Lab 8
Econ 104

Name: Tanuj Dargan **Student Number: V01040822**

Instructions: For the below questions, show full solutions. You must complete a reasonable attempt for each question. Show your steps.

Question 1: Money Creation Process

Let us continue with the lecture example of the money creation process. In the lecture, we ended at the following step. We argued that this is not the end based on our assumptions: a) the commercial bank holds no excess reserve, and its reserve ratio is 10%; and b) everyone will deposit their cash in the bank.

Assets			**Liabilities & Owner's Equity**
Reserve	**$10 + $90 = $100**	Deposits	**$100 + $90 = $190**
Loans	**$90**	Debt	
Securities		Capital	
Total	**$100+ $90 = $190**	Total	**$100+ $90 = $190**

a. Which assumption means that the above is not the end yet? Based on the assumption, what is the next step in the money creation process? Draw the T-account and explain how large M1+ is when the step is completed.

Based on the given information, assumption b) means that the process is not yet complete. Since everyone will deposit their cash in the bank, the bank will receive additional deposits, which will allow for further lending and money creation.

The bank receives the $900 in cash as deposits.
T-account:

Assets		Liabilities	
Reserves	+$900	Deposits	+$900

The bank now has $900 in additional reserves. With a 10% reserve ratio, it can lend out $810 (90% of $900).
M1+ after this step:
Initial deposit: $1,000
Loans created: $900 + $810 = $1,710
Total M1+ = $1,000 + $1,710 = $2,710

Lab 8
Econ 104

b. Is what you have in the previous question the end? If yes, explain why. If no, which assumption means that it is still not the end? What is the next step? Draw the T-account and explain how large M1+ is when it is completed.

This process theoretically continues indefinitely, with each iteration adding a smaller amount to M1+.

Assumption a) means that the process is not yet complete because the bank holds no excess reserves and will continue lending whenever it receives new deposits.

The next step would be:

The bank receives the $810 in cash as deposits.

T-account:

Assets		Liabilities	
Reserves	+$810	Deposits	+$810

The bank can now lend out $729 (90% of $810).

M1+ after this step:

Initial deposit: $1,000

Loans created: $900 + $810 + $729 = $2,439

Total M1+ = $1,000 + $2,439 = $3,439

Lab 8
Econ 104

Quiz 10 Question 11: *Consider the following scenario for Bank A:*

Assets		*Liabilities*	
Reserves	*$25,000*	*Deposits*	*$180,000*
Loans	*$155,000*		

If the desired reserve ratio is 10%, and someone deposits $50,000 into the bank, what is the bank's reserve position right after the deposit? Show using a T-Table for Commercial Bank A. (Hint: Please first draw the table after the deposit and then come to a conclusion.)

T-account for Bank A after the $50,000 deposit:

Assets Liabilities

Reserves +$50,000 Deposits +$50,000

With a 10% desired reserve ratio, the bank is required to hold $5,000 (10% of $50,000) as reserves.

The bank's reserve position right after the deposit is $45,000 in excess reserves ($50,000 - $5,000).

Quiz 10 Question 12: *Consider the following scenario for Bank A:*

Assets		*Liabilities*	
Reserves	*$25,000*	*Deposits*	*$180,000*
Loans	*$155,000*		

If the bank is holding $5,000 in excess reserves, what is the desired reserve ratio? Show your work.

Given:

- Excess reserves = $5,000

- Total reserves = $50,000 (from the previous question)

To calculate the desired reserve ratio:

Required reserves = Total reserves - Excess reserves

Required reserves = $50,000 - $5,000 = $45,000

Desired reserve ratio = Required reserves ÷ Total deposits

Desired reserve ratio = $45,000 ÷ $50,000 = 0.9 or 90%

Therefore, the desired reserve ratio is 90%.