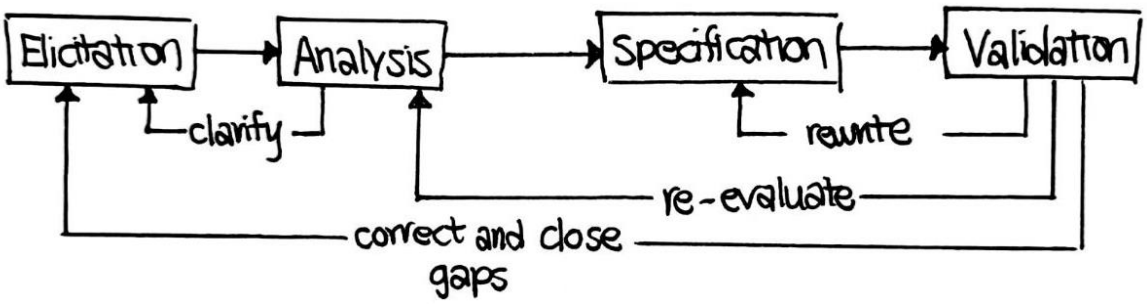
Solver: Chew Jing Wei

1a) (Just show this diagram, it is enough)



1b) (i) I will choose to interview the users, as each gamer can be very different in terms of personal preferences so it is better to have more personal insights as to what the user prefers.

1b) (ii) I will choose to watch them on the job, because I can then see what the existing employees are currently doing, where their tasks can be automated and also see which process is emotionally draining to them.

1b) (iii) I will use task analysis, because I can see what exactly students and professors need to do before building the system accordingly.

1c) (i) There should be five requirements, and the current conditions for requirement 3 and requirement 4 are wrong.

1c) (ii)

Conditions	Requirement Number				
	1	2	3	4	5
Age >= 20	N	Y	Y	Y	Y
Pass BTT	-	N	Y	Y	Y
Pass FTT	-	-	N	Y	Y
Pass PT	-	-	-	N	Y
Actions					
Issue					X
Reject	X	X	X	X	

2a) They have an inverse relationship because maintainable systems might end up consuming more resources and if you were to use less resources you might end up having to create 'hacks' which are difficult to understand and thus unmaintainable. An example of this will be how creating an adapter class to communicate with other APIs will lead to more function calls but will lead to more maintainable code as a change in API specifications will only cause a change in the adapter.

2b) The two meta design principles are separation of concerns, followed by low coupling and high cohesion. Separation of concerns means that the responsibility of components should not overlap, while low coupling and high cohesion means that a component should be as independent from other components as possible. They are both necessary conditions for modularity, as a modular

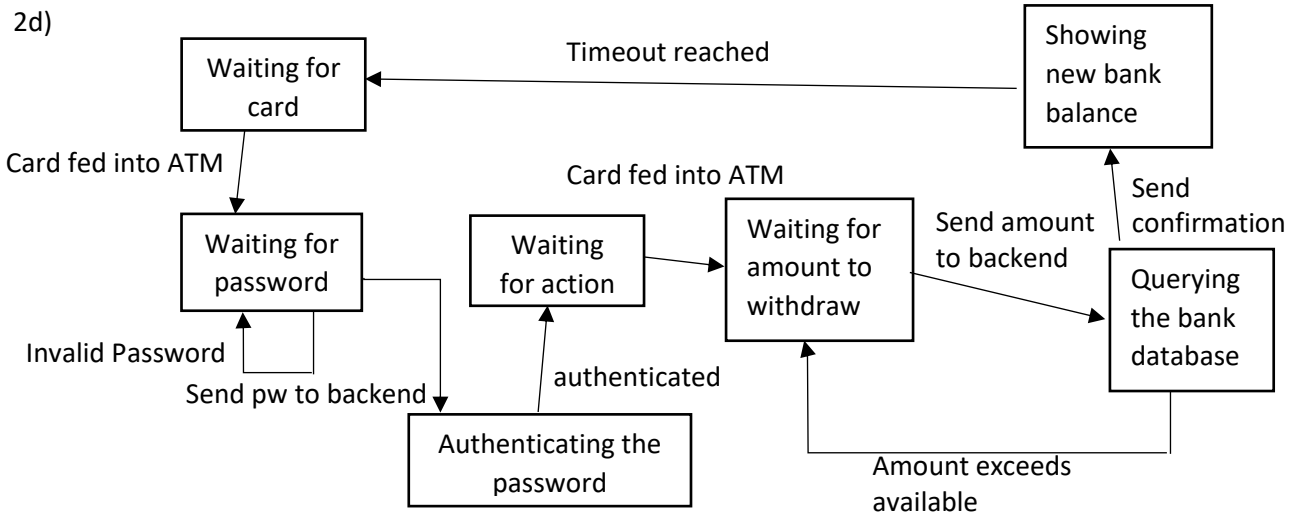
component should be independent of other components and taking the component out should not cause multiple functionalities to break.

2c) (i) It is a pipe-and-filter architecture.

2c) (ii) It allows for high efficiency and performance because there is minimal overhead between each filter, but it is not good at handling interactive applications and is hampered by having to maintain correspondence between two separate but related streams.

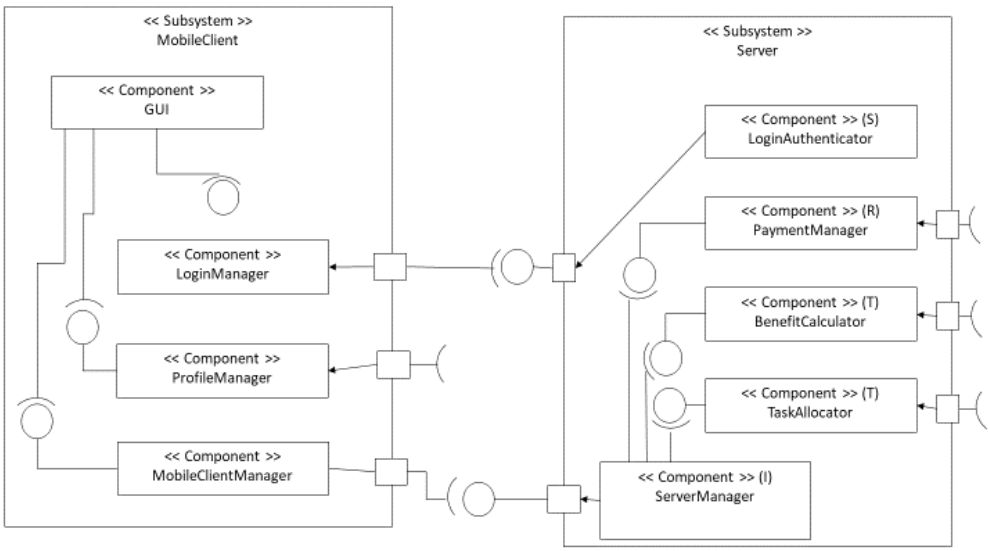
2c) (iii) (A) and (B) are both wrong.

2d)

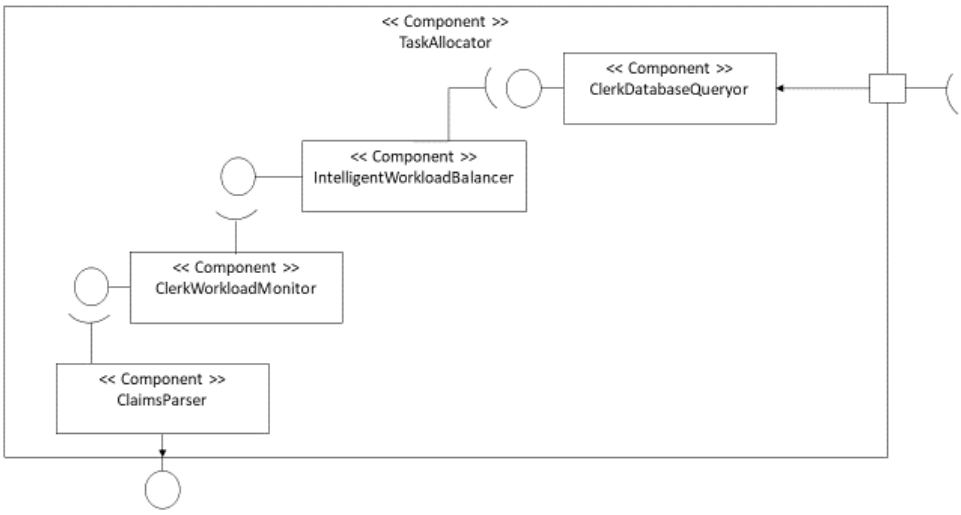


3a) On the MobileClient, a LoginManager component will be required to allow the user to key in the password tagged to their personal profile, and also manage the user session after authentication. On the server, a LoginAuthenticator component will be required to verify that the password is valid.

3b and d) (don't anyhow give port numbers because if they're wrong, you will be penalized, and be careful with delegation connectors)



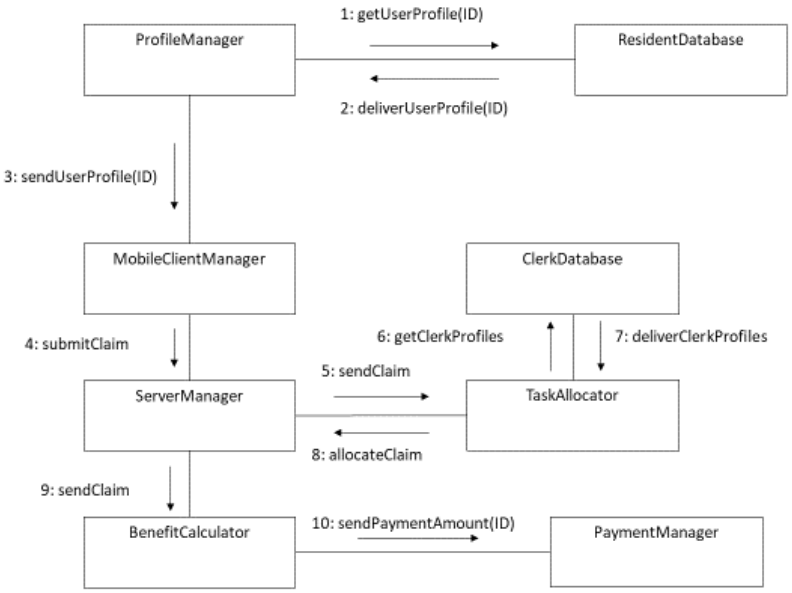
3c)



4a) Minimum number of classes = number of children in the below table + the root component = 9 + 1 = 10.

Parent	Child
X	C1,C2,X1,X2,X3
X2	C2a
X3	C3a, C3b, C3c

4b)



4c) It is better for it to be delivered as a system to justify continuous patches to be made by its development team (perpetual life span). It is also better delivered as a system so that ongoing payment for it to cover the expenses for performing these patches can be justified.

4d) The clerks themselves might oppose OSP as it might render them jobless now that the city council has lower manpower requirements.

< There usually isn't much to separate each person in this mod for the finals, and maybe even in the project as well, but good luck nevertheless! >