**Login System:**

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}.

**COVID Update News:**

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}.

**Lab Test Reservation:**

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}.