Assignment 6

Task 0

Last 20 iterations output:

```
Step 9980 Loss 1.0371838 Correct 49 out of 100
Step 9981 Loss 0.86992 Correct 49 out of 100
Step 9982 Loss 0.92278665 Correct 57 out of 100
Step 9983 Loss 0.9723475 Correct 54 out of 100
Step 9984 Loss 0.9681546 Correct 48 out of 100
Step 9985 Loss 0.9389746 Correct 45 out of 100
Step 9986 Loss 0.87809294 Correct 58 out of 100
Step 9987 Loss 0.9014037 Correct 54 out of 100
Step 9988 Loss 0.9035738 Correct 52 out of 100
Step 9989 Loss 0.87465614 Correct 54 out of 100
Step 9990 Loss 0.8377726 Correct 59 out of 100
Step 9991 Loss 0.94965774 Correct 50 out of 100
Step 9992 Loss 0.8963748 Correct 52 out of 100
Step 9993 Loss 0.8176634 Correct 61 out of 100
Step 9994 Loss 0.912059 Correct 48 out of 100
Step 9995 Loss 0.7984134 Correct 62 out of 100
Step 9996 Loss 0.8849958 Correct 58 out of 100
Step 9997 Loss 0.9299058 Correct 56 out of 100
Step 9998 Loss 0.9322842 Correct 47 out of 100
Step 9999 Loss 0.89783365 Correct 52 out of 100
```

Task 1

Last several output lines:

```
Step 9997 Loss 0.90907556 Correct 56 out of 100
Step 9998 Loss 0.85670877 Correct 53 out of 100
Step 9999 Loss 0.8290921 Correct 66 out of 100
Loss for 3000 randomly chosen document is 0.9149784872929256 number
correct labels is 1627 out of 3000
```

Task 2

Last 20 iterations output:

```
Step 9980 Loss 0.21379961 Correct 91 out of 100
Step 9981 Loss 0.27312818 Correct 91 out of 100
Step 9982 Loss 0.192183 Correct 95 out of 100
Step 9983 Loss 0.1444154 Correct 95 out of 100
Step 9984 Loss 0.21230288 Correct 93 out of 100
Step 9985 Loss 0.2178548 Correct 91 out of 100
Step 9986 Loss 0.09960269 Correct 96 out of 100
```

```
Step 9987 Loss 0.11792643 Correct 96 out of 100
Step 9988 Loss 0.14788203 Correct 95 out of 100
Step 9989 Loss 0.18195452 Correct 93 out of 100
Step 9990 Loss 0.2199789 Correct 92 out of 100
Step 9991 Loss 0.2040475 Correct 95 out of 100
Step 9992 Loss 0.24066463 Correct 88 out of 100
Step 9993 Loss 0.1426932 Correct 94 out of 100
Step 9994 Loss 0.12890066 Correct 96 out of 100
Step 9995 Loss 0.17416757 Correct 94 out of 100
Step 9996 Loss 0.22537236 Correct 92 out of 100
Step 9997 Loss 0.15344311 Correct 93 out of 100
Step 9998 Loss 0.21229371 Correct 91 out of 100
Step 9999 Loss 0.19035248 Correct 93 out of 100
Loss for 3000 randomly chosen document is 0.25019213551034525 number
correct labels is 2725 out of 3000
```

Task 3

Last 20 iterations output:

```
Step 9980 Loss 0.08752874 Correct 96 out of 100
Step 9981 Loss 0.10140841 Correct 97 out of 100
Step 9982 Loss 0.094891876 Correct 96 out of 100
Step 9983 Loss 0.089462854 Correct 98 out of 100
Step 9984 Loss 0.047377314 Correct 100 out of 100
Step 9985 Loss 0.09634549 Correct 96 out of 100
Step 9986 Loss 0.07575372 Correct 97 out of 100
Step 9987 Loss 0.08329792 Correct 97 out of 100
Step 9988 Loss 0.09416036 Correct 96 out of 100
Step 9989 Loss 0.10176899 Correct 96 out of 100
Step 9990 Loss 0.051609702 Correct 99 out of 100
Step 9991 Loss 0.08394879 Correct 97 out of 100
Step 9992 Loss 0.055202756 Correct 99 out of 100
Step 9993 Loss 0.08902317 Correct 97 out of 100
Step 9994 Loss 0.08973941 Correct 97 out of 100
Step 9995 Loss 0.08938692 Correct 97 out of 100
Step 9996 Loss 0.10274352 Correct 97 out of 100
Step 9997 Loss 0.06756161 Correct 98 out of 100
Step 9998 Loss 0.06755719 Correct 100 out of 100
Step 9999 Loss 0.07030229 Correct 99 out of 100
Loss for 3000 randomly chosen document is 0.44107285141944885 number
correct labels is 2692 out of 3000
```

Task 4

Last 20 iterations output:

```
Step 9980 Loss 0.029830791 Correct 99 out of 100
Step 9981 Loss 0.017829131 Correct 99 out of 100
Step 9982 Loss 0.005649335 Correct 100 out of 100
Step 9983 Loss 0.050076097 Correct 97 out of 100
Step 9984 Loss 0.014861861 Correct 100 out of 100
Step 9985 Loss 0.043011773 Correct 99 out of 100
Step 9986 Loss 0.012753385 Correct 100 out of 100
Step 9987 Loss 0.05179151 Correct 99 out of 100
Step 9988 Loss 0.0070069404 Correct 100 out of 100
Step 9989 Loss 0.027734902 Correct 98 out of 100
Step 9990 Loss 0.01222512 Correct 100 out of 100
Step 9991 Loss 0.002397586 Correct 100 out of 100
Step 9992 Loss 0.030314106 Correct 99 out of 100
Step 9993 Loss 0.024975343 Correct 99 out of 100
Step 9994 Loss 0.009699332 Correct 100 out of 100
Step 9995 Loss 0.007634781 Correct 100 out of 100
Step 9996 Loss 0.0032418298 Correct 100 out of 100
Step 9997 Loss 0.02597647 Correct 98 out of 100
Step 9998 Loss 0.019459397 Correct 100 out of 100
Step 9999 Loss 0.024451248 Correct 99 out of 100
Loss for 3000 randomly chosen document is 0.3791454167415699 number
correct labels is 2785 out of 3000
```