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Phase 1

System description:

The purpose of utilizing a Database Management System (DBMS) is to allow for easier storage and access of data which is extremely important in a hospital. Doctors are able to do their jobs more efficiently if the patient data is organized, and the Hospital Management System (HMS) does exactly that. It contains patient data, employee data, hospital space availability, insurance information, billing information, and any data for other facilities that the hospital may utilize. Different employees have access to different levels of information, and a database has the functionality to grant different access to different types of employees. This allows for delegation of work so that each employee can focus on the work they are responsible for. With the help of administrative staff at a hospital, certain staff can be responsible for which department a patient belongs to and what section of the hospital they should stay in, and the doctors can focus on simply treating the patients. With unique log-in IDs for staff, administrators, and patients at the hospital, everyone has access to data that will be most useful for their use. The inclusion of such technology makes the process more routine, improves the interactions between patients and doctors, and ends up being more cost-effective from an administrative standpoint.

Context diagram (system architecture):

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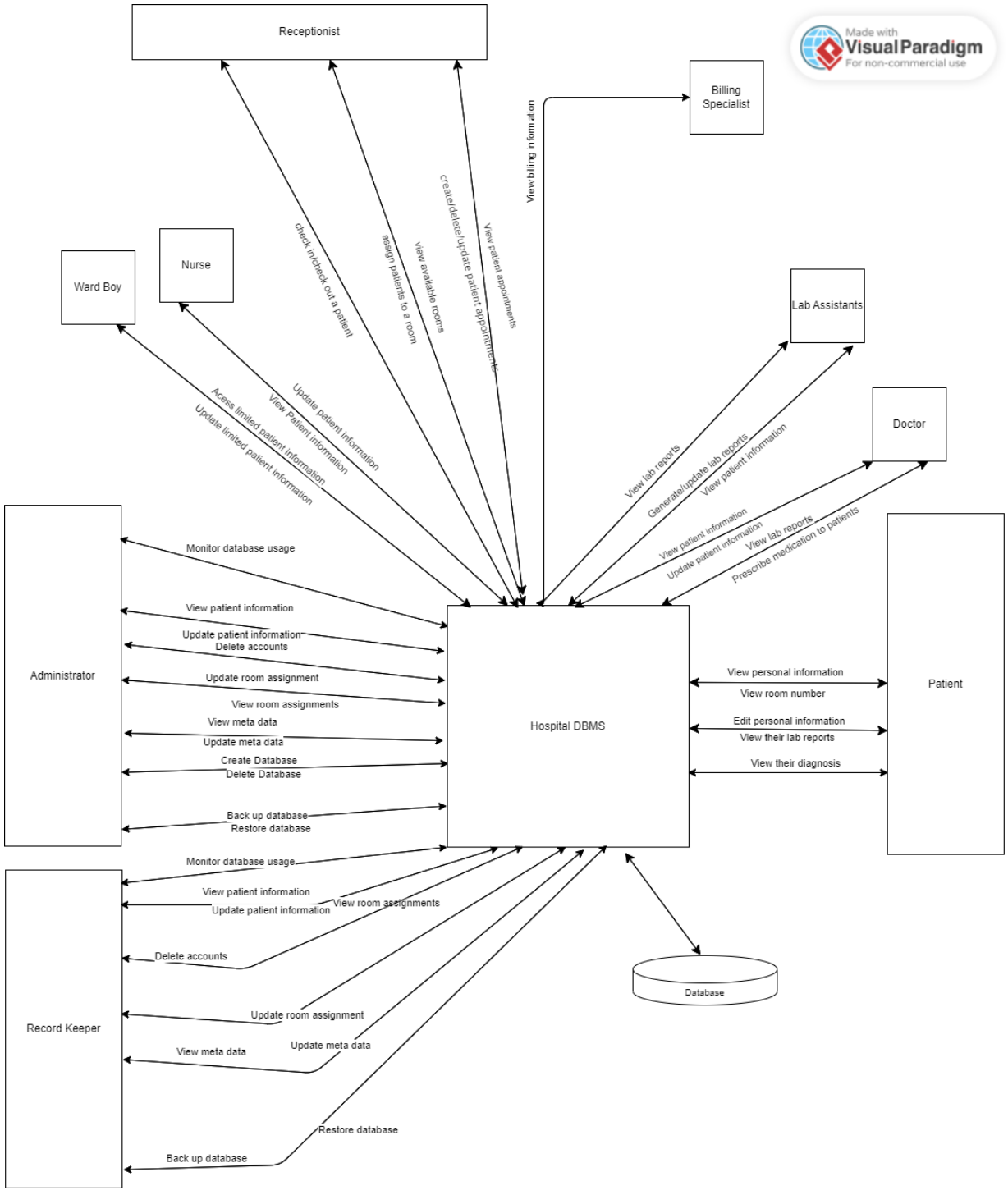

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Functional requirements:

This is an initial set of login functional requirements; you may add more as needed.
1: The system will allow the user to log in.
2. The system will verify the username and password.
3. The system will not allow the user to log in with an invalid username or password.
4. The system will be able to remember usernames and passwords.
5. The system will allow users to create accounts.
6. The system will enable users to log out of their accounts

Browsing Functional Requirements:

1. The system allows receptionists to assign patients to a room.
2. The system allows receptionists to view available rooms.
3. The system allows receptionists to create patient appointments.
4. The system allows receptionists to update patient appointments.
5. The system allows receptionists to delete patient appointments.
6. The system allows receptionists to view patient appointments.
7. The system allows receptionists to check in a patient.
8. The system allows receptionists to check out a patient.
9. The system allows Billing Specialists to view billing information.
10. The system allows users to update account information.
11. The system allows doctors to prescribe medication to patients.
12. The system allows doctors to update all patient information.
13. The system allows doctors to access all patient information.
14. The system allows doctors to view lab reports.
15. The system allows ward boys to access limited patient information
16. The system allows ward boys to update limited patient information
17. The system allows nurses to access limited patient information
18. The system allows nurses to update limited patient information
19. The system allows lab assistants to view patient information.
20. The system allows lab assistants to generate/update lab reports.
21. The system allows lab assistants to view lab reports.
22. The system allows patients to view their personal information
23. The system allows patients to edit their personal information
24. The system allows patients to view their lab reports

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25. The system allows patients to view their diagnosis
26. The system allows patients to view their room number

Administrator Functional Requirements:

1. The system allows record keepers to view all patient information.
2. The system allows record keepers to update all patient information.
3. The system allows record keepers to view room assignments.
4. The system allows record keepers to update room assignments.
5. The system allows record keepers to view metadata.
6. The system allows record keepers to update metadata.
7. The system allows record keepers to delete accounts.
8. The system allows record keepers to back up the database information.
9. The system allows record keepers to restore the database information.
10. The system allows record keepers to monitor database usage.
11. The system allows administrators to delete the database.
12. The system allows administrators to create the database.
13. The system allows administrators to view all patient information.
14. The system allows administrators to update all patient information.
15. The system allows administrators to view room assignments.
16. The system allows administrators to update room assignments.
17. The system allows administrators to view metadata.
18. The system allows administrators to update metadata.
19. The system allows administrators to delete accounts.
20. The system allows administrators to back up the database information.
21. The system allows administrators to restore the database information.
22. The system allows administrators to monitor database usage.

Non-functional requirements:

Nonfunctional Requirements (NFRs) define system attributes such as security, reliability, performance, maintainability, scalability, and usability

1. The system should be available 24/7
2. The system should be flexible to accommodate schema changes
3. The system should not allow unauthorized users to access sensitive information

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4. The system should be able to add patients without the database getting full or running out of ID numbers.
5. The system should be able to scale depending on the number of users.
6. The system shall shut down access to the HMS for all members except DBA/DBA office so that maintenance can be done when the system is compromised.
7. The system should store data securely
8. The system encrypts sensitive information.
9. The system should store data in a way that it should be interoperable.
10. The system can recover in case of failure
11. The system should allow for weekly backups
12. The system should have a quick response time
13. The system will refresh every 10 minutes.