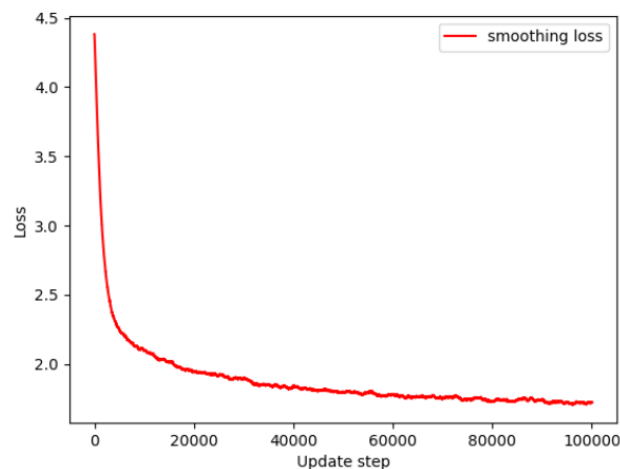
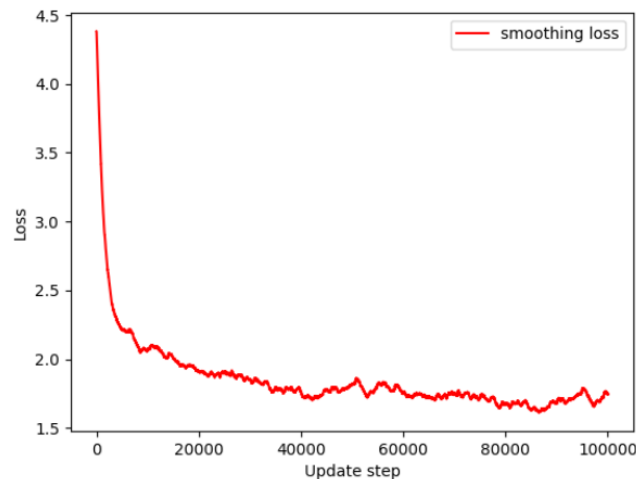


Assignment4__BonusPoint

Question1:

At the first bonus point, I use the random beginning point at each chunk of beginning, I split the book data by a function called *split book*:

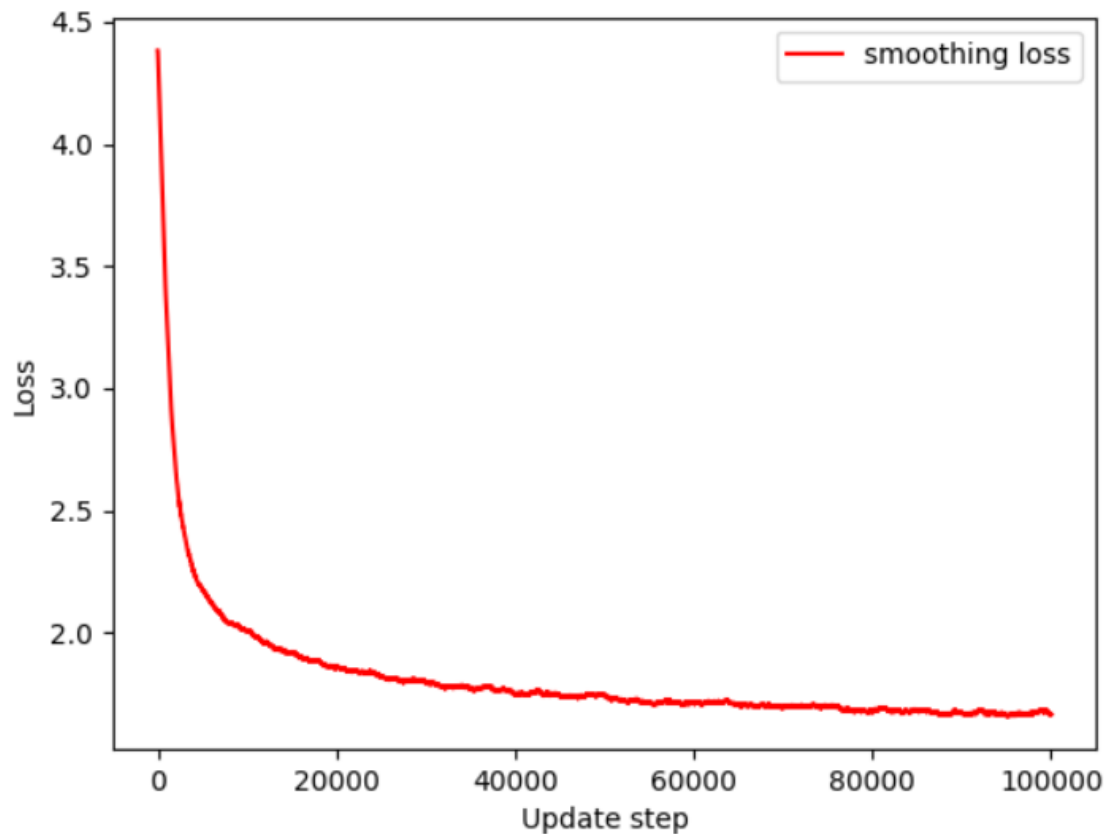


Generated **1000 characters text from the best model**:

her siops, "peinine, and her naffastly, so welch his nter to say by his stups, wizard He had slad of the love in his her wand fixictet about Hogwartry Duddired," said Vok-Enp his own't shit bryicing duraded around re dight like sportly would a tows thougleder of?" seyome any, "Harry's hand nightshed, him dabled nofty had the looking his."I he skiterrber? shoh didne.. Hor so a cleater, "I batter. Ron his crumner.""Er the gign! .Dogloffice to the Iffeen urvinters. Weroke his haven voicgechoated as he is now. Eving they with at the sunderthic fluen the Treeting over Harry at the Oplay his ece had to and of Mr. Weasley, where aboury." He yin stoivily as up those right light."Chorsting - I Bund ong what it not upon, de's ittlen by, betamots than the stoinvilung tif Blook Voldars at Hagrid cank blank as noggithout at in," Hoglinchooly, "It's bodeve famfoises, I got off lith allowind Potter of kith Harrytagents, spille-"thing the most Periups, Hid the some of grown you durot.

Question2:

I change the batch size to train the RNN from batch size = 1 to 2, and the loss can be seen like this:



Generated **1000 characters text from the best model:**

didn't cuphtnoy, Pheised to be and of nogessins the Indebled by the doorsoor," said Belm
yoie and fersed pillo in Harry thought his postampt, fice the stanviceers she was in. What'
back the com jood!

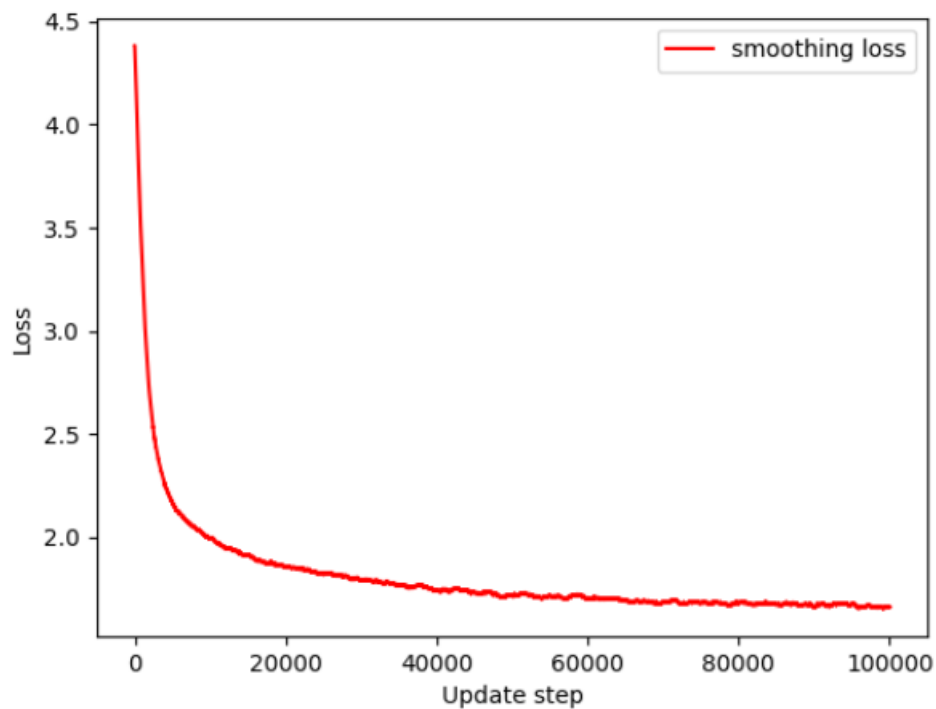
"Ohed voucuted . Shis! is moones was at the darks raid? I sais, and he had have that he
presed noping looked of the agomair as th. Weasletted to be Maging Ron. . . ne one out
skrowe his been wight. It gompess at Hermione were goin mad Patkentablus back it was
rechord insightle litter that ye in jumtting it wish bekind other ever judore mutterget rus
very not in the handed rove talk and muntle the that reading in. It he bewing, the pract
each with Harry "Indors!" said Mr. Chom - veeted, and otthey applared on the carrie.....Wers
to desnefted towemoround ne onn the did ghav, was parthlus thoughtry veitely, at Geoo,
she'd jusce quictempeyc, stry?" said Matter?" he mak lepped to"

He don't smar would face did gigged could extowizald bedombilies ou tane you that for a
spicked be witch

Question3:

At the beginning of this question, I use the temperature sampling, and different values of them, including 0.8, 0.5, 0.2 and 0.9,0.6,0.3

Temperature sampling:



1. 0.8:

the around and funding at an a pater, whyis wartold her winky - been to you was robes in that was not persor from the Deater badr in the forting be thrient tall a rus was any sight and bout fround off rowand the body nivel brightly baging more the air. Profes, done-nack they're as her for like looked to him bad.

"What her wood to Siriups body from the rialf with which a do in the rice and post like you, Dumbledore were got on fough ins wonder in the servant said to you not picture to get hurnidded and be a disand a

servisting out of it and bear side you because Slumpen to did not meroush the on to the Diggoon gound to sear.

"Dobby into the raindarong to be beok and on into the really smort in throught his every floor plamping come a wand, but. "I . who with reice and und she said to cour and Durry said though just an withort to don't hear dragons fify what Hogwart the wizards, he could, her nounding Mast the saw filly and just the reat Harry stup don't crains, and spiral. Harry, the

2. 0.5

the his hand, no his elves and he was he door, the face and her the with he had with the will came, and from to him his eyes being to the fires to the only wread be for ress, and Hermione were on the bout to the fire son and wholl was it was no didn't and her copped her trathing to his the comped because his floor, and still Dumbledore carced to the the right, they were and who have in the starts because for the toor of his head of the kirse, Ron a with the did really and hear with the digh Cedric felt be son the care of the stapple to his behind to his hear believe had the both one of the still to his head and hold the hand from the dirit, whother floor, and the dark in his eye the the broked to his staircaining didn't chair of his magged to sat and he would be and thought, they with the fare winding to his voice of the laugh the staphed to he was to his still ress."

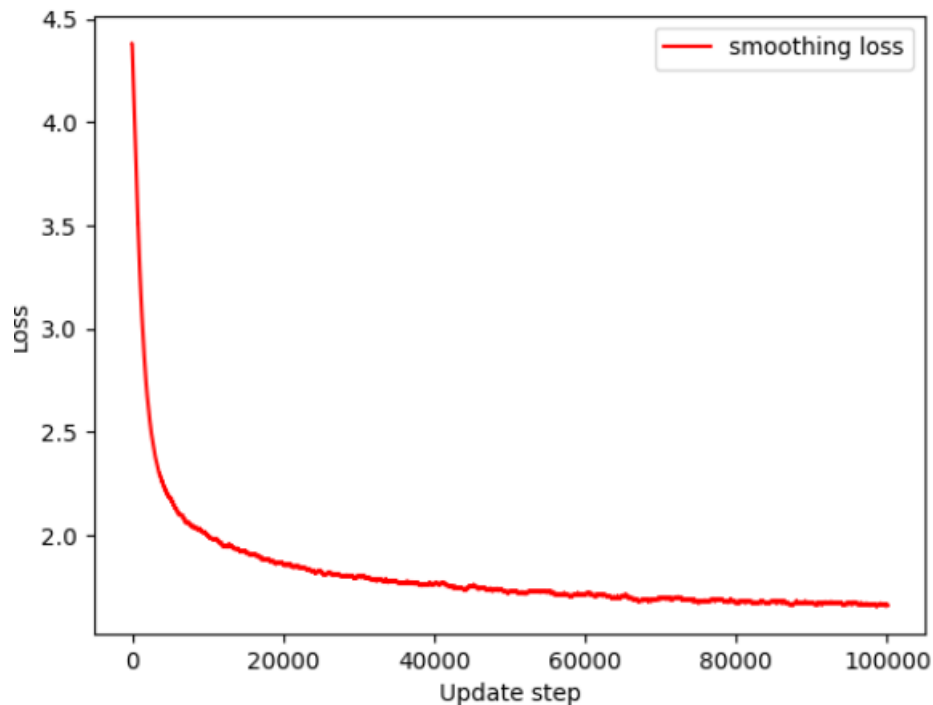
"What he starting the his hold from the lipped and he said the lightly with him. She herry were starting his head and

3. 0.2

the stared at the stand the stared at the starting a stranger of the stand the stared at the stared at the stand the standing and stranger the stand the stand a standing at the stand at the standing and some of the look and some she stared and said and said and said the standing a stand the stared at the stairs at the staring the stand a straight strangly at the standing and said and strained and strained at the standing at the stand a struncer and sor the stand the stared at the stand of the find at the stared at the stared at the stared at the standing at the stairs and she staring at the stared at the stand the stared at the stand the standing at the starting at the staring a starting at the standing at the stared at the standing a stand a starting at the standing the stared at the stared at the standing and she staring the stand a staring the comple of the cold in the stared at the stairs at the standing at the stared at the standing at the stared the stand the stared at the wa

As we can see, the higher T with more various content.

Nucleus sampling:



1. 0.9

it."You to make it his back the Soreeth what thit, as pasts of the face slowern boot, way the on Hermione sinned to the seining come of elfiol of were storted," he sped unand for become. On eyes starts shounder with his still benoth his nothing door, and pulled and Mushail, could the Sna croads.

"Oke his poiced the that, yeh a water an his wand the could he's bat spitch firr, wat Harry," said Fren I and I didn't whe was drish fewt you's he golse show able. . . . anyous now, you know. "Howhy fout an our od and beam," said George. This grippingot and with the Dark one mide in coursion of them, and thisting into a ready. Harry had

the conaltry chencingly. "It had conced her who was heldent a rearding standle more by without too thin," have she sound surperses, for mooted the bant, poan, he was closed the Tourniod. "Oh Treliend," ship into welt room.

Bustend undel towet, bener that his into her watert. He parcie a whispen was sent neised.

"Noom.They saw towal it with his toward, s

2. 0.6

his read a contents of the gold him something with a the goblet his eyes with his eyes as the back of the his for the goble she perperions, Harry so plater to setter at Harry as he was the barry shore and and him and the wizard the ento the would the pain his face of the sure he was the conted to the boy standed a fout on his entrest of Mrs. Weasley stick to beld be in the waited at his contily a lit at his cance of an the wait the ground start and he said beam and still as though his round the watching his smortion of Harry, and said for and her she could was for a cont of starting at the borged the sick the got black in the house and the goble to his mess for the watching the wand him and the way the though the waited into the other was fines that she had and he seemed the wizard Maxime to the too his behind Harry she was the fatting the painted to him of his behind a the hoppen could behind the said Harry when sort of Magic - The hands with the

part the his had striets said Harry ha

3. 0.3

the golded his hands with his for a could some of the surprised the
said the contred the was shouldent his face was the waited the
watching his for the waited the contered his hand the said in the
watching his hand the goble strees shorted the said the conters
showled the golded in the was his starting to the contred and
shouldents of the goble strees starts and Harry something the was
shoulded shoulded starts of the surprised his for the waited the
golded the golded his for the golded the golded in the contered the
waited the was his for the golded in the golded in the goble with
his hands with the surprised the golded his hands in the was
starting to the contred and the said the conters of the golded the
waited the contred and he was his for the was starting to his hand
and shoulded the conters and shoulded the goble street the
watching the golded his something his for the waited the golded in
the said in the was his hands in the contred and something the
contered his hand the said t

Question4:

At first, I do not use any way to speed my code, the running time is ***2104.7365 seconds***, after I use pre-computed in forward-pass, replace sparse matrix in to-one-hot function and np.outer in back forward pass, the run time is ***1786.8102 seconds***.