Name: _____ Quiz Roll#: _____

Q: We've thoroughly practiced employing LSTM (Long Short-Term Memory) in our previous assignment to forecast forthcoming work tasks. The current objective involves computing values for the below given tasks.

1. Compute embedding from the given target weight matrix based on One Hot vector: [1 0 0 0].
2. Define Stacked Input.
3. Compute value for forget gate from the data given below.
4. Compute C_t & h_t value from all supporting values given below.
5. Write Equations for finding C_t & h_t.

Target Weight Matrix:

4	1	3	4
2	3	3	4
4	1	1	0
2	0	2	4

Weight Matrix for Forget Gate:

6	2	4	6	6	4	4	5
5	5	1	1	0	5	6	4
2	4	2	0	1	5	5	5
6	4	2	3	1	6	3	6

Bias for Forget Gate:

0
0
2
0

Forget Gate	Input Gate	Output Gate	h_{t-1}	c_{t-1}
	1	1	0	0
	1	1	0	0
	1	0.99	0	0
	0.99	1	0	0

Solution: (Show Steps)

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Q: We've thoroughly practiced employing LSTM (Long Short-Term Memory) in our previous assignment to forecast forthcoming work tasks. The current objective involves computing values for the below given tasks.

1. Compute embedding from the given target weight matrix based on One Hot vector: [0 1 0 0]
2. Compute value for forget gate from the data given below.
3. Compute C_t & h_t value from all supporting values given below.
4. Write Equations for finding C_t & h_t.

Target Weight Matrix:

4	1	3	4
2	3	3	4
4	1	1	0
2	0	2	4

Weight Matrix for Input Gate:

6	4	3	1	5	6	2	0
0	0	6	6	1	3	3	5
6	4	2	3	4	5	1	2
6	6	2	6	1	4	0	0

Bias for Input Gate:

4
4
2
1

Forget Gate	Input Gate	Output Gate	h_{t-1}	c_{t-1}
1		1	0.76	1
1		1	0.76	1
1		1	0.76	1
1		1	0.76	0.99

<u>Solution:</u> (Show Steps)

Name: _____ Quiz Roll#: _____

Q: We've thoroughly practiced employing LSTM (Long Short-Term Memory) in our previous assignment to forecast forthcoming work tasks. The current objective involves computing values for the below given tasks.

1. Compute embedding from the given target weight matrix based on One Hot vector: [0 0 1 0]
2. Compute value for forget gate from the data given below.
3. Compute C_t & h_t value from all supporting values given below.
4. Write Equations for finding C_t & h_t.

Target Weight Matrix:

4	1	3	4
2	3	3	4
4	1	1	0
2	0	2	4

Weight Matrix for Output Gate:

1	3	0	2	2	4	2	3
0	2	0	2	0	3	6	0
0	4	0	2	0	0	1	3
3	4	1	0	5	1	1	0

Bias for Output Gate:

5
2
3
8

Forget Gate	Input Gate	Output Gate	h_{t-1}	c_{t-1}
1	1		0.964	2
1	1		0.964	2
1	1		0.964	2
1	1		0.964	1.99

Solution: (Show Steps)