UNIVERSITI TEKNOLOGI MALAYSIA

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SCSV1223 – WEB PROGRAMMING

PROJECT REPORT -
DATA-CENTRIC ONLINE SYSTEM:
STUDENTS' COLLEGE ACCOMMODATION SYSTEM
[COLLEGE of HOPE]

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Table of Contents

1.0 PROJECT OVERVIEW

The project is about students' college accommodation system. This system aims to provide a convenient way for both accommodation managers and students. By using this system, the manager can manage the students' application systematically and student can apply their hostel for the next sem without going to the office counter. In this system, a few assumptions are made, which included that there are only 5 blocks of the hostel (3 male blocks and 2 female blocks) for the students to apply, the duration of the hostel (if success) is two semesters, students can only choose the block and room type of the hostel, room number is not available for them, and they have to wait for their application to be updated by the manager. The manager will then approve or reject the application and assign a room for the approved application. To register for our system, students can press sign up at the login page to create an account. Unfortunately, for manager to have an account, they need to the help of admin to create it for them. The administrators of our system can view all the pages in the system, while managers can only view their own manager page and student page, and students can only view student's page.

There are three modules of the system:
A.   Administrators (Admin)
B.   Accommodation managers
C.   Students

2.0 TOOLS & TECHNOLOGY

- HTML   : Basic webpage layout.
- CSS   : To design the layout of our HTML.
- PHP   : To perform form handling and connecting to the database
- MYSQL   : To be used with PHP
- JAVASCRIPT: To validation form

3.0 MODULES

1. Administrator
   - ✓ Administrators can manage the websites and the database of the system.
   - ✓ Administrators can update their own self personal information, which included name, email, phone number and password.
   - ✓ Administrators can create a new admin account.
   - ✓ Administrators have the right on data manipulation, which included adding new users, edit and delete any information on both accommodation managers and students.
   - ✓ Administrators can edit the block database details.
   - ✓ Administrators can also view the pages of staff and student.

2. Accommodation Managers
   - ✓ Accommodation managers can view their own self personal information.
   - ✓ Accommodation managers can update their own self personal information, which included name, email, phone number, password, gender, IC no. and address.
   - ✓ Accommodation managers can view the students' application.
   - ✓ Accommodation managers have the right to approve or reject the students' application based on the availability of the requested block.
   - ✓ Accommodation managers can manipulate the data of hostel (blocks) details.

3. Students
   - ✓ Students can view their own self personal information.
   - ✓ Students can update their own self personal information, which included name, email, phone number, password, gender, IC no. and address.
   - ✓ Students can apply for a hostel for the next two semesters, by filling up necessry information in a form and submit.
   - ✓ Students can check their application status after submitting the application.

4.0 FUNCTIONALITY

- **Administrators**
    1. Manage and update their own profile
    2. Create new administrators account
    3. Create a new accommodation manager and students account.
    4. Manage, edit and update accommodation managers and students' account.
    5. Manage the block database detail

- **Accommodation manager**
    1. View and update own self personal information.
    2. View or delete students' application
    3. Manage students' application, either approved or rejected, based on the availability of the requested block.
    4. Manager can edit, update and delete the information of the block, for example, update the room number of the students.

- **Students**
    1. View own self personal information.
    2. Manage and update own self personal information.
    3. Apply the hostel by choosing the block and room type desired.
    4. View the application status, whether "approved" or "rejected".

Extra Functionality
- Viewing a sorted / filtered list of tables
- Passing values with session
- Cookies with session
- User Level session
- Map selection with hover effect
- Sign up Form validation
- User id and password validation

5.0 DATABASE AND TABLES

Database Name: db_tsx

Table:

1. **Name** : **User**

   Usage : To store the users' details.

   Description : In this table, there is a total of 3 users' details, which are administrators, accommodation managers and students as well. The information included id(primary key), password, name, email, phone number, gender, IC number, address, block, room number and user type. At first, the block and room number are null until the student had success in their hostel application, then the block and room number will update by the accommodation manager.

   Relate Table : Application table, Block table

2. **Name** : **Application**

   Usage : To store the hostel application details and information.

   Description : The information contains in this table included application id(primary key), matric number, block, room number, room type, date applied, time applied and status. Status is used to store the status of the hostel application, whether is approved or rejected. Once the student had successfully made apply, the application table will updated.

   Relate Table : User table, Block table

3. **Name** : **Block**

   Usage : To store the information of the block and id of the student who stays.

   Description : This table will have a fixed amount of rows of data, which record the details of each room in every block. The table will determine who occupied the room in a block. The information in the table included block, roomNo (primary key), roomType, gender, id1 and id2. In the beginning, the id1 and id2 will be null to indicate that all the room are not occupied yet. The information will be updated by staff once the application of the students is being approved. Id1 and id2 are used to store the detail of 2 students if the room type is a double room, if the room type is a single room, the student id will be stored in both id1 and id2.

   Relate Table : User table, Application table

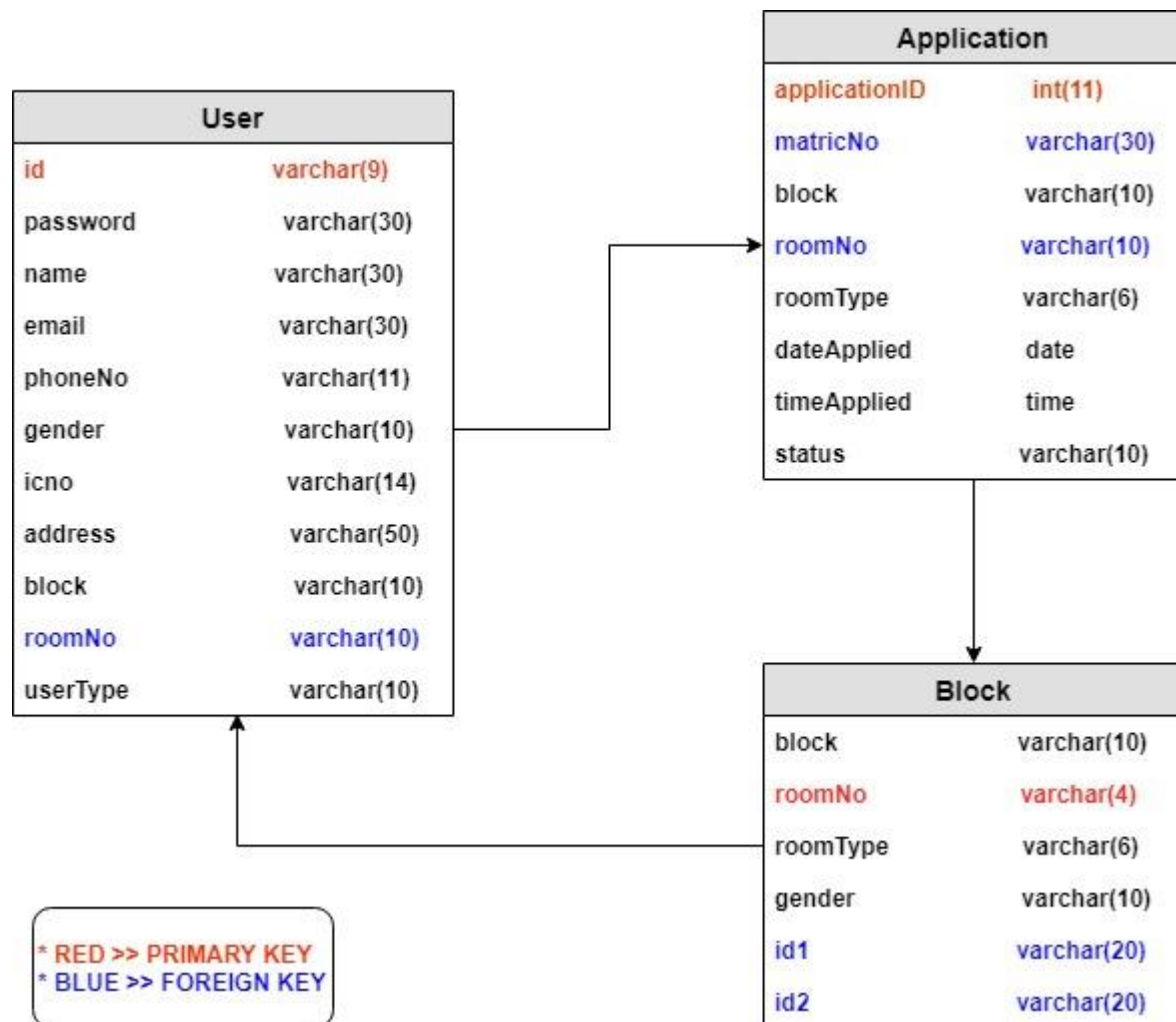## 5.1 DATABASE DESIGN WITH ENTITY RELATIONSHIP DIAGRAM

User

id	varchar(9)
password	varchar(30)
name	varchar(30)
email	varchar(30)
phoneNo	varchar(11)
gender	varchar(10)
icno	varchar(14)
address	varchar(50)
block	varchar(10)
roomNo	varchar(10)
userType	varchar(10)

Application

applicationID	int(11)
matricNo	varchar(30)
block	varchar(10)
roomNo	varchar(10)
roomType	varchar(6)
dateApplied	date
timeApplied	time
status	varchar(10)

Block

block	varchar(10)
roomNo	varchar(4)
roomType	varchar(6)
gender	varchar(10)
id1	varchar(20)
id2	varchar(20)

* RED >> PRIMARY KEY
* BLUE >> FOREIGN KEY

Diagram # shows the ERD Database Design of the system

6.0 SQL FILE TEXT

```php
$sql = "CREATE TABLE Block
(
    block varchar(10),
    roomNo varchar(10),
    roomType varchar(20),
    gender varchar(10),
    id1 varchar(9),
    id2 varchar(9)
)";
mysql_query($sql);
```

Diagram # shows the sql query of create table block

First we create 3 table which are User, Block and Application. Diagram # shows the example of creating table block. We use the sql query CREATE TABLE and setting the attribute type of each attribute.

```php
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A', 'A01', 'single', 'male')");
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A','A02', 'single', 'male')");
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A','A03', 'single', 'male')");
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A','A04', 'single', 'male')");
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A','A05', 'single', 'male')");
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A','A06', 'double', 'male')");
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A','A07', 'double', 'male')");
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A','A08', 'double', 'male')");
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A','A09', 'double', 'male')");
mysql_query("INSERT INTO Block (block, roomNo, roomType, gender)VALUES ('Block A','A10', 'double', 'male')");
```

Diagram # shows the sql query of INSERT INTO

We initialize the table of block with the data of block, room no, room type and room gender without the id1 and id2 which will be update later. Sql Query of INSERT INTO are being used. This query will insert a row of data into the respective table.

```php
$result=mysql_fetch_array(mysql_query("SELECT * FROM User WHERE id='$id'"));
```

Diagram # shows the sql query of SELECT

The SQL Query of SELECT are being used to retrieve the data of the selected rows. This query allow us to compare data, get data, and view data. This query are being used most of the time in our system.

```
mysql_query("INSERT INTO Block (block,roomNo,roomType,gender,id1,id2)
VALUES ('$block','$roomNo','$roomType','$gender','$id1','$id2')");
$_SESSION["EXISTEDMESSAGE"] = "New Block Added";
```

Diagram # shows the sql query of INSERT INTO in Block

This SQL Query are also being used when admin add a new data into a table.

```
mysql_query("DELETE FROM User WHERE id='$id'");
```

Diagram # shows the sql query of DELETE FROM

The DELETE FROM sql query are used to delete a row of data from the table. The WHERE query are used to determine which row to select.

```
mysql_query("UPDATE Application SET status = 'APPROVED' WHERE applicationID = '$id'");
```

Diagram # shows the sql query of UPDATE

The SQL Query are used to update the data in the table. The diagram above shows the section of query where Manager will update the status in application of a student to APPROVED.
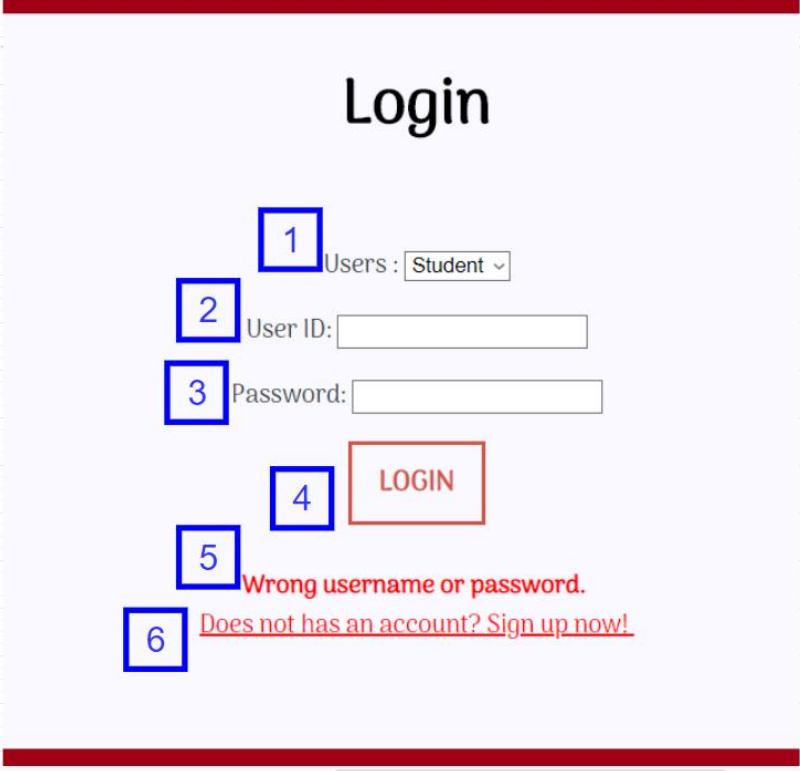
```
'SELECT Application.matricNo,
        Application.applicationID,
        Application.block,
        Application.roomNo,
        Application.roomType,
        Application.dateApplied,
        Application.timeApplied,
        Application.status,
        User.name,
        User.gender FROM Application inner join User On Application.matricNo = User.id order by name');
```

Diagram # shows the sql query of ORDER BY

The ORDER BY query is being used to sort the data. The diagram above shows the query of sorting the data in application by name. This function are being used by Manager to view a sorted list of application data.

7.0 USER MANUAL

A.   <u>Login Page</u>

	Note: 1. This will let the users to select which user type to log in as. 2. User needs to fill in the their own USER ID 3. This section will let the user to key in their password 4. To login their account, user can press this button 5. This line will tell the user if they had entered the wrong username or password 6. This section will allow the user to go to the sign up page

B. Sign up
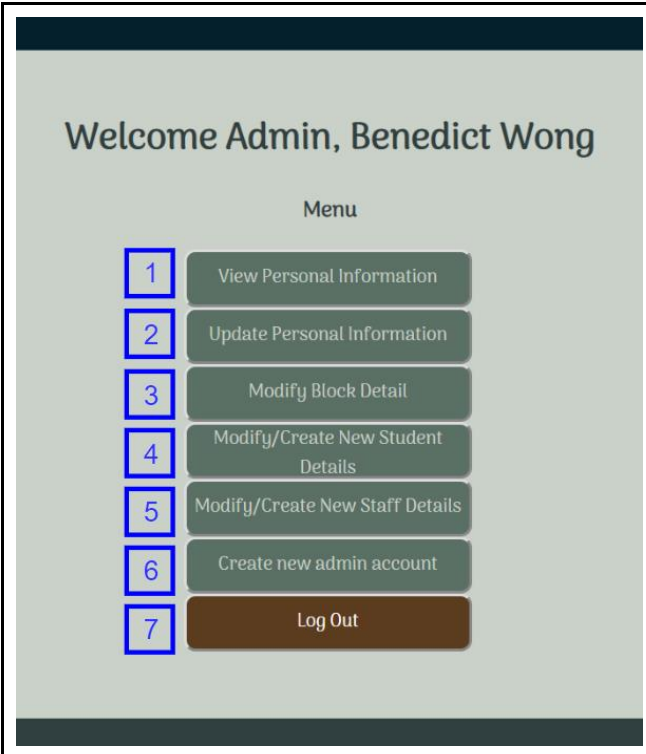
	Note:
	1. Student can fill in their details for signing up over here. 2. Press the confirm button to confirm the sign up 3. The reset button will clear all the form input 4. This button will return the user back to the login page 5. This message will shows if the user registered with an existed ID 6. Form validation are being done here. This message will be shown if the users doesn't enter the correct information

	Note:
You had Successfully Signed Up ! **Click OK to proceed.** OK	After succesfully signed up, user will enter this page and a button will redirect the user back to the login page once pressed.

7.1 ADMINISTRATOR

A.   Admin Main Page

	This is the main page of admin with a selection menu
Welcome Admin, Benedict Wong Menu 1 View Personal Information 2 Update Personal Information 3 Modify Block Detail 4 Modify/Create New Student Details 5 Modify/Create New Staff Details 6 Create new admin account 7 Log Out	1. Click to view personal infomation of admin 2. Click to update personal information 3. Click the modify the college block database 4. Click to modify student details 5. Click to modify staff details 6. Click to create new admin account 7. Click to log out

B. Admin Profile Page

	1. The personal information of admin. 2. This button will redirect the user back to their main/home page.

C. Update Admin Account information

	This page allow the admin to edit his/her own account information 1. Admin can edit their information in this section. 2. Once changes are done, press UPDATE button to change the details. 3. Press this button to go back to the homepage.

D. Database Management Page

Block Staff Student 	This page is for block database management, the function of this page are the same with student account management page and staff account management page. 1. This section let the admin to fill in the details of the database 2. Click this button to add new rows of data 3. Click this button to clear the form 4. This section shows the list of the database in the table. 5. Press this button to edit the database of the rows. Once press, the admin can edit in the information in #1 section. The button at #2 will change to Update where once click, the information will be updated 6. Press this button to delete the selected rows of database. 7. Press this button to goes back to homepage
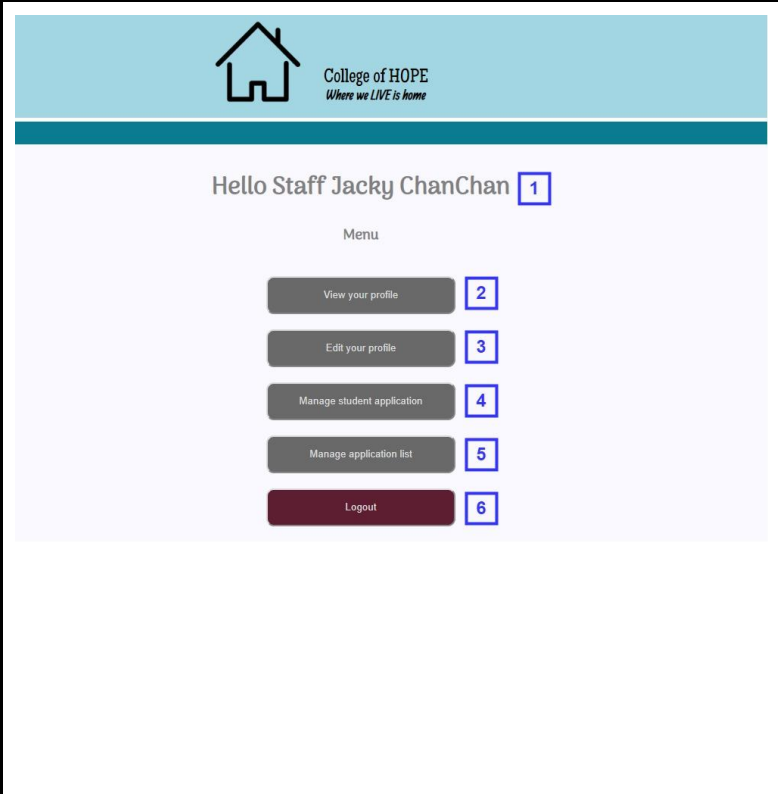
E. Create New Admin Account

This page can create new admin account.

1. This section is to key in all the required information for creating the admin account.
2. Press this button to create
3. Press this button to goes back to the homepage.

7.2 ACCOMMODATION MANAGER

A.   Accommodation Manager Main Page

1. Show the accommodation manager's name once they successfully login in.
2. Click to view own self profile.
3. Click to edit own self profile.
4. Click to manage student application.
5. Click to Manage application list.
6. Click to log out.

B. Accommodation Manager Profile Page

1. Show the details of the staff.
2. Click "Back to home page" to back to the home page.

C. Accommodation Manager Update Profil Page

1. The information contains in the table enable the accommodation manager to update that information.
2. Click to confirm the update.
3. Click to back to the homepage.

D. Manage Student Application

This page allow the manager to approve or reject the application of student

1. This section allow the manager to filter the list, either to show only the result they want or

	to sort the list
	2. Press this button to approve the application. Once press the section in number 5 will be shown
	3. Press this button to reject the application
	4. Press this button to return to homepage
	5. This section let the manager to assign the room no for the approved student. This section will only be shown once an approve are pressed
	6. This message will shown when the assign room are already occupied

E. Manage Application List

	This page allow manager to delete application list 1. Click the delete button to delete 2. Click the button to return to homepage

7.3 STUDENT

A. Student Main Page

	1. Show student's name once they successfully login in. 2. Click to go student profile page. 3. Click to go update profile page. 4. Click to go Hostel application. 5. Click to log out.

B. Student Profile page

	1. The table shows the personal details of the student. 2. Click to back to the homepage.

C. Student Update Profile page

	1. The information contains in the table enable the students to update that information. 2. Click to confirm the update. 3. Click to back to the homepage.

D. Student Hostel Application (Hostel selection)

	1. Show the selection of the hostel. Once student hovers over the target hostel, how many rooms available will be shown. 2. Show the landmark around the college.

E. Student Hostel Application [Room Type Selection]

	1. Click to choose a single room. 2. Click to choose a double room.

F. Student Hostel Application [Check Application details]

STEP 3: Please check the details.	1
NAME	Andy Lau
MATRIC NO.	A17CS0011
IC	971110017631
GENDER	male
BLOCK APPLIED	Block D
ROOM TYPE APPLIED	Double
DATE APPLIED	2019/05/13
DATE APPLIED	07:47:29pm

CONFIRM 2

BACK TO HOME PAGE 3

1. The table contains the information about the application, for example, the block applied, room type applied and so on.
2. Click "Confirm" to submit the application.
3. Click "Back to home page" to back to the home page, without submission.

G. Student Hostel Application [Successfully applied for the hostel]

College of Hope
Where we LIVE is home

Your Application has been Confirmed... 1

and will be process shortly, please check after a few days. 2

BACK TO HOME PAGE 3

1. Show that the student successfully submits the application.
2. Reminder student to check the application after a few days.
3. Click "Back to home page" to back to the home page.

H. Student Hostel Application [Not successfully applied for the hostel]

	1. Show that the student fails to submit the application.
	2. Show the reason. (as one student only allowed to make one application.)
	3. Click "Back to home page" to back to the home page.

I.Student Check Hostel Status [Approved, Processing or Rejected]

	1. The table contains the application details and the application status as well.
	2. Show the "Status" of the application, either "Approved", "Processing", or "Rejected".
	3. Click "Back to home page" to back to the home page.

8.0 CONCLUSION

In conclusion, College of Hope Students' College Accommodation System aims to provide a convenient and effective way for both the accommodation managers and students. With this system, students can apply their hostel anywhere rather than burden them to walk in the register at the office. They can also check the status of their application through this system. Therefore, this system can prevent the long queue as well.

Besides, every record of the students' hostel application keeps privately in the Application table, only managers can view and manage it. By doing this, students are safe to use the system without worries. Accommodation manager can sort the record by using either the data applied, name, gender or block. With this feature, the process for the manager to approve the status of the applications is much easier, as they can approve the application according to the date applied.

The students are being told to give cooperation for using this system wisely and fill in all the information honestly by giving the true identity. Apart from that, it can also make sure that the system can run smoothly and response in the correct way.