**CS2102 Project**

**Module Bidding System**

**Group 9**

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**Web server, server page language and database management**

**system used (whether use Zone or else)**

Web server used is PHP.   
For website language used is html and php.   
Query language used is SQL.  
Both zone and local are used to test and run.

**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)  
);

**Chosen sample and representative SQL code (indicate the SQL code and the function of service it helps to implement**

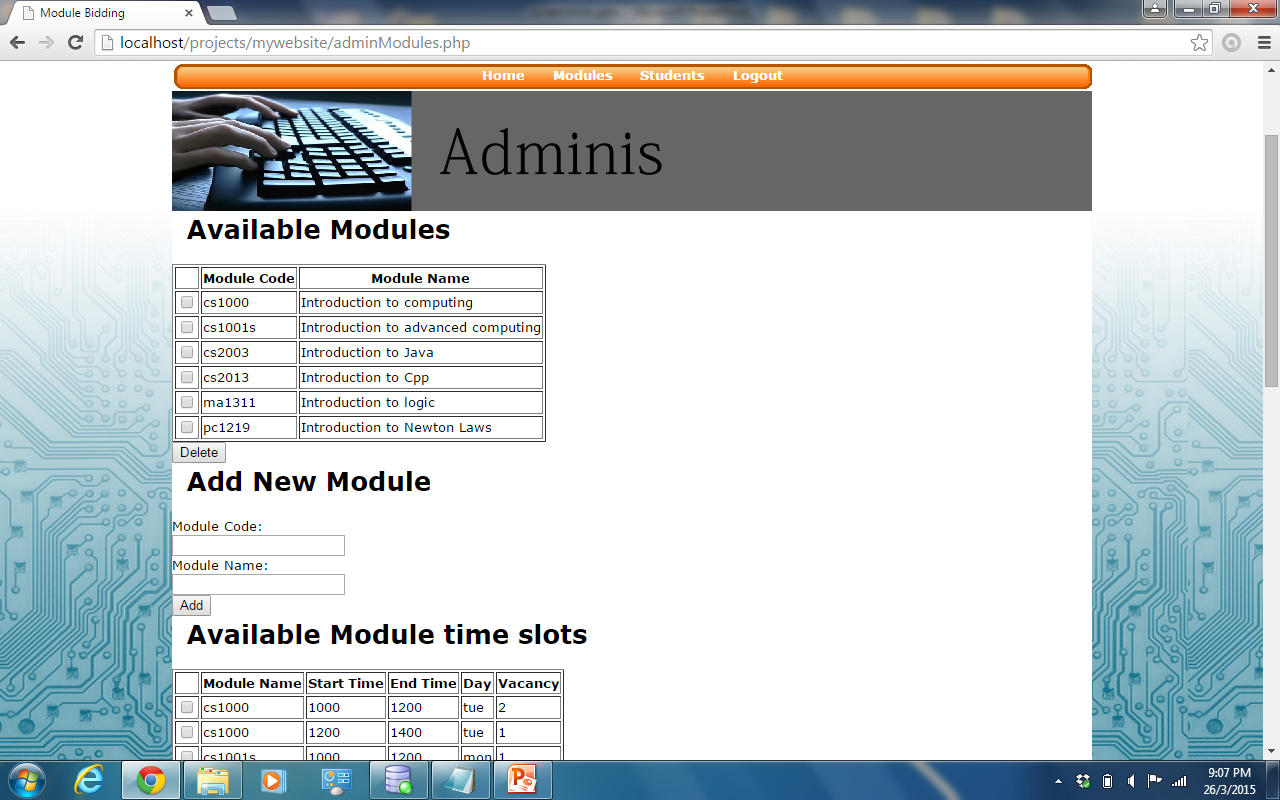
**function of the service it helps to implement)**

**Web interface screenshots**

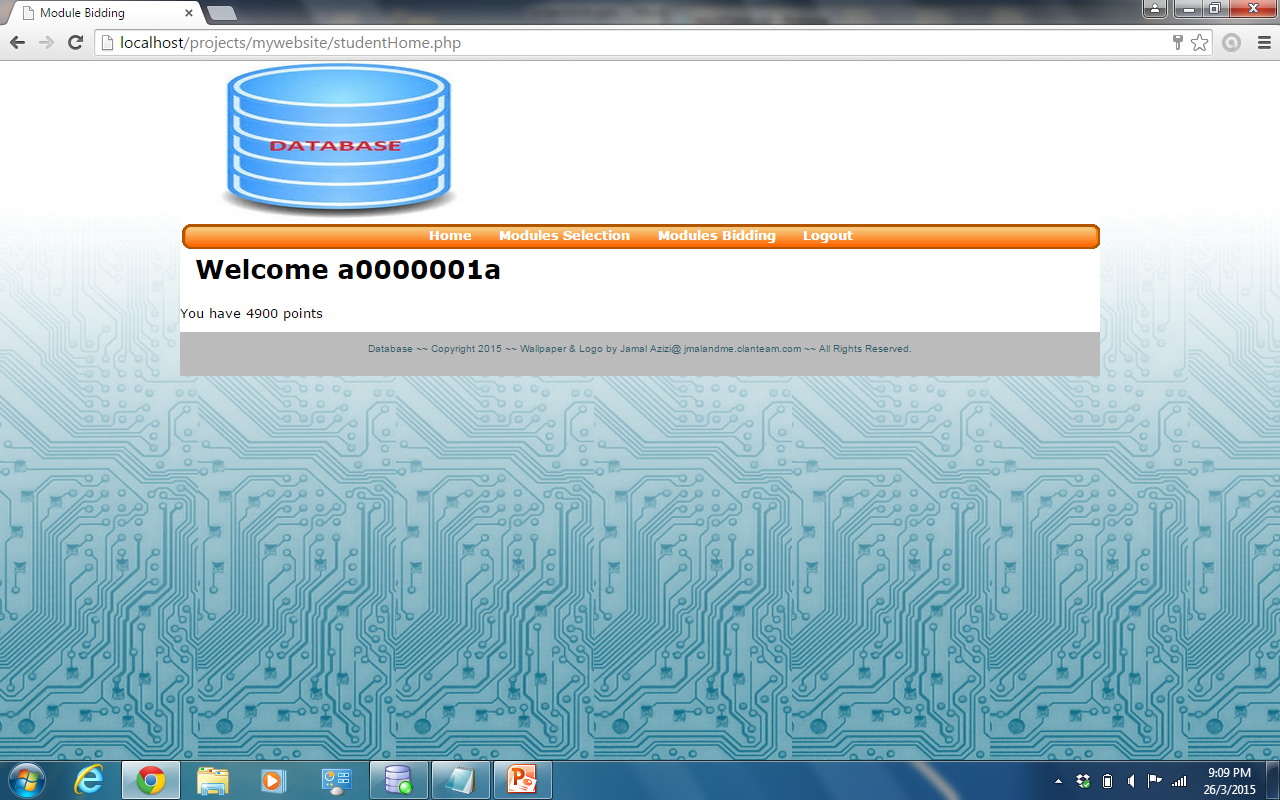
**Admin 1**

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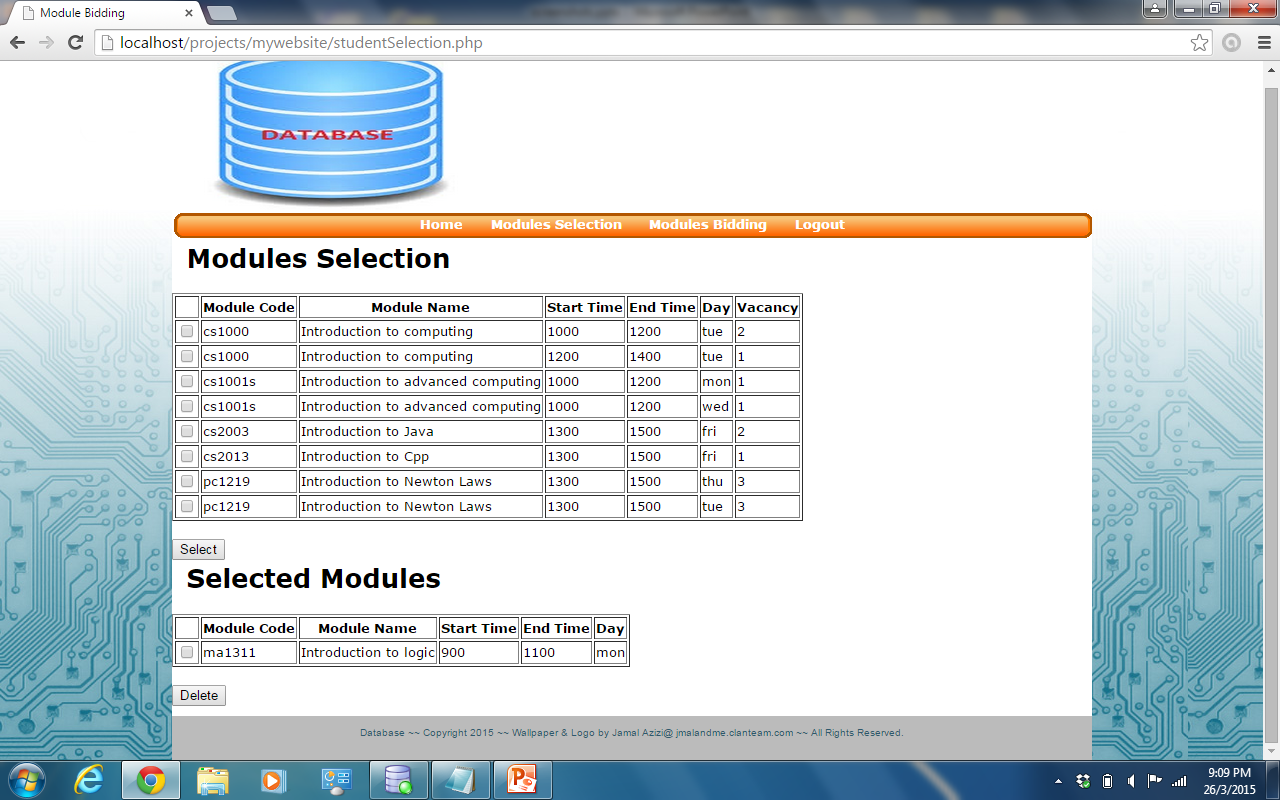
**Admin 2**

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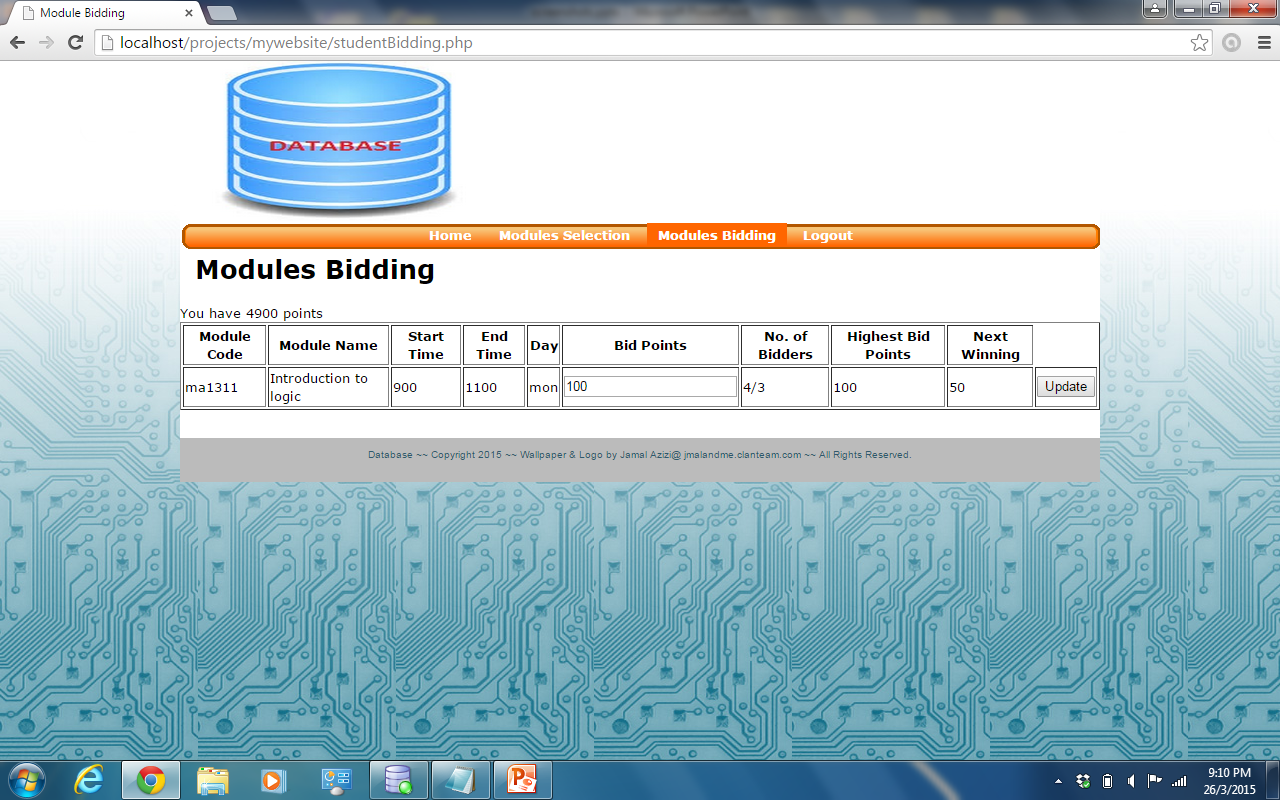
**Student 1**

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**Student 2**

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**Student 3**

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