Transactions

1. Dashboard

```
"Dashboard"

SELECT * FROM 'site';
SELECT * FROM 'site_memory';
SELECT * FROM 'site_CPU';

START TRANSACTION;

SELECT 'reservation_id' FROM 'reservation'
    WHERE [now] BETWEEN 'begin' AND 'end';

For 'reservation_id' in list of reservations:
    SELECT 'memory' FROM 'reservation_memory' WHERE 'reservation_id' = [id];
    SELECT 'CPU' FROM 'reservation_CPU' WHERE 'reservation_id' = [id];

COMMIT;
```

2. Get site's descriptions

```
"Get site's descriptions"

START TRANSACTION;

SELECT 'reservation_id' , 'site_list' FROM 'reservation'
        WHERE [time] BETWEEN 'begin' AND 'end';

//keep only reservations which have the specific site_id in their list.

For 'reservation_id' in list of reservations:
    SELECT 'memory' FROM 'reservation_memory' WHERE 'reservation_id' = [id];
    SELECT 'CPU' FROM 'reservation_CPU' WHERE 'reservation_id' = [id];

COMMIT;
```

3. Search

```
"Search"

SELECT * FROM 'site';

//keep only sites which have network connection type and image type as same as what user want.

SELECT * FROM 'site_memory' WHERE 'site_id' = [id];
SELECT * FROM 'site_CPU' WHERE 'site_id' = [id];

START TRANSACTION;

SELECT 'reservation_id' FROM 'reservation' WHERE [time] BETWEEN 'begin' AND 'end' AND 'site_id' = [id];

For 'reservation_id' in list of reservations:
    SELECT 'memory' FROM 'reservation_memory' WHERE 'reservation_id' = [id];
    SELECT 'CPU' FROM 'reservation_CPU' WHERE 'reservation_id' = [id];
    //subtracts CPU and memory reserved from total of each site.

COMMIT;

//return only sites which have available resources enough.
```

4. Create a reservation


```
"Create a new reservation"

//When user click 'next' in step 1

SELECT 'site_id' , 'image_type_id' FROM 'site' WHERE 'name' = [site_name1] OR 'name' = [site_name2] ...;
SELECT 'CPU_total' FROM 'site_CPU' WHERE 'site_id' = [site id];
SELECT 'memory_total' FROM 'site_memory' WHERE 'site_id' = [site id];
SELECT 'list' FROM 'image_type' WHERE 'image_type_id' = [image type id];

START TRANSACTION;

SELECT 'reservation_id' FROM 'reservation' WHERE [time] BETWEEN 'begin' AND 'end' AND 'site_id' = [id];

For 'reservation_id' in list of reservations:
    SELECT 'memory' FROM 'reservation_memory' WHERE 'reservation_id' = [id];
    SELECT 'CPU' FROM 'reservation_CPU' WHERE 'reservation_id' = [id];
    //subtracts CPU and memory reserved from total of each site.


if the reservation can be created:
    INSERT INTO 'reservation' ('user_id', 'site_list', 'start', 'end', 'reference_number', 'image_type')
        VALUES ([user_id], [site_list], [start], [end], [reference_number], [image_type]) ;
    SELECT LAST_INSERT_ID();

    INSERT INTO 'reservation_CPU' ('reservation_id', 'CPU') VALUES ([reservation_id], [CPU]);
    INSERT INTO 'reservation_memory' ('reservation_id', 'memory') VALUES ([reservation_id], [memory]);

else:
    Do nothing.

COMMIT;
```

```
//When user click 'next' in step 2
UPDATE 'reservation' ('title', 'description')
       VALUES ([title], [description]) WHERE 'reservation_id' = [id];
```

PRAGMA Cloud Testbed services

Create a New Reservation

1. Specify description
2. Additional description
3. Confirm reservation

Site's name :	UCSD/SDSC , AIST
Begin :	09 - Nov - 2016 10 : 00
End :	11 - Nov - 2016 15 : 00
Reservation Length :	2 Days, 5 Hours
Image type :	centOS7
SPTU CPUs :	32
Memory (GB) :	64
AIST CPUs :	32
Memory (GB) :	64
Title of reservation :	Test reservation 1
Description of reservation :	-

BACK   CONFIRM

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Success

Reservation Success!
Please check your email address.

OK