Questions 1

Part a :

1.State all the SDLC phases: explain each phase, its role in software development and its input & output

Anser :

Phases :1. Analysis : this phase usually has the owners of the project and manager also the business analyst and CTO the role of it that it takes the big decisions like what type of language program we should use do we need a designer or not and like this

2.Design : usually this has the System architect-like functional requirements technical requirements and the best architecture for the software, also it has the user interface and the user experience (UI/UX) which helps the client and the developer to understand and know what the software will do in the end .

3.Development : this phase is one of the important phase in the development software life cycle because it the place where the work start and thighs become true this phase has 2 different main parts one called Front-end Developer the second is Back end-Developer , so the first end developer is the person how will create the thing that the client will see unlike the back-end developer how will constraint how the data will save and transfer between the different parts of the softwart .

4.testing : is the phase that test if the software satisfy the client requirements and check the limits of the software and see it may breakdown in any cases and there is a specific engineers that can do this test with specific programs that do this tests

5.Deployment: is the place where the software becomes public for everyone so the client can use it from anywhere in the world. To do that we need devops and also data administrator so he can reserve a server .

6. Maintenance : is not a required phase in all softwares but it some time asked to have it in the software so this phase users become tester if they have any problems they need to report them to be maintenance at the end

| Phase | Input | Output |
| --- | --- | --- |
| Analysis | Clint request | Clint request analysed |
| Design | Clint request analysed | UI/UX AND and System architect |
| Development | UI/UX AND and System architect | Softwar |
| testing | Software limits and test | Pass or fail |
| Deployment | Private software | Public software |
| Maintenance | Public software | Updated Public software |

Part b:

state all the roles / titles that you know in the SDLC, their responsibilities and tools that they used if any :

| role | titles | responsibilities | tools |
| --- | --- | --- | --- |
| Product Owner | Analysis | who is a business representative or a voice for the stakeholders | Jama Connect |
| Project Manager | Analysis | who can be considered a team representative | Jira |
| Business Analyst | Analysis | a business analyst is a person that identifies the need for a specific technological solution and determines if a particular idea is in sync with what the customers actually need | workflows |
| CTO | Analysis | is the executive in charge of an organization's technological needs as well as its research and development | Git |
| System Architect designer | designer | He design how the data will transfer and save in the software | Lucidchart |
| UX/UI designer | designer | He design how the software will appear to the users | Figma |
| front -end developer | developer | He will code the design of the System Architect | Visual studio |
| Back -end developer | developer | He will code the UX/UI design | Vs code |
| Testers | Testers | How will test the project | TestNG |
| Data administrator | administrator | ensuring the integrity, security, and performance of databases throughout the development process | Git ,SonarQube |
| Devops | deployment | Make the software public | Docker |
| Support managers | maintenance | They track user problems and make the software updates | Zendesk |

Refrinus :

<https://djangostars.com/blog/roles-in-the-sdlc/>

<https://www.shareitsolutions.com/blog/business-analyst/>