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| CS2102 Project |
| Module Bidding System |
| Specially Designed For Students To Register Modules… |

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## **Web server**

Web server used is Zone. (We used local server to test also).

## **Server page language**

Server Page Language: php.

Frontend: Html, CSS

## **Database management system used**

Query language used is SQL.

Database Management System is Oracle.

## **ER diagram**

## **Schemas**

CREATE TABLE modules (  
moduleCode VARCHAR (16),  
moduleName VARCHAR (128),  
PRIMARY KEY (moduleCode)  
);

CREATE TABLE prerequisite (  
andId INT CHECK (andId = 0 OR andId = 1),  
module VARCHAR (16),  
requiredModule VARCHAR (16),  
FOREIGN KEY (module) REFERENCES modules(moduleCode),  
FOREIGN KEY (requiredModule) REFERENCES modules(moduleCode),  
PRIMARY KEY (andId, module, requiredModule));

CREATE TABLE preclusion(  
module VARCHAR (16),  
excludedModule VARCHAR (16),  
FOREIGN KEY (module) REFERENCES modules(moduleCode),  
FOREIGN KEY (excludedModule) REFERENCES modules(moduleCode),  
PRIMARY KEY (module, excludedModule)  
);

CREATE TABLE modulesTime (  
moduleCode VARCHAR (16),  
startTime INT   
CHECK(  
(FLOOR(startTime/100)<=23) AND   
(FLOOR(startTime/100)>=0) AND   
(MOD(startTime,100)>=0) AND   
(MOD(startTime,100)<=59)),  
endTime INT   
CHECK(  
(FLOOR(endTime/100)<=23) AND   
(FLOOR(endTime/100)>=0) AND   
(MOD(endTime,100)>=0) AND   
(MOD(endTime,100)<=59)),  
day CHAR (3)   
CHECK (  
lower(day) LIKE ('mon') OR  
lower(day) LIKE ('tue') OR  
lower(day) LIKE ('wed') OR  
lower(day) LIKE ('thu') OR  
lower(day) LIKE ('fri') OR  
lower(day) LIKE ('sat') OR  
lower(day) LIKE ('sun') ),  
maxVacancy INT NOT NULL,  
FOREIGN KEY (moduleCode) REFERENCES modules (moduleCode) ON DELETE CASCADE,  
PRIMARY KEY (moduleCode, startTime, endTime, day)  
);

CREATE TABLE users (  
matricNo VARCHAR(10),  
admin INT DEFAULT '0' CHECK (admin = 0 OR admin = 1),  
name varchar(64) NOT NULL,  
points INT NOT NULL,  
openId INT DEFAULT '1' CHECK (openId = 0 OR openId = 1),  
password CHAR (64),  
PRIMARY KEY (matricNo)  
);

CREATE TABLE passed (  
matricNo VARCHAR(10),  
moduleCode VARCHAR(16),  
FOREIGN KEY (matricNo) REFERENCES users(matricNo),  
FOREIGN KEY (moduleCode) REFERENCES modules(moduleCode),  
PRIMARY KEY (matricNo, moduleCode)  
);

CREATE TABLE selected(  
matricNo VARCHAR(10),  
moduleCode VARCHAR(16),  
startTime INT,  
endTime INT,  
day CHAR(3),  
bidpoints INT NOT NULL,  
bidTime TIMESTAMP NOT NULL,  
success INT DEFAULT '0' NOT NULL CHECK (success = 0 OR success = 1),  
FOREIGN KEY (matricNo) REFERENCES users(matricNo),  
FOREIGN KEY (moduleCode, startTime, endTime, day) REFERENCES modulesTime(moduleCode, startTime, endTime, day),  
PRIMARY KEY (matricNo, moduleCode, startTime, endTime, day)  
);

CREATE TABLE sessionBit (

sessionB INTEGER default '0',

PRIMARY KEY (sessionB)

);

## **Sample and representative SQL code**

* “INSERT INTO sessionBIT VALUES ('0')”

The above statement is to insert one row to sessionBit table so as to allow tracking if bidding has started or not.

* “SELECT \* FROM modules order by moduleCode”  
  The above statement helps to retrieve all the available modules data and display out at the administrator page.
* "INSERT INTO modules values('$varmoduleCode','$varmoduleName')"

The above statement helps to add new module data base on module code and module name into the database.

* “DELETE FROM modulesTime where moduleCode='$pieces[0]'and startTime='$pieces[1]' and endTime='$pieces[2]' and day='$pieces[3]'"

The above statement removes a data or t-uple from modulesTime, which is a table where module available timeslots are kept, based on the array $piece[], which consists of many values.

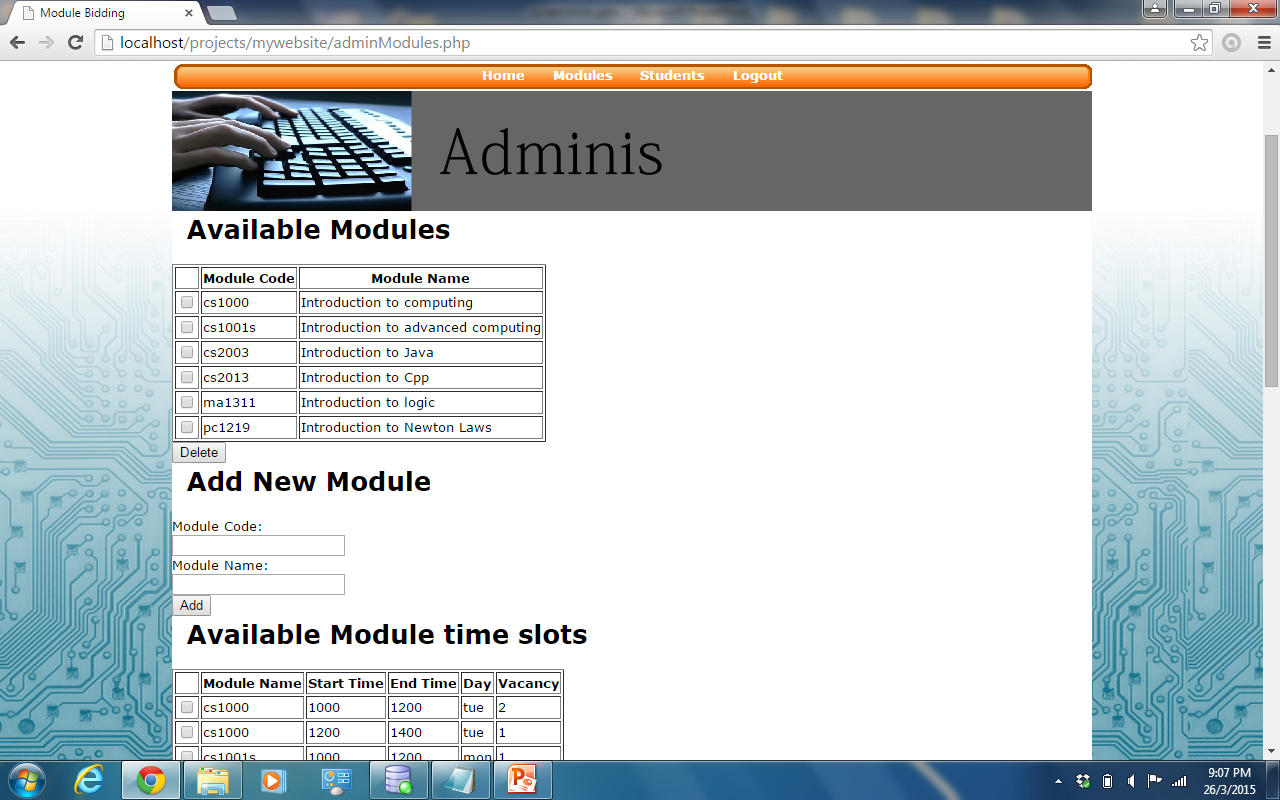
* …

## **Web interface screenshots**

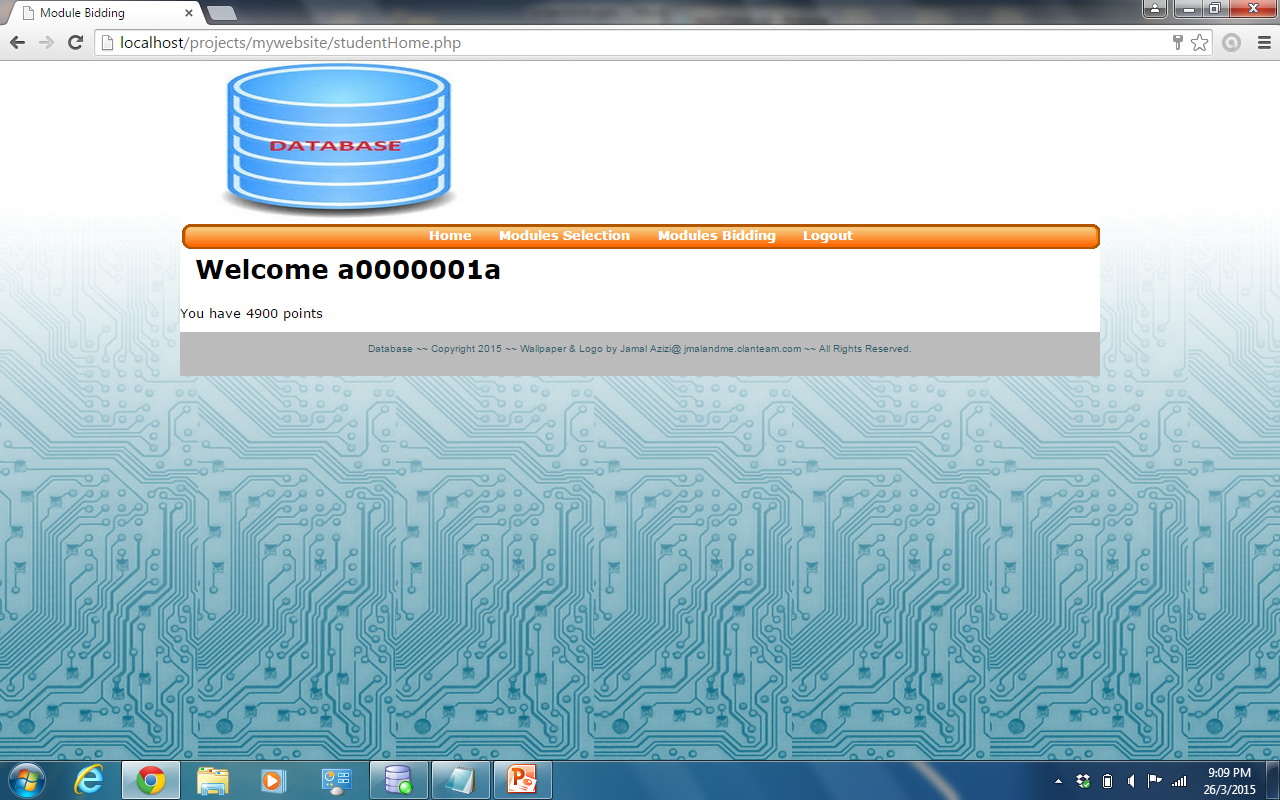
## **Admin: Students Page**

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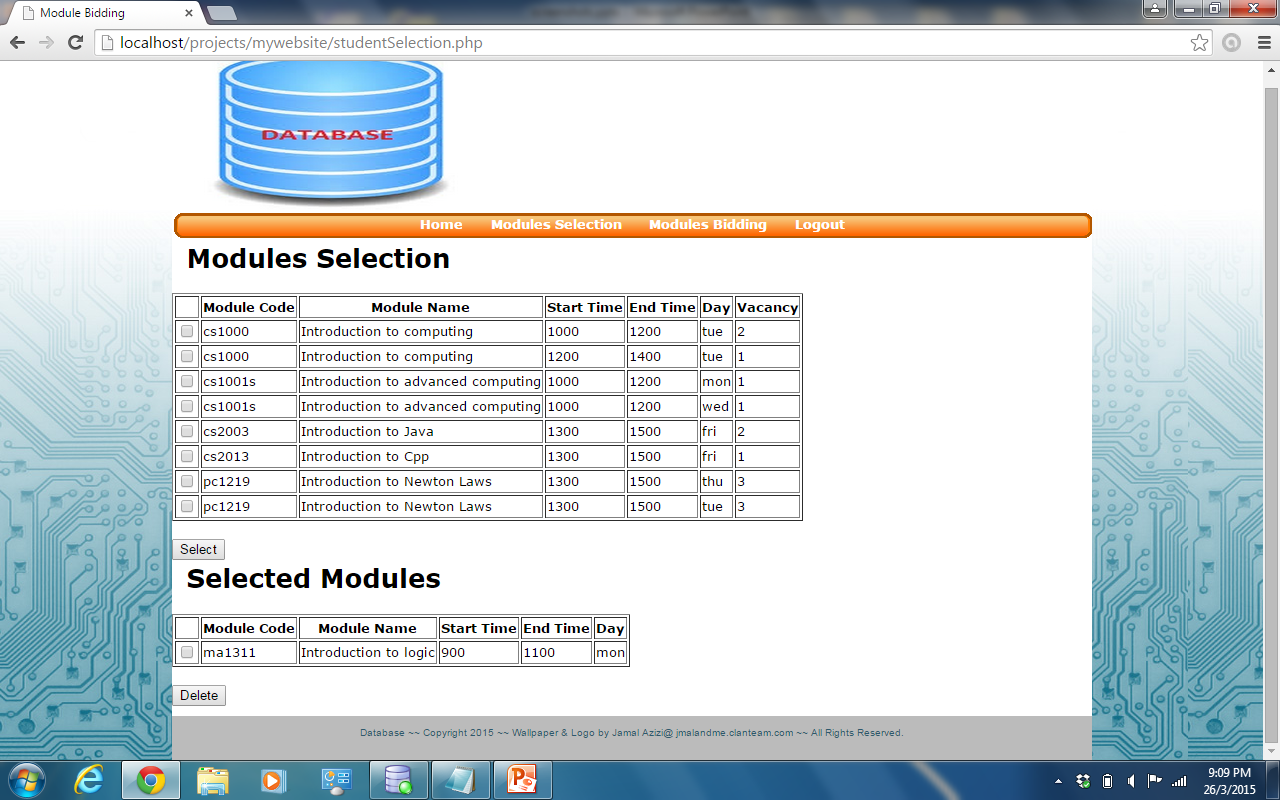
## **Admin: Modules Page**

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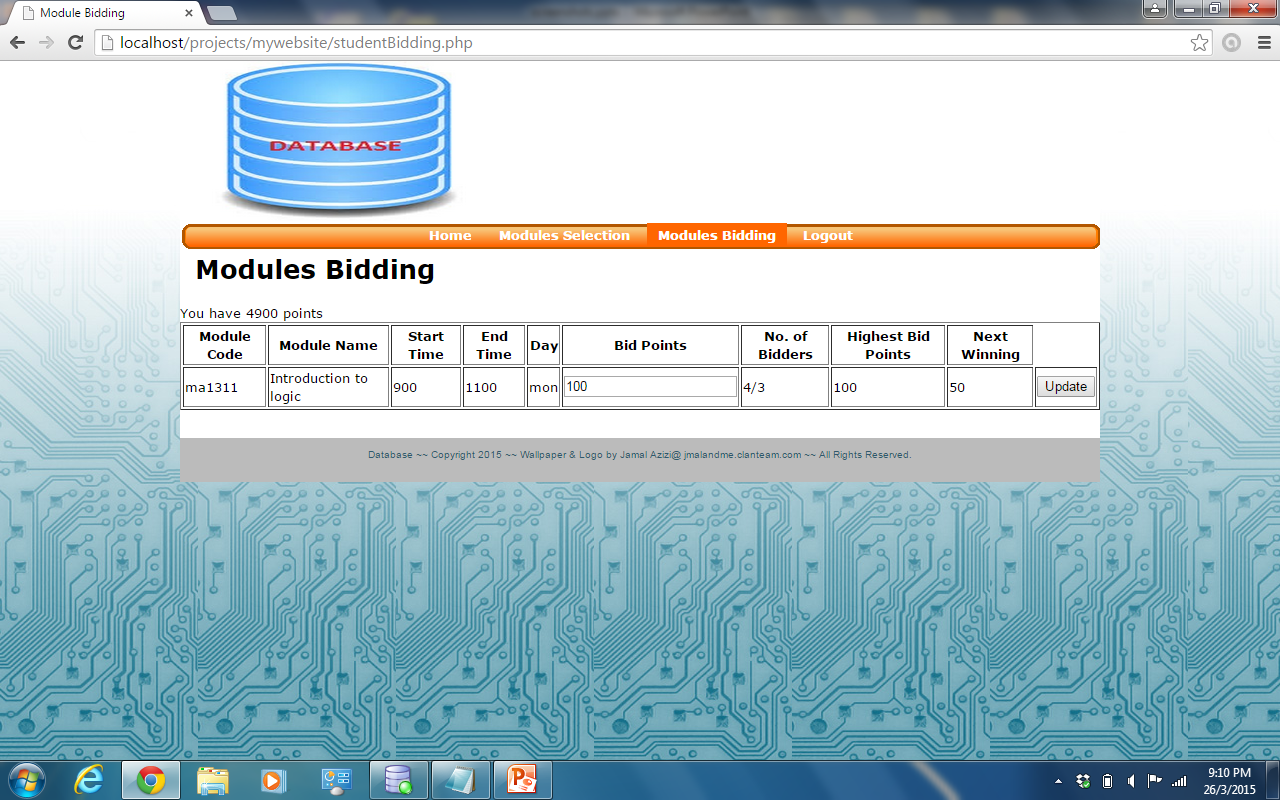
## **Student: Home Page**

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## **Student: Modules Selection Page**

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## **Student Modules Bidding Page**

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