1) i)
   User testing would be applied to Software System A. This test case is specifically meant for determining the functionality of an individual component, without considering its interactions with any other components. Here, component C4 is being tested individually.
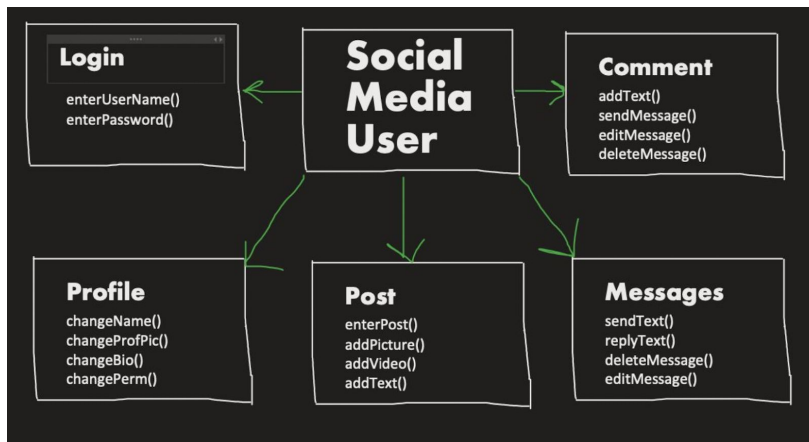
   ii)
   Integration testing would be applied to Software System B. This test case is specifically meant for determining the functionality of how an individual component functions when it interacts with other components in the system. Here, component C2, C4, and C5 are being tested to make sure their independent tasks are performed, and their collective outputs cohesively work together in the final product.

   iii)
   System testing would be applied to Software System C. This test case is specifically meant for determining the functionality of every single component in the system. Here, all the components are being selected, and the final product is evaluated as to whether it fits the requirements of the project.

2)

i)
Verification:
a) Check to determine whether logging into an account works correctly. Does an error message display if there's an incorrect password?

b) Posts should be able to receive comments, likes, and reposts. When you add a comment to a post, does it display correctly?

Validation:
a) Are we deviating from our goals when developing the Social Media Application?

b) Are the requirements for our project reasonable, or do they need to be updated? Is the Social Media app relevant for what we want to achieve, and does it provide a product that is relevant to a target audience?

ii)
Functional Requirements:
a) If you follow an individual, or hit the like button on their posts, do they receive a notification that you've done so?

b) Does the "close friend" list on this application have extra features? Are you able to improve the messaging experience with these individuals?

Non-Functional Requirements:
a) Does logging in (enterUserName() and enterPassword()) take faster than two seconds to load?

b) Does posting (enterPost()) take faster than 10 seconds to reach the main feed?

3) GitHub Link: https://github.com/SrikarValluri/Software_Engineering_2

4) i) Building a Bridge Over A Pond.
   ii)

Testing in Agile	Testing in Waterfall
Testing occurs throughout the entire project, including a variety of different materials, procedures, and methods of building and execution.	Testing occurs at the end of the project, including only the industry-standard material that is known to be successful. This way, any errors are minimized.
A rough blueprint or plan is executed throughout the project, that continues to be iterated on as development continues. There is always room for experimentation, and a feedback loop provides for the best possible end result.	A firm blueprint or plan is executed throughout the project. Everything is fixed beforehand, so there is minimal room for experimentation during the project.