721
```

```
--- Generating with seed: "o us, absolutely and  
completely known, without deduction or "
```

```
----- temperature: 0.2  
o us, absolutely and  
completely known, without deduction or  
----- temperature: 0.5  
o us, absolutely and  
completely known, without deduction or  
----- temperature: 1.0  
o us, absolutely and  
completely known, without deduction or  
----- temperature: 1.2  
o us, absolutely and  
completely known, without deduction or  
epoch 36  
-----
```

```
Train on 200281 samples  
200281/200281 [=====] - 215s 1ms/sample - loss: 1.2701
```

```
--- Generating with seed: "rred  
even to the wariest of them to doubt here on the very t"
```

```
----- temperature: 0.2  
rred  
even to the wariest of them to doubt here on the very t  
----- temperature: 0.5  
rred  
even to the wariest of them to doubt here on the very t  
----- temperature: 1.0  
rred  
even to the wariest of them to doubt here on the very t  
----- temperature: 1.2  
rred  
even to the wariest of them to doubt here on the very t  
epoch 37  
-----
```

Train on 200281 samples
200281/200281 [=====] - 213s 1ms/sample - loss: 1.2684

--- Generating with seed: "s for knowledge be interdicted and rooted out; but his singl"

----- temperature: 0.2
s for knowledge be interdicted and rooted out; but
his singl
----- temperature: 0.5
s for knowledge be interdicted and rooted out; but
his singl
----- temperature: 1.0
s for knowledge be interdicted and rooted out; but
his singl
----- temperature: 1.2
s for knowledge be interdicted and rooted out; but
his singl
epoch 38

Train on 200281 samples
200281/200281 [=====] - 212s 1ms/sample - loss: 1.2679

--- Generating with seed: "eliable, and cautious organs of knowledge. our eyes find it "

----- temperature: 0.2
eliable, and
cautious organs of knowledge. our eyes find it
----- temperature: 0.5
eliable, and
cautious organs of knowledge. our eyes find it
----- temperature: 1.0
eliable, and
cautious organs of knowledge. our eyes find it
----- temperature: 1.2
eliable, and
cautious organs of knowledge. our eyes find it
epoch 39

Train on 200281 samples
200281/200281 [=====] - 214s 1ms/sample - loss: 1.2661

--- Generating with seed: "asure in them, scarcely, indeed, a true perception of their "

----- temperature: 0.2
asure in them, scarcely, indeed, a true
perception of their
----- temperature: 0.5
asure in them, scarcely, indeed, a true
perception of their
----- temperature: 1.0
asure in them, scarcely, indeed, a true
perception of their
----- temperature: 1.2
asure in them, scarcely, indeed, a true
perception of their
epoch 40

Train on 200281 samples
200281/200281 [=====] - 214s 1ms/sample - loss: 1.2625

--- Generating with seed: "ortion to the small number who command--in view, therefore, "

----- temperature: 0.2
ortion
to the small number who command--in view therefore

```
to the small number who command--in view, therefore,
----- temperature: 0.5
ortion
to the small number who command--in view, therefore,
----- temperature: 1.0
ortion
to the small number who command--in view, therefore,
----- temperature: 1.2
ortion
to the small number who command--in view, therefore,
epoch 41
-----
```

Train on 200281 samples

200281/200281 [=====] - 214s 1ms/sample - loss: 1.2612

--- Generating with seed: "gieux et le plus
assure d'une destinee infinie.... c'est qua"

```
----- temperature: 0.2
gieux et le plus
assure d'une destinee infinie.... c'est qua
----- temperature: 0.5
gieux et le plus
assure d'une destinee infinie.... c'est qua
----- temperature: 1.0
gieux et le plus
assure d'une destinee infinie.... c'est qua
----- temperature: 1.2
gieux et le plus
assure d'une destinee infinie.... c'est qua
epoch 42
-----
```

Train on 200281 samples

200281/200281 [=====] - 215s 1ms/sample - loss: 1.2632

--- Generating with seed: "tum aere perennius".=[13]--a decided
disadvantage, attending"

```
----- temperature: 0.2
tum aere perennius".=[13]--a decided
disadvantage, attending
----- temperature: 0.5
tum aere perennius".=[13]--a decided
disadvantage, attending
----- temperature: 1.0
tum aere perennius".=[13]--a decided
disadvantage, attending
----- temperature: 1.2
tum aere perennius".=[13]--a decided
disadvantage, attending
epoch 43
-----
```

Train on 200281 samples

200281/200281 [=====] - 215s 1ms/sample - loss: 1.2612

--- Generating with seed: "is feeling had not been rendered agreeable to man--why
shoul"

```
----- temperature: 0.2
is feeling had not been rendered agreeable to man--why
shoul
----- temperature: 0.5
is feeling had not been rendered agreeable to man--why
shoul
----- temperature: 1.0
is feeling had not been rendered agreeable to man--why
shoul
----- temperature: 1.2
is feeling had not been rendered agreeable to man--why
shoul
```

epoch 44

Train on 200281 samples
200281/200281 [=====] - 216s 1ms/sample - loss: 1.2578

--- Generating with seed: "nces under which i see them evolving and the ways along whic"

----- temperature: 0.2
nces under which i see them evolving and the ways along whic
----- temperature: 0.5
nces under which i see them evolving and the ways along whic
----- temperature: 1.0
nces under which i see them evolving and the ways along whic
----- temperature: 1.2
nces under which i see them evolving and the ways along whic
epoch 45

Train on 200281 samples
200281/200281 [=====] - 216s 1ms/sample - loss: 1.2560

--- Generating with seed: "lves in the same interrogative
formula now that they did two"

----- temperature: 0.2
lves in the same interrogative
formula now that they did two
----- temperature: 0.5
lves in the same interrogative
formula now that they did two
----- temperature: 1.0
lves in the same interrogative
formula now that they did two
----- temperature: 1.2
lves in the same interrogative
formula now that they did two
epoch 46

Train on 200281 samples
200281/200281 [=====] - 216s 1ms/sample - loss: 1.2545

--- Generating with seed: " placed in marital chambers as guardians. (in
turkish such a"

----- temperature: 0.2
placed in marital chambers as guardians. (in
turkish such a
----- temperature: 0.5
placed in marital chambers as guardians. (in
turkish such a
----- temperature: 1.0
placed in marital chambers as guardians. (in
turkish such a
----- temperature: 1.2
placed in marital chambers as guardians. (in
turkish such a
epoch 47

Train on 200281 samples
200281/200281 [=====] - 216s 1ms/sample - loss: 1.2542

--- Generating with seed: "e, took a retrospect, and looked around;
that he here laid h"

----- temperature: 0.2
e, took a retrospect, and looked around;
that he here laid h
----- temperature: 0.5
e, took a retrospect, and looked around.

```
e, took a retrospect, and looked around,  
that he here laid h  
----- temperature: 1.0  
e, took a retrospect, and looked around;  
that he here laid h  
----- temperature: 1.2  
e, took a retrospect, and looked around;  
that he here laid h  
epoch 48  
-----
```

Train on 200281 samples

200281/200281 [=====] - 217s 1ms/sample - loss: 1.2516

--- Generating with seed: "t strangely. the
question is, how far an opinion is life-fur"

```
----- temperature: 0.2  
t strangely. the  
question is, how far an opinion is life-fur  
----- temperature: 0.5  
t strangely. the  
question is, how far an opinion is life-fur  
----- temperature: 1.0  
t strangely. the  
question is, how far an opinion is life-fur  
----- temperature: 1.2  
t strangely. the  
question is, how far an opinion is life-fur  
epoch 49  
-----
```

Train on 200281 samples

200281/200281 [=====] - 217s 1ms/sample - loss: 1.2521

--- Generating with seed: " of the foreground, of the magnified,
the diminished, the mi"

```
----- temperature: 0.2  
 of the foreground, of the magnified,  
the diminished, the mi  
----- temperature: 0.5  
 of the foreground, of the magnified,  
the diminished, the mi  
----- temperature: 1.0  
 of the foreground, of the magnified,  
the diminished, the mi  
----- temperature: 1.2  
 of the foreground, of the magnified,  
the diminished, the mi  
epoch 50  
-----
```

Train on 200281 samples

200281/200281 [=====] - 218s 1ms/sample - loss: 1.2682

--- Generating with seed: "more delicate and intellectual. as
regards superiority of tr"

```
----- temperature: 0.2  
more delicate and intellectual. as  
regards superiority of tr  
----- temperature: 0.5  
more delicate and intellectual. as  
regards superiority of tr  
----- temperature: 1.0  
more delicate and intellectual. as  
regards superiority of tr  
----- temperature: 1.2  
more delicate and intellectual. as  
regards superiority of tr  
epoch 51  
-----
```


Train on 200281 samples
200281/200281 [=====] - 219s 1ms/sample - loss: 1.2810

--- Generating with seed: "atter and that it was
within his discretion not to have done"

----- temperature: 0.2
atter and that it was
within his discretion not to have done
----- temperature: 0.5
atter and that it was
within his discretion not to have done
----- temperature: 1.0
atter and that it was
within his discretion not to have done
----- temperature: 1.2
atter and that it was
within his discretion not to have done
epoch 52

Train on 200281 samples
200281/200281 [=====] - 226s 1ms/sample - loss: 1.7816

--- Generating with seed: "ook-reading germans is complaisant enough
to recognize such "

----- temperature: 0.2
ook-reading germans is complaisant enough
to recognize such
----- temperature: 0.5
ook-reading germans is complaisant enough
to recognize such
----- temperature: 1.0
ook-reading germans is complaisant enough
to recognize such
----- temperature: 1.2
ook-reading germans is complaisant enough
to recognize such
epoch 53

Train on 200281 samples
200281/200281 [=====] - 222s 1ms/sample - loss: 2.2725

--- Generating with seed: "nsion of men that they neither feel it, nor
sympathize with "

----- temperature: 0.2
nsion of men that they neither feel it, nor
sympathize with
----- temperature: 0.5
nsion of men that they neither feel it, nor
sympathize with
----- temperature: 1.0
nsion of men that they neither feel it, nor
sympathize with
----- temperature: 1.2
nsion of men that they neither feel it, nor
sympathize with
epoch 54

Train on 200281 samples
200281/200281 [=====] - 221s 1ms/sample - loss: 2.6616

--- Generating with seed: "en this feeling
has lost its keenest sting for the christian"

----- temperature: 0.2
en this feeling

```
en this feeling
has lost its keenest sting for the christian
----- temperature: 0.5
en this feeling
has lost its keenest sting for the christian
----- temperature: 1.0
en this feeling
has lost its keenest sting for the christian
----- temperature: 1.2
en this feeling
has lost its keenest sting for the christian
epoch 55
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 222s 1ms/sample - loss: 2.7866
```

```
--- Generating with seed: "st
intellectual world, the world apparently most indifferent"
```

```
----- temperature: 0.2
st
intellectual world, the world apparently most indifferent
----- temperature: 0.5
st
intellectual world, the world apparently most indifferent
----- temperature: 1.0
st
intellectual world, the world apparently most indifferent
----- temperature: 1.2
st
intellectual world, the world apparently most indifferent
epoch 56
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 221s 1ms/sample - loss: 2.7182
```

```
--- Generating with seed: " and the most artificial,
with a secret confidence and cordi"
```

```
----- temperature: 0.2
and the most artificial,
with a secret confidence and cordi
----- temperature: 0.5
and the most artificial,
with a secret confidence and cordi
----- temperature: 1.0
and the most artificial,
with a secret confidence and cordi
----- temperature: 1.2
and the most artificial,
with a secret confidence and cordi
epoch 57
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 223s 1ms/sample - loss: 2.8526
```

```
--- Generating with seed: ". it is
also equally certain that in the ensuing reaction of"
```

```
----- temperature: 0.2
. it is
also equally certain that in the ensuing reaction of
----- temperature: 0.5
. it is
also equally certain that in the ensuing reaction of
----- temperature: 1.0
. it is
also equally certain that in the ensuing reaction of
----- temperature: 1.2
it is
```

```
. 10 10
also equally certain that in the ensuing reaction of
epoch 58
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 221s 1ms/sample - loss: 2.8187
```

```
--- Generating with seed: "orld-pain in that which he finds so
displeasing in himself. "
```

```
----- temperature: 0.2
orld-pain in that which he finds so
displeasing in himself.
----- temperature: 0.5
orld-pain in that which he finds so
displeasing in himself.
----- temperature: 1.0
orld-pain in that which he finds so
displeasing in himself.
----- temperature: 1.2
orld-pain in that which he finds so
displeasing in himself.
epoch 59
-----
```

```
Train on 200281 samples
200281/200281 [=====] - 221s 1ms/sample - loss: 3.0703
```

```
--- Generating with seed: "lectual. as
regards superiority of truth, it is evident that"
```

```
----- temperature: 0.2
lectual. as
regards superiority of truth, it is evident that
----- temperature: 0.5
lectual. as
regards superiority of truth, it is evident that
----- temperature: 1.0
lectual. as
regards superiority of truth, it is evident that
----- temperature: 1.2
lectual. as
regards superiority of truth, it is evident thattr ofd
```

```
C:\Users\Nick\Anaconda3\lib\site-packages\ipykernel_launcher.py:5: RuntimeWarning: divide
by zero encountered in log
"""
```

```
ee dtlh
hor isui ongunst fnenfkutyl-ke cututhigdnposeng, anss statha ceolansollf,esigioi of
tpctnre t ds at dioet iamtiha le omecaedye ho ttbevem
ad
ve elton firpdhwt
y somitihmesr l
wesoadpranetes it heanes iba
t it! dfyrea fe
ththeg
whe gcirac ghin
(ancoslale
andxootsefosliw,
d, ontheusonndciblest out.r pesesterradroat pl unthee- exe"-wavttomen ,oy:tia
wilgtmathve dang,riyd afu?r thed
at
```

```
In [ ]:
```