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University intranet system

1) Registration new user – adding new user to the Data Base, assignment login \ password, sending information about new users to data base.

2) Authorization – process of checking the login\password. Request is sent to the database. As the request is sent to the entered login, if the user with such password exists, the password is verified from the database and the user-entered password.

3) Displaying data – displaying information instructors, courses, personal information about user (attendance, transcript, schedule).

4) Entering data (marks, attendance) - the process of making assessments, a logbook of attendance.

5) Calculation GPA – calculation GPA of the student according the data about the student: his marks, number of taken credits est.

6) User determining – according the entered password system determine all information about him(name, status, faculty, department, year, attestation, attendance est.) and privileges(access to certain folders).

7) Scheduling - student by selecting subject, can see his schedule options and choose the right time for him and desired teacher. Next, the system checks whether a sufficient number of sessions per week was chosen, does not exceed the number of students in each group, and whether it does not intersect the selected time to time other lessons.

8) Registration for courses - received a request from the user to the registration of the course, the system checks its curriculum, if it is not exceeded the number of credits, if prerequisites are closed.

9) Data base – storing whole information about each user, courses and departments.

Single layer system

In this type of system, all functions are performed and database in one single layer. For example, if the authorization system accepts your login password, checks for the existence of a user and password match here at once.

Two layer system (thin-client model)

Client (presentation) - This layer is responsible for the visual display of the responses to user requests. Also at this level the user inputs level information which is subsequently used by the server or stored in a database.

Server (Business logic, data base) – This layer is used to detect new users entering them into the database. Also the login user is authorized. Upon successful login program defines the user - its status (student, teacher, office receptionist), makes available all the data on it (transcript, schedule, browsing history lessons), and provides access to certain folders.

Entering new data about students (attendance, evaluation) to the database is also implemented here. On the basis of student data system itself calculates its GPA. During registration for courses and scheduling system also automatically receives all the necessary information about the user from the database.

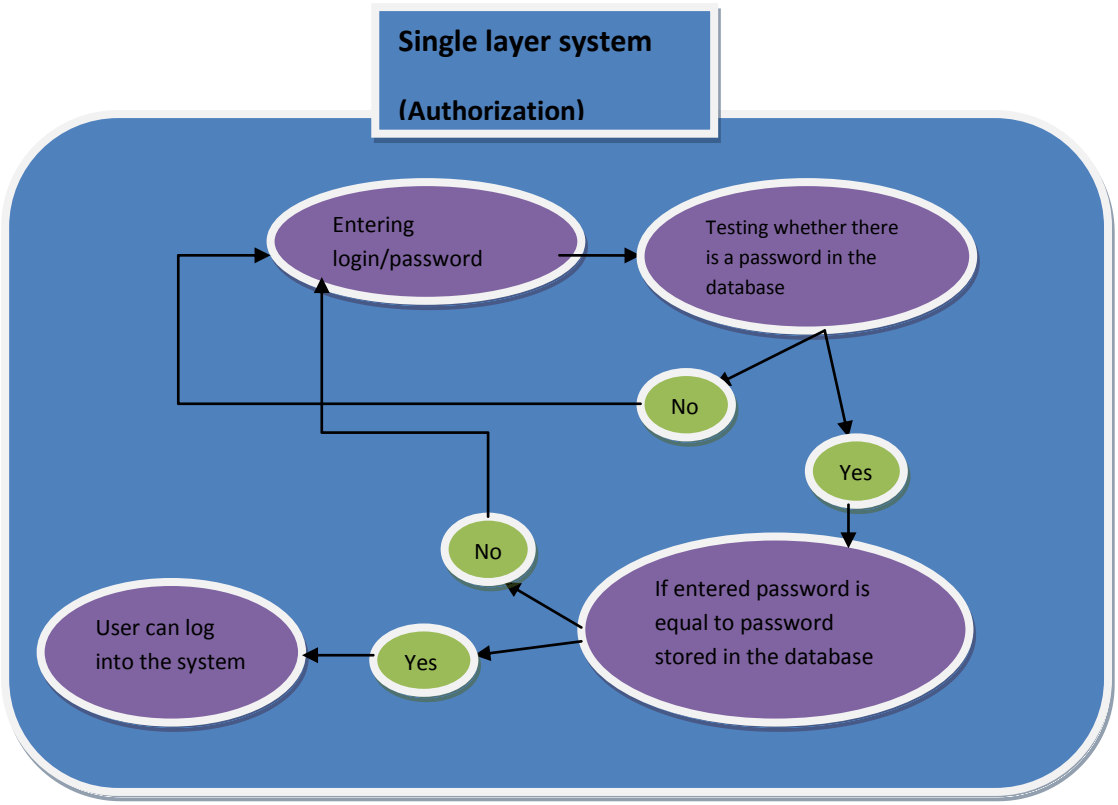
Three layer system

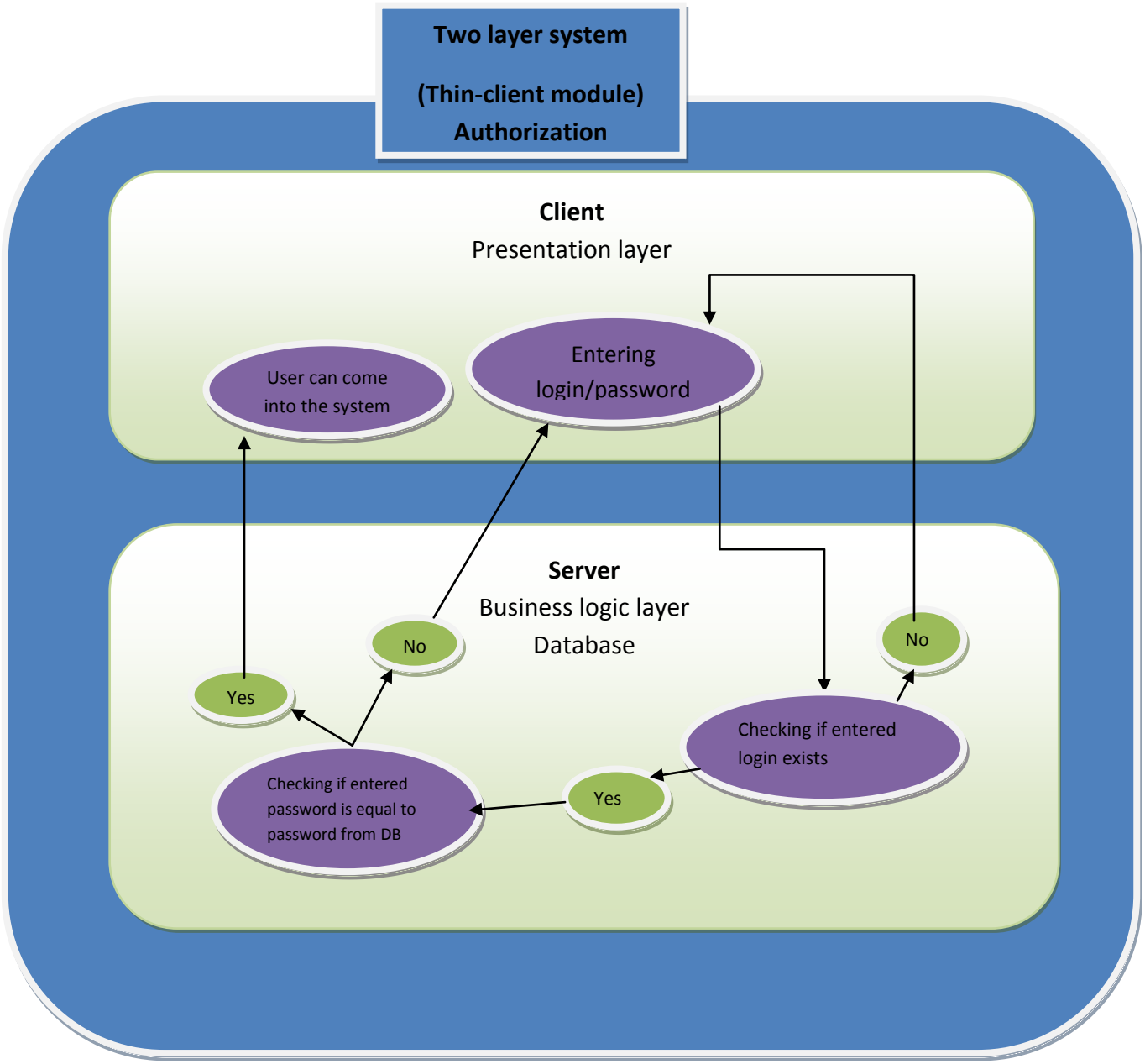
Presentation layer - This level shows the interface of intranet system for users, the necessary information and forms to enter certain data which then be scanned and processed on the next level.

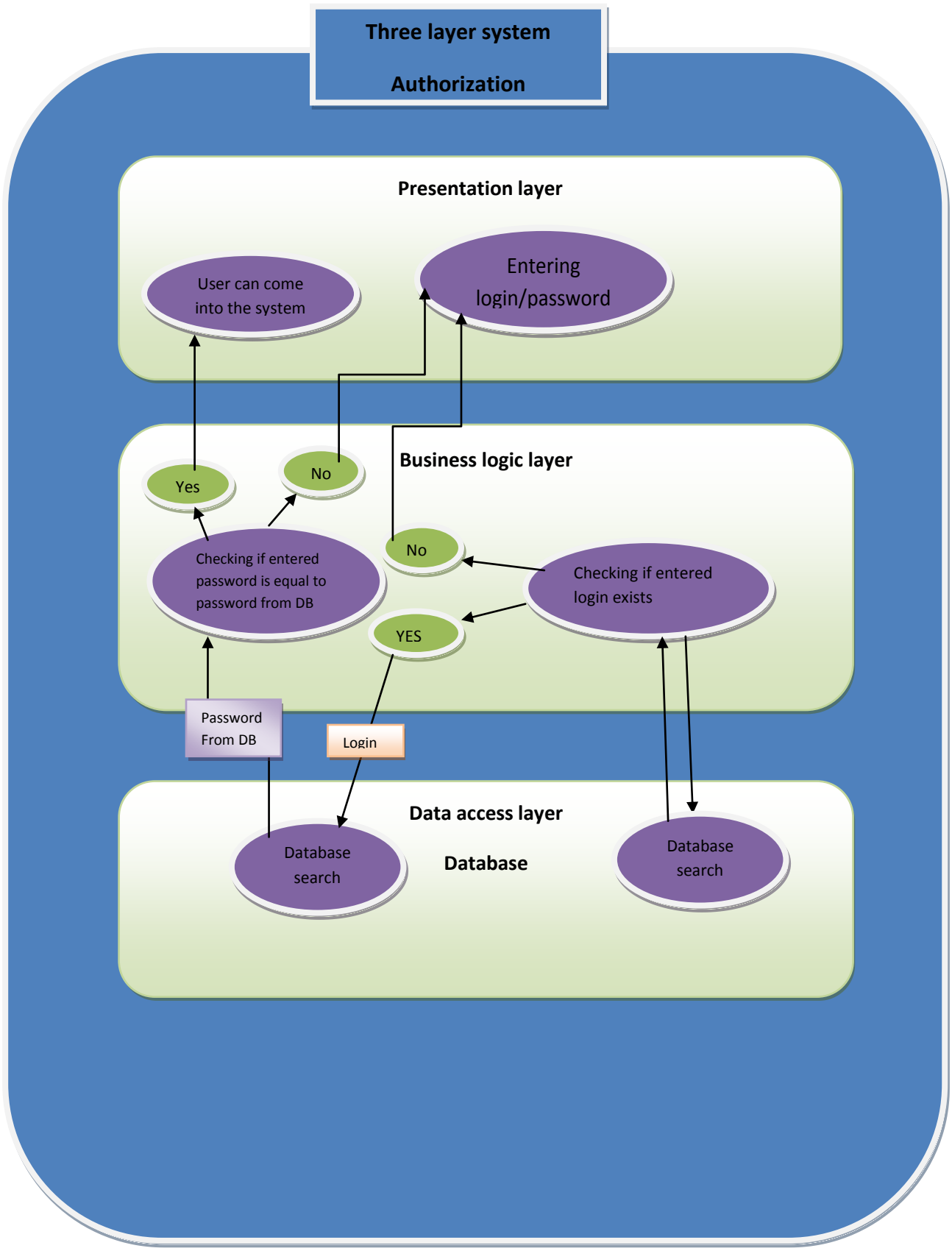
Business logic layer - On this layer all the functions, where is logic, are performed – checking, calculation processing. The correctness of the entered data required for registration, check your login \ password (in this case the request to the database) are verified. When you log in all your personal information is determined by the user's login and query to the database. Also GPA student are calculated automatically; at this level there is a check on the possibility of registering a particular discipline and schedule. After all the data is sent for storage in the database.

Data access layer - at this level, all data is stored for each user (username \ password, status, name, Schedule, etc.). This information is sent to the business logic layer where it is processed to reproduce to a client.

Following three diagrams show the work of system on an example of an authorization in 1, 2 and 3-layer systems:


Single layer system
(Authorization)
Entering login/password
Testing whether there is a password in the database
No
Yes
No
If entered password is equal to password stored in the database
User can log into the system
Yes


Two layer system
(Thin-client module)
Authorization
Client
Presentation layer
User can come into the system
Entering login/password
Server
Business logic layer
Database
No
No
Yes
Checking if entered login exists
Checking if entered password is equal to password from DB
Yes


Three layer system
Authorization
Presentation layer
User can come into the system
Entering login/password
Business logic layer
Yes
No
Checking if entered password is equal to password from DB
No
Checking if entered login exists
YES
Password From DB
Login
Data access layer
Database search
Database
Database search