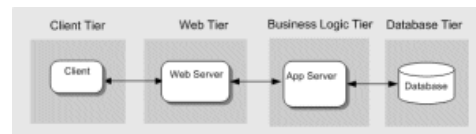# Tiers vs Layers Architectures
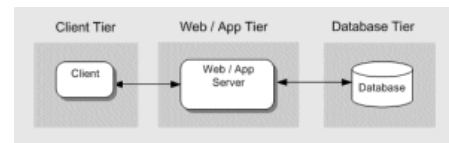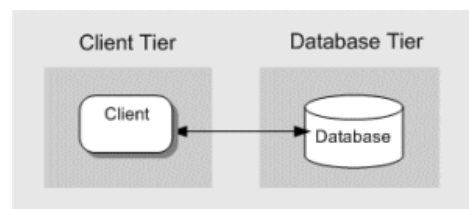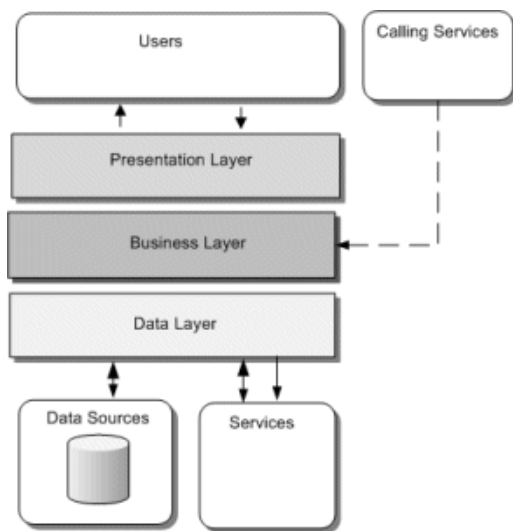
- *Layers* descriu gruparea *logica* a functionalitatii si a componentelor intr-o aplicatie[1]
- *Tiers* descriu distributia *fizica* a functionalitatii si a componentelor pe diferite servere, computere, retele sau locatii remote[1]
- Ambele au acelasi set de nume(presentation, business, service si data), dar numai *Tiers* implementeaza o separare diferita.[1]
- Este foarte des intalnita localizare mai multor *layers* pe aceeasi masina fizica (acelasi *Tier*)[1]
- *Layers* reprezinta o buna metoda de organizare a codului.
- Tiers se refera la locatia unde ruleaza codul. Adica, *tiers* sunt localizare acolo unde *Layers* sunt dezvoltate si acolo unde ruleaza. *Tiers* reprezinta dezvoltarea fizica a *Layers[2]*

Layers   *2-Tiers/ 3-Tiers/ 4-Tiers*

- Beneficii *Layers* Architectures
   Simplitate=usor de inteles si implementat
   Consistenta=organizarea codului este consistenta in toate proiectele
   Browsability=toate obiectele sunt puse impreuna, deci atunci cand doresti sa faci o modificare este usor de gasit un obiect[3]
- Beneficii *Tiers* Architecture
   Mententabilitate=fiecare tier este independent de celelate=> schimbarile sunt foarte usor de realizat
   Scalabilitate=pt ca tiers contin layers , scalarea este usor de realizat
   Flexibilitate=fiecare tier poate fi manageriat independent
   Desponibilitate= aplicatiile pot fi folosite intr-o arhitectura modulara[4]

Web-sources

1. https://docs.microsoft.com/en-us/previous-versions/msp-n-p/ee658109%28v%3dpandp.10%29
2. https://stackoverflow.com/questions/120438/whats-the-difference-between-layers-and-tiers
3. https://www.pixelstech.net/article/1493900728-Benefits-and-Drawback-of-a-Layered-Architecture?fbclid=IwAR1fEydmPikUNGoKaB0LLvoAxD58J1aAUDlg7AdSIxx_lWLkIfuLdIoe8pA
4. https://www.codeproject.com/Tips/277818/Difference-in-layer-and-tier-architecture?fbclid=IwAR1JMQYhJtUUb0ILzHKs0Jfi-W8uuMg3D_JGO2_2r4soQxMjMteM95wcCeM

Logging and Security in Layers Architectures

Logging in Layered Arhitecture:
Folosind o tehnica de validate a datelor proiectului, in Layer-ul Presentation se defineste o strategie pentru tratarea si logarea exceptiilor. Asadar cea mai usoara solutie este sa impelementam logging-ul in cel mai inalt nivel al aplicatiei. [1]

Security in Laiered Arhitecture:
 Componentele din Business Layer cer acces la resurse drept motiv, security este impementat in acest layer pentru a proteja componentele si asecuriza serverul.[2]

Web-sources

1. https://docs.microsoft.com/en-us/previous-versions/msp-n-p/ee658081(v%3dpandp.10)
2. https://docs.microsoft.com/en-us/previous-versions/msp-n-p/ee658102(v%3dpandp.10)?fbclid=IwAR36s-KZK7FaQLBR1lzjRrd7V9P8_LboKow5IZu2PO6vzoTGVbh18SZIQL4