Lab 11

GUI Graphics and Diagrams

1. GUI Programming (10 points)

Run and review kiloconverter.java. Then answer the following questions:

1.1. What is the window title?

1.2. What type of object is calcButton?

1.3. What is the name of the JPanel variable in buildPanel?

1.4. What three components get added to the panel?

1.5. How does the program show its results: a message dialog, or on the console?

1.6. What variable is kiloTextField.getText() assigned to?

1.7. What method is used to convert the input string to a Double?

1.8. What method gets called to display the window? (What method makes the window visible?)

1.9. What class does KiloConverter extend?

1.10. What interface does calcButtonListener implement?

2. Graphics (20 points)

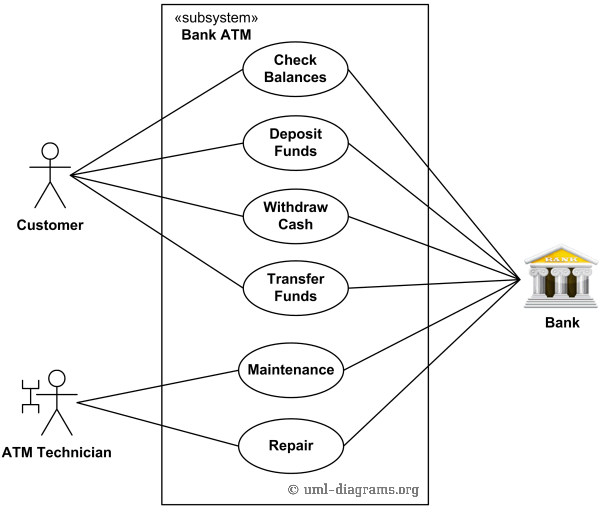
Adapt the LinesDemo to write your first name in lines on the screen. If your first name is more than eight characters, feel free to use a short version, a nickname, or just draw the first five letters.

Rubric:  
Student name and today’s date is a comment in the first line of the programs: -5 points if fails  
Screenshot and program code: -5 points if fails  
Name written in lines: 20 points

Please paste a screenshot of a successful program run, and copy-and-paste the source code from your main program's .java file, here.

3. Use Case and Sequence Diagrams (Questions, 15 points)

Review the following diagrams and answer the questions below.



Thanks to: <http://www.uml-diagrams.org/bank-atm-uml-use-case-diagram-example.html>

3.1. What are the three actors in this use case diagram? (Hint: the bank is also an actor)

3.2. What seven actions are captured in this diagram?

3.3. What system is being modeled?

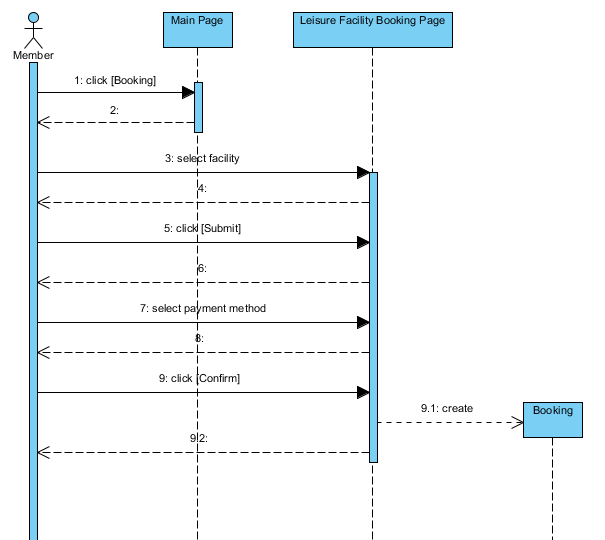
3.4. Can an ATM technician transfer funds?

3.5. Can a customer transfer funds?

3.6. Can the bank transfer funds?

3.7. Which actors are involved in checking balances?

3.8. If a customer checks their account balance, is the ATM technician involved?



Thanks to: <https://www.visual-paradigm.com/VPGallery/diagrams/Sequence.html>

3.9. How can you tell that the click for booking happens first?

3.10. Why does the customer have to click "booking" before they can select a facility?

3.11. Which action happens later: select payment method, or the step 9.2 response from the booking page?

3.12. Which action happens later: click to submit, or the booking being created?

3.13. How many interactions are expected on the main page? (Hint: how many arrows go to/from it?)

3.14. How many interactions are expected with the booking database?

3.15. How many **responses** are expected from the leisure facility booking page? (Hint: how many arrows go from it to the member?)