EAST WEST UNIVERSITY

PROJECT REPORT

Course Code : CSE 435

Course Title : Software Quality Assurance

Submitted to

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Introduction:

"Corona Updates and lab test management system" is an online computerize system where a user can visualize (different charts are used) worldwide and Bangladesh corona updates news and can reserve a date a for corona lab test whenever he/she want to test himself/ herself. Through this online system anyone can visualize corona updates news but for booking a date for lab test at a test center user need to register himself/ herself to the system. And after testing, his/ her test result will be informed through this system.

Log in:

Sequence diagram:

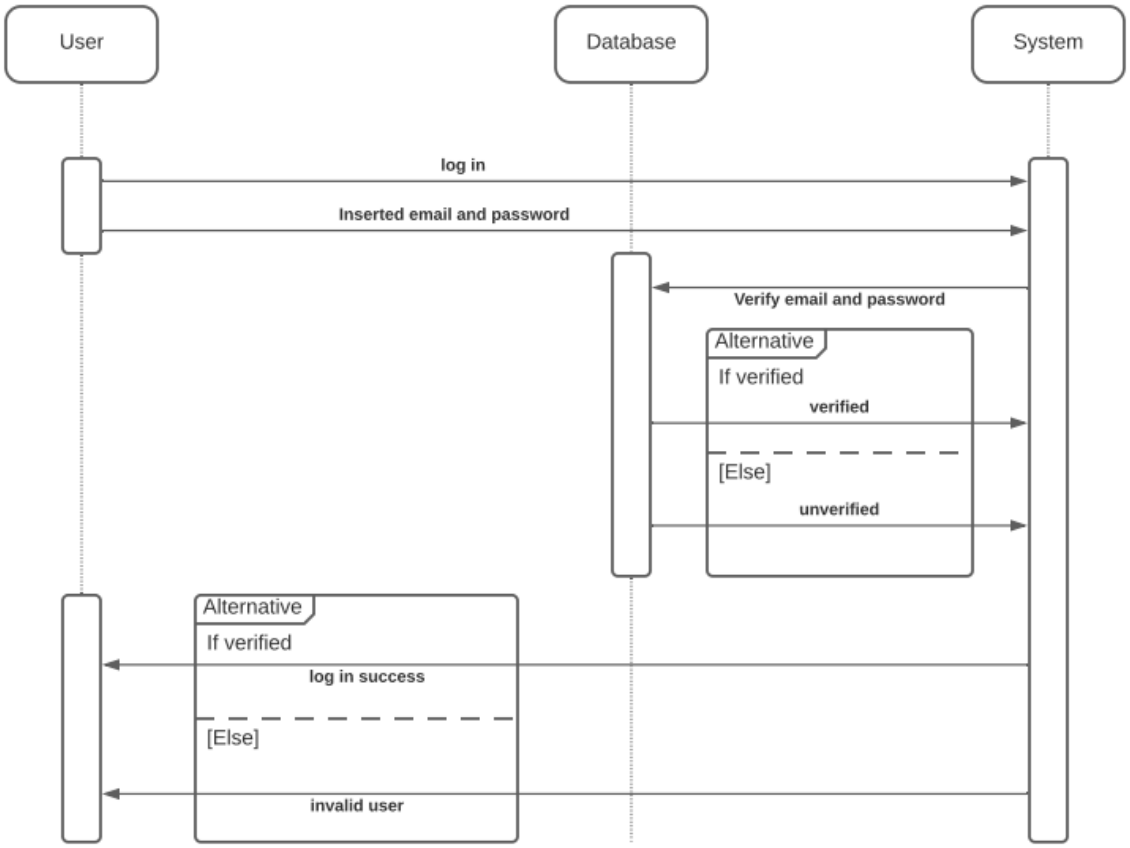

Fig: Login Sequence Diagram.

This is a front interface where admin and user can request for login to the System. Then user and admin insert their login info (email and password). System verifies user or admin log in info from the database. If their login info stored in the database, then database returns verified to the system otherwise returns unverified. After that system returns log in success (send to user or admin profile page) if user or admin verified otherwise returns invalid user.

FSP code of the log in sequence diagram:

```
USER =(log_in->insert_login_info->(log_in_success->USER|invalid_login->USER)).

SYSTEM =(login_req->inserted_login_info->verify_login_info-> (verified->log_in_success->SYSTEM | unverified->invalid_login->SYSTEM)).

DATABASE = (verify_login_info->(verified->DATABASE | unverified->DATABASE)).


||LOGIN_SYSYEM =(USER||SYSTEM||DATABASE)
                /{log_in/login_req,insert_login_info/inserted_login_info}.
```

Analysis Diagram:

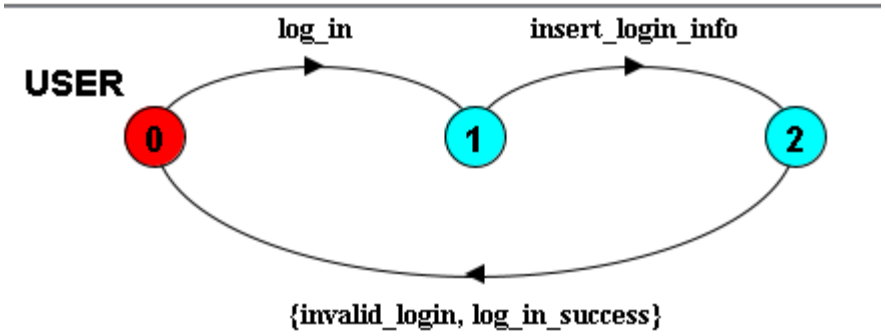

Fig: User state diagram.

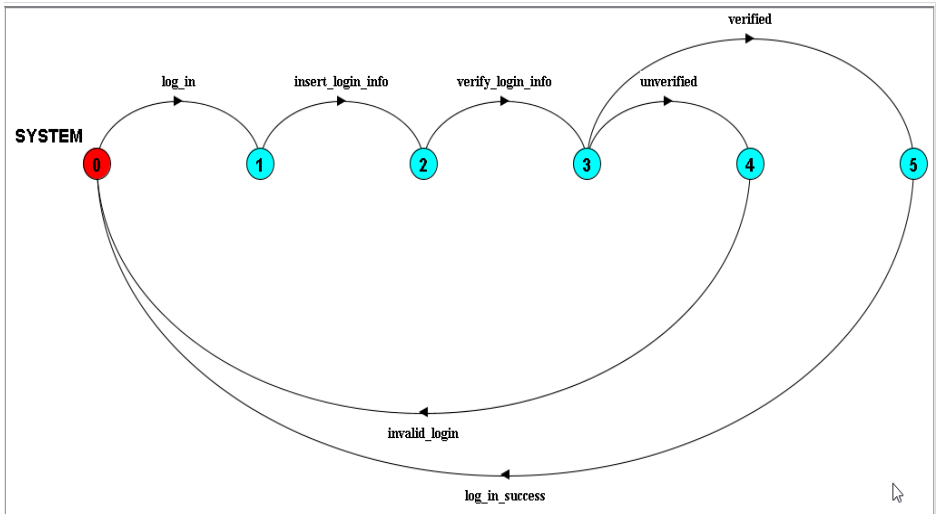

Fig: System State diagram.

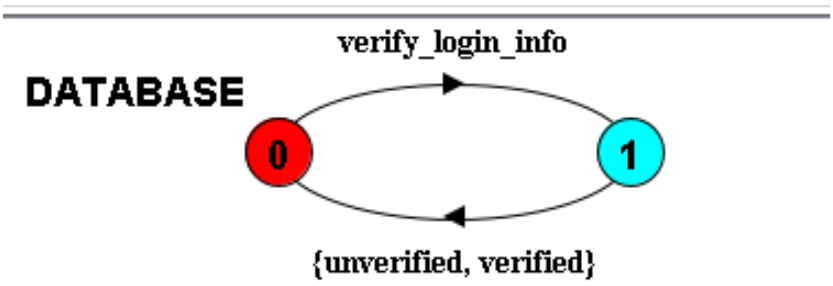

Fig: Database state diagram.

Composite Diagram:

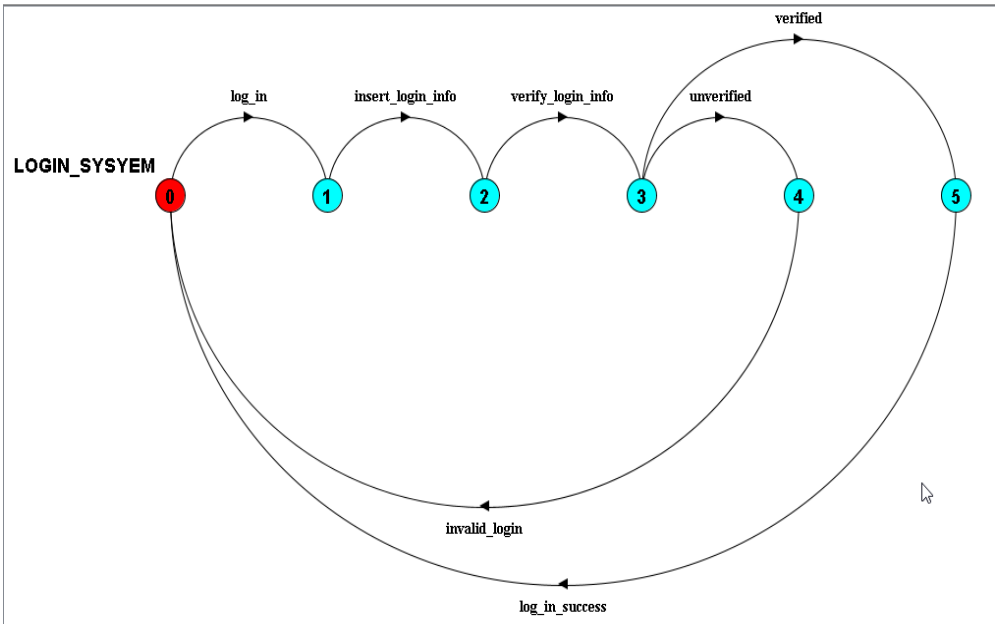

Fig: Composite diagram of login system.

COVID Update News:

Sequence Diagram:

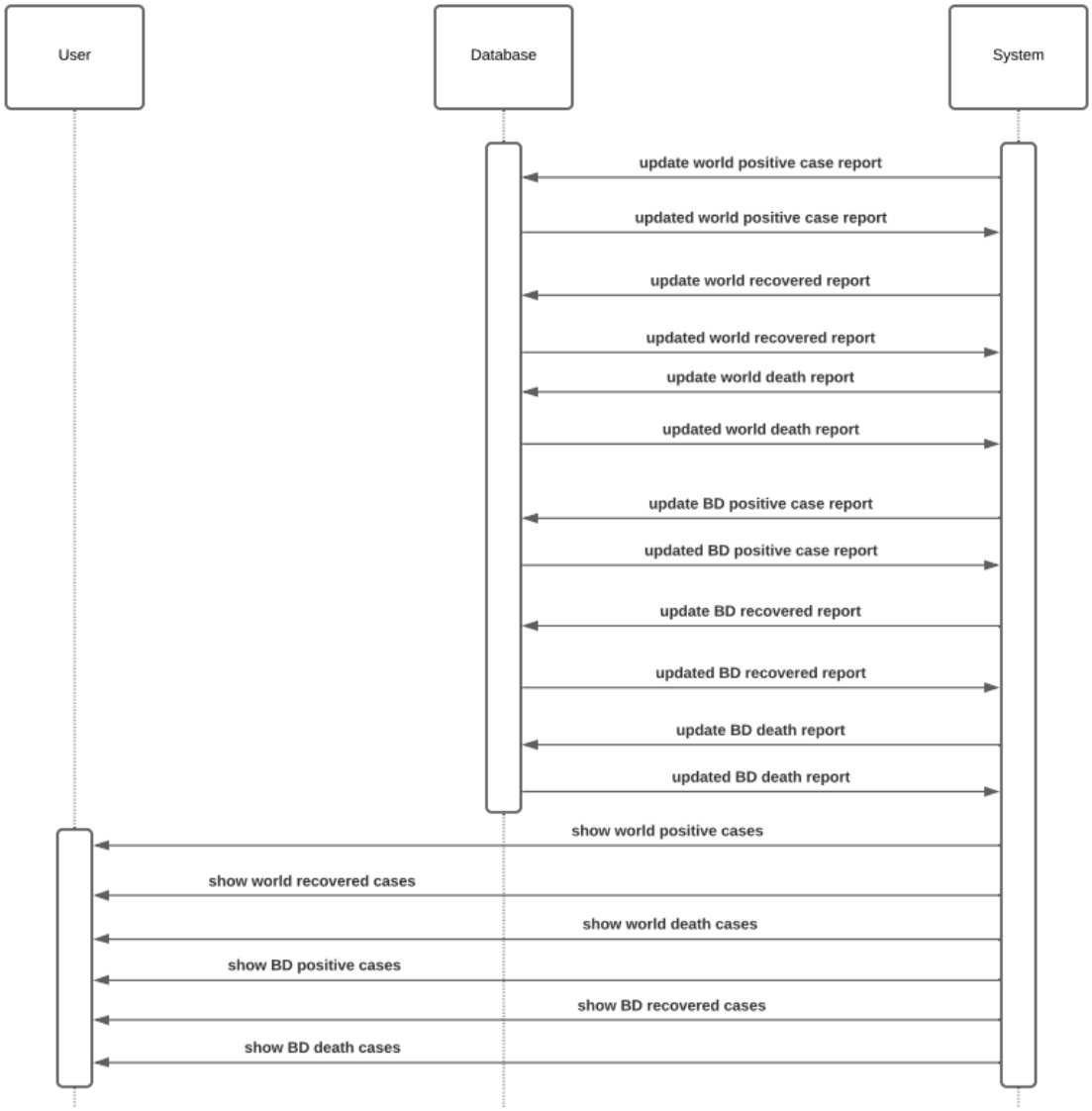

Fig: COVID Update News Sequence Diagram.

Here, system will update World (positive cases, recovered cases and death cases) and Bangladesh (positive cases, recovered cases and death cases) COVID cases daily in the database, fetch it from the database and visualize world and Bangladesh updated COVID cases to the user.

FSP code of the COVID update news sequence diagram:

```
USER = (show_world_positive_cases->show_world_recovered_cases->show_world_death_cases->
        show_BD_positive_cases->show_BD_recovered_cases->show_BD_death_cases->USER).


SYSTEM = (update_world_positive_cases->updated_world_positive_cases->update_world_recovered_cases->
          updated_world_recovered_cases->update_world_death_cases->updated_world_death_cases->
          update_BD_positive_cases->updated_BD_positive_cases->update_BD_recovered_cases->
          updated_BD_recovered_cases->update_BD_death_cases->updated_BD_death_cases->
          show_world_positive_cases->show_world_recovered_cases->show_world_death_cases->
          show_BD_positive_cases->show_BD_recovered_cases->show_BD_death_cases->SYSTEM).


DATABASE = (update_world_positive_cases_req->updated_world_positive_cases->update_world_recovered_cases_req->
            updated_world_recovered_cases->update_world_death_cases_req->updated_world_death_cases->
            update_BD_positive_cases_req->updated_BD_positive_cases->update_BD_recovered_cases_req->
            updated_BD_recovered_cases->update_BD_death_cases_req->updated_BD_death_cases->DATABASE).


||COVID_UPDATE = (USER||SYSTEM||DATABASE)
               /{update_world_positive_cases_req/update_world_positive_cases,
                 update_world_recovered_cases_req/update_world_recovered_cases,
                 update_world_death_cases_req/update_world_death_cases,
                 update_BD_positive_cases_req/update_BD_positive_cases,
                 update_BD_recovered_cases_req/update_BD_recovered_cases,
                 update_BD_death_cases_req/update_BD_death_cases}.
```

Analysis Diagram:

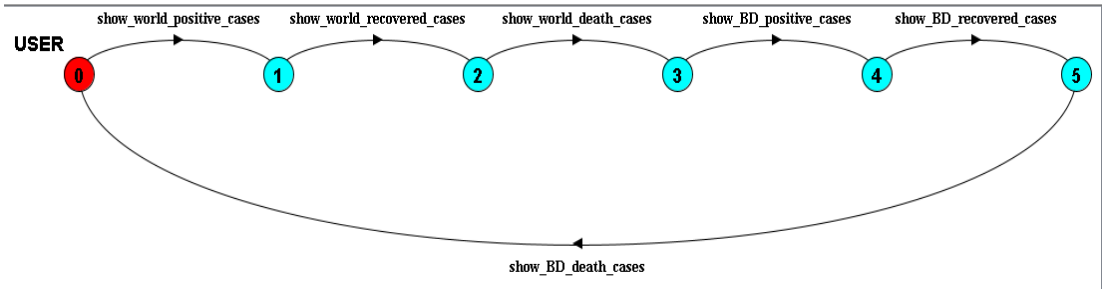

Fig: User state diagram.

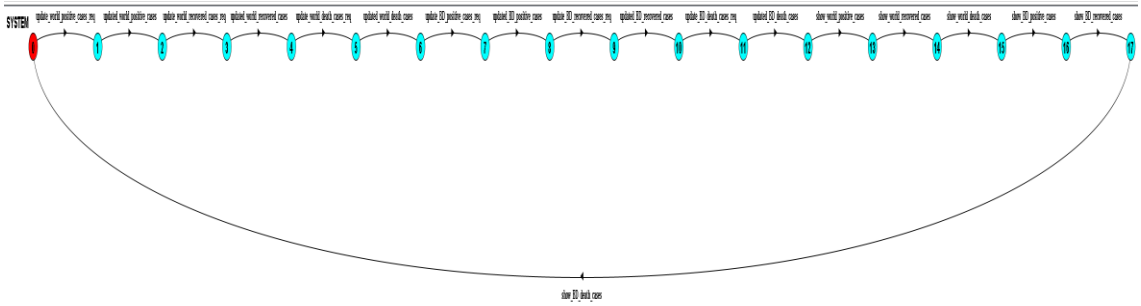

Fig: System state diagram.

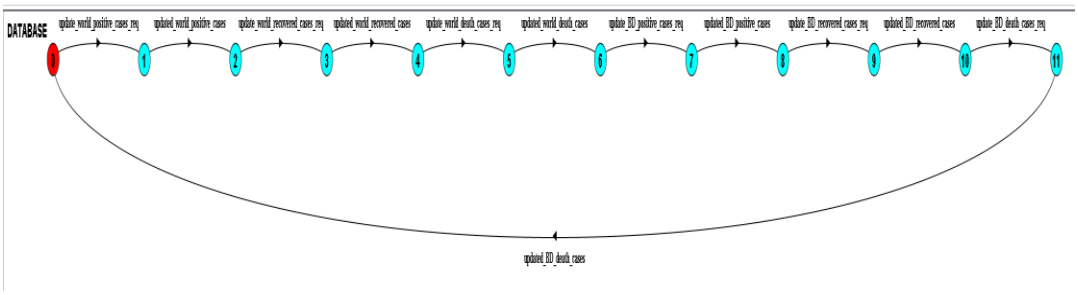

Fig: Database state diagram.

Composite Diagram:

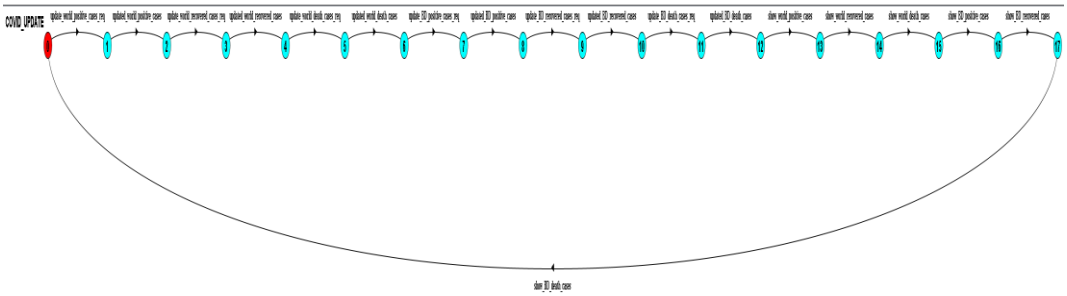

Fig: Composite diagram of COVID update news sequence diagram.

Lab Test Reservation:

Sequence diagram:

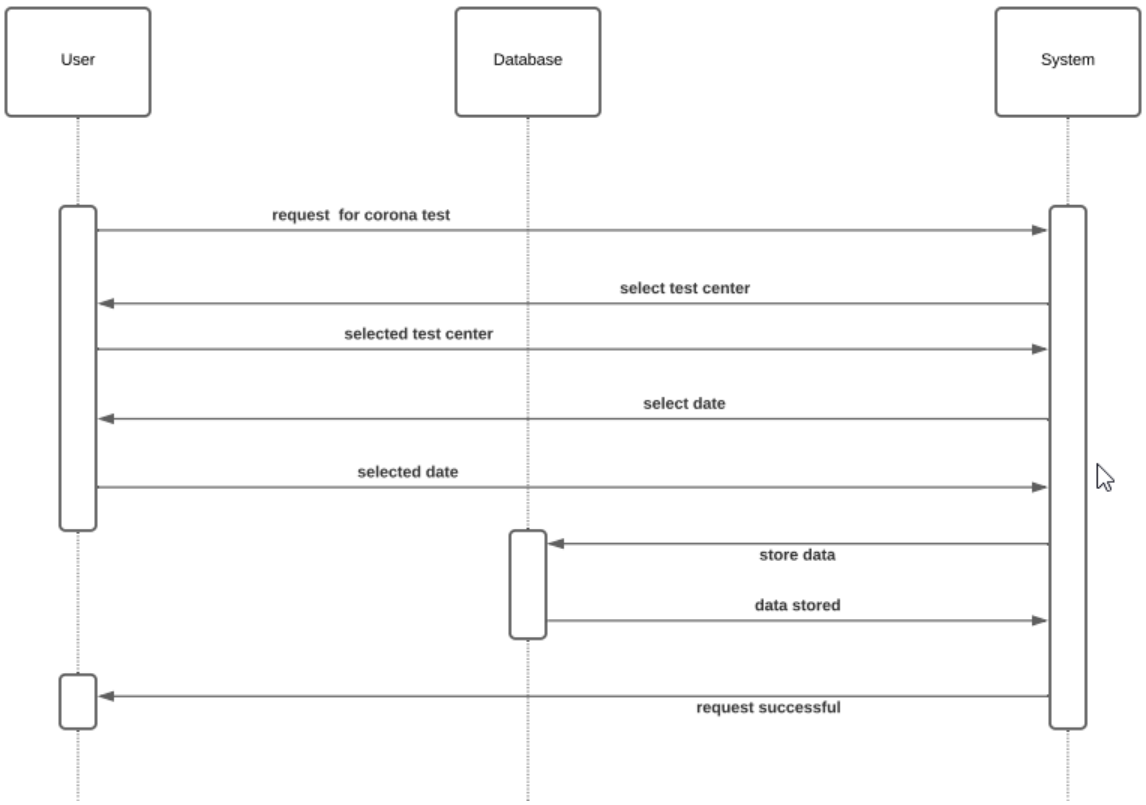

Fig: Lab Test Reservation sequence diagram.

There a registered user can request for COVID lab test if he/ she suspected himself/herself COVID infected. Then registered user can select test center and date when he/ she want to test. System update registered data into the database and booked registered user Lab test date and center.

FSP code of the Lab Test Reservation sequence diagram:

```
USER = (corona_test_req->select_test_center->selected_test_center->select_date->selected_date
        ->request_successful->USER).

SYSTEM = (corona_test_req->select_test_center->selected_test_center->select_date->selected_date
        ->store_data->data_stored->request_successful->SYSTEM).

DATABASE = (store_data_req->data_stored->DATABASE).

||TEST_REQUEST = (USER||SYSTEM||DATABASE)/{store_data_req/store_data}.
```

Analysis diagram:

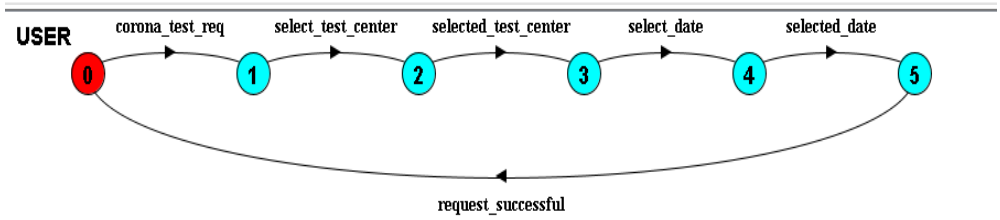

Fig: User state diagram.

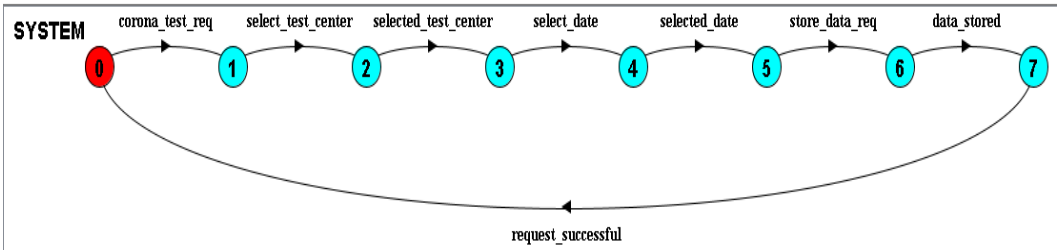

Fig: System state diagram.

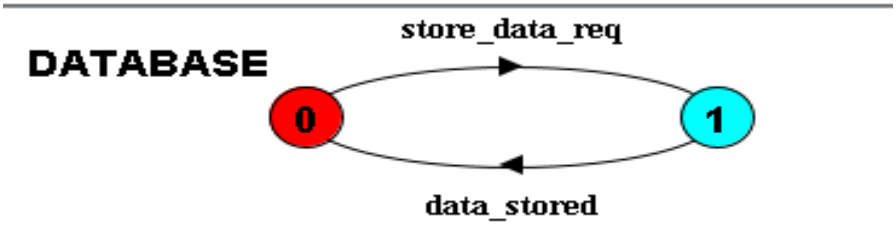

Fig: Database state diagram.

Composite Diagram:

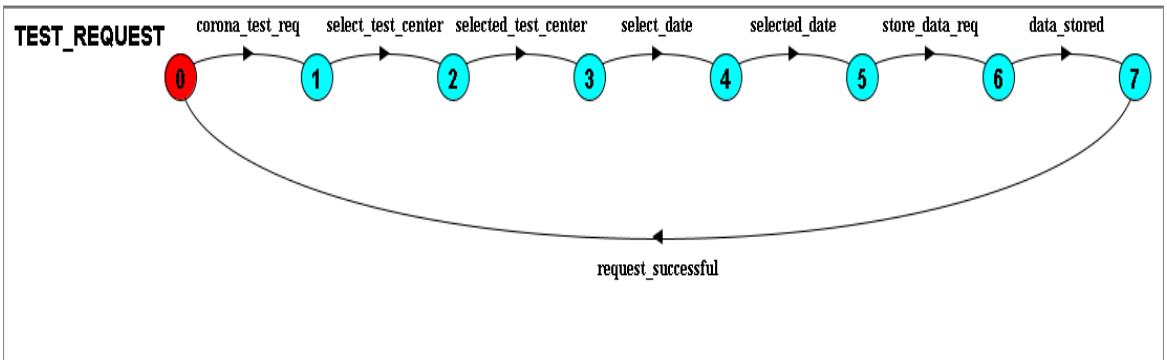

Fig: Composite diagram of Lab Test Reservation sequence diagram.