



الجامعة الإسلامية العالمية ماليزيا  
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

**KULLIYAH OF INFORMATION AND  
COMMUNICATION TECHNOLOGY**

**DEPARTMENT OF INFORMATION SYSTEMS**

**INFO 1102 – Database System 1**

Semester 1 2014/2015

**Project Report - Physical Design**

**CPD PROJECT**

**[Sakina Hassany**

**1210850]**

Supervised by  
**Mohd Syarqawy Hamzah**

## Table of Contents

<b>Physical design report of DB.....</b>	<b>3</b>
<b>Tables' Entities and Attributes.....</b>	<b>4</b>
<b>Staff table.....</b>	<b>4</b>
<b>Student table.....</b>	<b>5</b>
<b>Participant table.....</b>	<b>5</b>
<b>Venue table.....</b>	<b>6</b>
<b>Equipment table.....</b>	<b>6</b>
<b>EquipmentBorrowing Table.....</b>	<b>7</b>
<b>Event table.....</b>	<b>7</b>
<b>Data Dictionary.....</b>	<b>8</b>
<b>SQL Scripts (Drop tables, create tables, and insert values).....</b>	<b>9</b>
<b>Drop tables.....</b>	<b>9</b>
<b>Create tables.....</b>	<b>9</b>
<b>Insert values.....</b>	<b>10</b>
<b>SQL Script (create view statements).....</b>	<b>13</b>
<b>1. EquipmentType.....</b>	<b>13</b>
<b>View Description.....</b>	<b>13</b>
<b>SQL Command.....</b>	<b>14</b>
<b>2. DisplayStudents.....</b>	<b>14</b>
<b>View Description.....</b>	<b>14</b>
<b>SQL Command.....</b>	<b>14</b>
<b>3. FemaleStaff.....</b>	<b>14</b>
<b>View Description.....</b>	<b>14</b>
<b>SQL Command.....</b>	<b>14</b>

# Physical design report of DB

This physical database design consists of 7 relations with their descriptions, schemas, SQL comments and inserts comments. In this physical database design contains 3 views, their descriptions and SQL comments.

The physical design tables are:

1. Staff: This table contains 8 attributes and 10 rows. The Primary Key in this table is staff ID its domain is 5 (varchar). The primary key cannot be NULL.
2. Students: This relation contains 6 columns and 10 rows its primary key is matric number the domain of primary key is 7 digits.
3. Participant: this table contains 2 attributes and 10 cardinalities. Has a composite primary key (eventID, matricNo) with 4 and 7 varchar domains.
4. Venue: it concludes 3 columns and 10 rows its primary key is venue ID with domain 4 varchar.  
Its primary must not be NULL.
5. Equipment: This table includes 3 attributes and 10 cardinalities its primary key is Equipment number its domain is 4 varchars not NULL.
6. Equipment borrowing: its table is consisted of 6 attributes and 10 cardinalities the primary key is a composite key made of borrowing ID and equipment number and its foreign key is event ID taken from Event table.
7. Event: This table includes 7 attributes and 10 tuples its primary key is Event ID with domain 4 varchar that cannot be NULL, the foreign key in this table is Venue ID referred to Venue ID.

The physical design views are:

1. **EquipmentType**  
This table includes 3 attributes and 3 cardinalities. Displays the equipment with Sony type.
2. **DisplayStudents**  
This view table contains 6 attributes and 4 cardinalities. shows information of ICT students.
3. **FemaleStaff**  
This view table has 8 attributes, and 5 cardinalities illustrates female staff in CPD.

## Tables' Entities and Attributes

**Staff table**

Staff
staffID(PK) fName lName position TelNo Email Salary sex

Staff (staffID, fName, lName, position, TelNo, Email, salary, sex)

**Primary Key** staffID

staffID	fName	lName	Position	TelNo	Email	Salary	Sex
S1454	Raja Noor	Alias	Administration Officer	0112245761	<a href="mailto:shikin@ium.edu.com">shikin@ium.edu.com</a>	RM 3320	F
S4155	Fauzatun Aqil	Hussin	Assistant Officer	0183945095	<a href="mailto:aqilah@ium.edu.com">aqilah@ium.edu.com</a>	RM 2345	F
S4057	Ismahia	Ismail	Administration Assistant	0113456700	<a href="mailto:ismahianis@ium.edu.com">ismahianis@ium.edu.com</a>	RM 3242	F
S2462	Siti Khadija	Daud	Administration Assistant	0196799556	<a href="mailto:khadijahdaud@ium.edu.com">khadijahdaud@ium.edu.com</a>	RM 3331	F
S3289	Zaini	Mohammad	Technician	0183405600	<a href="mailto:zainim@ium.edu.com">zainim@ium.edu.com</a>	RM 2333	M
S3456	Ramzi	Mohammad	Audio Visual	0173405677	<a href="mailto:ramzi@ium.edu.com">ramzi@ium.edu.com</a>	RM 4521	M
S6448	Ahmad	Rauof	Technician	0178003400	<a href="mailto:ahmad@ium.edu.com">ahmad@ium.edu.com</a>	RM 3546	M
S4536	Zinat	Ramadan	Officer	0145506600	<a href="mailto:zinatramadan@ium.edu.com">zinatramadan@ium.edu.com</a>	RM 4211	F
S5453	Mahmood	Noor Ahmad	Officer Assistant	0182004545	<a href="mailto:mahmood@ium.edu.com">mahmood@ium.edu.com</a>	RM 3002	M
S3449	Faiz	Rhman	Clerk	0174568991	<a href="mailto:faizRhman@ium.edu.com">faizRhman@ium.edu.com</a>	RM 4000	M

## Student table

Student
Matric No(PK) fName lName Kuliyah Email TelNo

**Student** (matric No, fName, lName, Kuliyah, Email, TelNo)

**PrimaryKey** Matric No

MatricNo	fName	lName	Kuliyah	Email	TelNo
1210383	Fatimah	Hassany	ICT	<a href="mailto:F.hassany@gmail.com">F.hassany@gmail.com</a>	183713737
1318339	Zahra	Ehsani	ENMS	<a href="mailto:Zehsani@gmail.com">Zehsani@gmail.com</a>	187172072
1421038	Maryam	Hussainy	LAWS	<a href="mailto:Mr.hussain@yahoo.com">Mr.hussain@yahoo.com</a>	182303821
1103839	Sakinah	Nazary	ENGIN	<a href="mailto:SaNazary@gmail.com">SaNazary@gmail.com</a>	163327487
1221038	Roqayyah	Mahmoody	ENGIN	<a href="mailto:Mahmoody12@hotmail.com">Mahmoody12@hotmail.com</a>	162186577
1483032	Zainab	Muhamady	ENMS	<a href="mailto:Zainab_24@gmail.com">Zainab_24@gmail.com</a>	136074758
1183739	Gulsom	Moatafawi	ENMS	<a href="mailto:Gmotafawi1@yahoo.com">Gmotafawi1@yahoo.com</a>	112853795
1223819	Fahima	Haidary	ICT	<a href="mailto:hfhah21@hotmail.com">hfhah21@hotmail.com</a>	136283474
1221847	Zubidah	Sadiqi	ICT	<a href="mailto:sadiqiz@gmail.com">sadiqiz@gmail.com</a>	168237428
1317937	Fithriah	Sajadi	ICT	<a href="mailto:Fsjadi@yahoo.com">Fsjadi@yahoo.com</a>	112743987

## Participant table

Participant
eventID matricNo

**Participant** (eventID, matricNo)

**Primary Key** eventID

eventID	matricNo
E001	1210383
E002	1318339
E003	1421038
E004	1103839
E005	1221038
E006	1483032

E007	1183739
E008	1223819
E009	1221847
E010	1317937

### Venue table

Venue
Venue_ID(PK) Venue_Name Location

**Venue** (Venue\_ID, Venue\_Name, Location)

**Primary\_Key** (Venue\_ID)

<i>Venue_ID</i>	<i>Venue_Name</i>	<i>Location</i>
V001	Main_Audi	Near masjid
V002	KICT HALL	KICT
V003	Halloween	Near CAC
V004	CAC banquet	AT IIUM
V005	Masjid	AT Masque
V006	Conference	Main building
V007	CAC Hall	CAC
V008	Library	At Library
V009	KICT RC	KICT
V010	CIELLC	CELPAD_LIB

### Equipment table

Equipment
EquipmentNo EquipmentName Type

**Equipment** (EquipmentNo, EquipmentName, Type)

**Primary Key** EquipmentNo

EquipmentNo	EquipmentName	Type
A001	CD-Player	sony
A002	DVD-Player	nokia
A003	TV25	LG

A004	Loudspeaker	HP
A005	LCD	Dell
A006	Computer	sony
A007	Plasma TV	LG
A008	Vedio carry	Dell
A009	Screen	HP
A010	Hailer	sony

## EquipmentBorrowing Table

EquipmentBorrowing
Borrowing_ID EquipmentNo Date-from Date-to Quantity Event_ID

**EquipmentBorrowing** (BorrowingID, EquipmentNo, Date-from, Date-to, Quantity, Event\_ID)

**Primary Key** (BorrowingID, EquipmentNo)

**Foreign Key** (Event\_ID)

BorrowingID	EquipmentNo	Date-from	Date-to	Quantity	Event_ID
B001	A001	1-J-2014	5-J-2014	2	E001
B002	A002	2-Sep2014	6-Sep-2014	1	E002
B003	A003	3-Oct2013	4-Oct-2013	3	E003
B004	A004	9-Feb-12	11-Feb-2012	4	E004
B005	A005	20-Jan-14	24-Jan-2014	2	E005
B006	A006	5-Mar-14	7-Mar-2014	3	E006
B007	A007	19-Aug-14	30-Aug-2014	1	E007
B008	A008	18-Apr-14	23-Apr-2014	2	E008
B009	A009	9-Apr2014	12-Apr-2014	4	E009
B010	A010	5-Jun-14	10-Jun-2014	3	E010

## Event table

Event
Event_ID Event name Organizer Program Date Program time Participant No Venue_ID

**Event** (Event\_ID,E\_name,organizer,program-Date,program-time,participantNo,Venue\_ID)

**Primary key** Event\_ID

**Foreign key** Venue\_ID

Event_ID	Event_Name	Organizer	Program_Date	Program_Time	ParticipantNo	Venue_ID
E001	P_graduation	KOS	1-1-2014	4:00 pm	500	V001
E002	Eid-Fithr	AFSA	2-sep-2014	7:30 am	1000	V002
E003	Eid-Adha	INSA	3-Oct-2013	7:30 am	1200	V003
E004	Taaruf week	IWK	9-Feb-12	8:30 am	2000	V004
E005	U_graduation	KOS	20-Jan-14	5:30 pm	700	V005
E006	Workshop	Selue	5_Mar-14	9:00 am	100	V006
E007	Seminar	Selue	19-Aug-14	9:30 am	80	V007
E008	Ummatic week	ISA	18=Apr-14	9:00 am	1300	V008
E009	Muslim Hero	CPD	9-Apr-2014	9:00 pm	800	V009
E010	Debate	CPD	5-Jun-14	3:45 pm	600	V010

## Data Dictionary

```
create table Student(  
    matricNo varchar(10) not null,  
    fname varchar(10),  
    lname varchar(10),  
    email varchar(50),  
    telNo char(15),  
    kulliyah varchar(10),  
    equipmentNo varchar(10),  
    primary key(matricNo)  
);
```

```
create table Participant(  
    eventID char(5) not null,  
    matricNo varchar(10),  
    primary key(eventID, matricNo)  
);
```

```
create table Venue(  
    venue_ID varchar(10) not null,  
    venue_name varchar (50),  
    location varchar (50),  
    primary key (venue_ID)  
);
```



```
create table Equipment(  
equipmentNo varchar(5),  
equipmentName char(20),  
type char(10),  
primary key(equipmentNo)  
);
```

```
create table EquipmentBorrowing  
(borrowingid char (5) not null,  
equipmentNo varchar(10),  
datefrom date,  
dateto date,  
quantity int,  
eventID char(5) not null,  
primary key(borrowingid,eventID)  
);
```

```
create table Event(  
eventID char(5) not null,  
eventname varchar(20),  
organizer varchar(15),  
eventdate date,  
time char(20),  
participant_NO varchar(50),  
venue_ID varchar(10),  
primary key(eventID)  
);
```

## **SQL Scripts (Drop tables, create tables, and insert values)**

### **Drop tables**

```
drop table Student cascade constraints;  
drop table Participant cascade constraints;  
drop table Venue cascade constraints;  
drop table Equipment cascade constraints;  
drop table EquipmentBorrowing cascade constraints;  
drop table Event cascade constraints;
```

### **Create tables**

```
create table Student(  
matricNo varchar(10) not null,
```

```

fname varchar(10),
lname varchar(10),
email varchar(50),
telNo char(15),
kulliyah varchar(10),
equipmentNo varchar(10),
CONSTRAINT student_matricNo_PK PRIMARY KEY(matricNo));

```

```

create table Participant(
eventID char(5) not null,
matricNo varchar(10),
CONSTRAINT participant_matricNo_eventID_PK PRIMARY KEY (eventID, matricNo));

```

```

create table Venue(
venue_ID varchar(10) not null,
venue_name varchar (50),
location varchar (50),
CONSTRAINT venue_venue_ID_PK PRIMARY KEY (venue_ID));

```

```

create table Equipment(
equipmentNo varchar(5),
equipmentName char(20),
type char(10),
CONSTRAINT equipment_equipementNo_PK PRIMARY KEY (equipmentNo));

```

```

create table EquipmentBorrowing
(borrowingid char (5) not null,
equipmentNo varchar(10),
datefrom date,
dateto date,
quantity int,
eventID char(5) not null,
CONSTRAINT equipment_borrowingid_eventID_PK PRIMARY KEY
(borrowingid,eventID));

```

```

create table Event(
eventID char(5) not null,
eventname varchar(20),
organizer varchar(15),
eventdate date,
time char(20),
participant_NO varchar(50),
venue_ID varchar(10),
CONSTRAINT event_eventID_PK PRIMARY KEY (eventID));

```

## Insert values

```

insert into Staff values('s1454','Raja','Alias','Administration Officer', 'f','0112245456',
'shikin@iium.edu.com', '3320');

```

```

insert into Staff values('s4155','Fauztun','Hussin','Assistant Officer','f','0183945095',
'aqilah@iium.edu.com','2345');

insert into Staff values('S4057','Ismahia','Ismail','Administration Assistant','f','0112245456',
'ismahianis@iium.edu.com','3242');

insert into Staff values('S2462','Khadija','Daud','Administration Assistant','f','0112245456',
'khadijahdaud@iium.edu.com','3331');

insert into Staff values('S3289','Zaini','Mohammad','Technician','m','0112245456',
'zainim@iium.edu.com','2333');

insert into Staff values('S3456','Ramzi','Mohammad','Audio Visual','m','0112245456',
'ramzi@iium.edu.com','4521');

insert into Staff values('S6448','Ahmad','Rauof','Technician','m','0112245456',
'ahmadn@iium.edu.com','3546');

insert into Staff values('S4536','Zinat','Ramadan','Officer','f','0112245456',
'zinatramadan@iium.edu.com','4211');

insert into Staff values('S5453','Mahmood','Noor Ahmad','Administration Officer','m',
'0112245456','mahmood@iium.edu.com','3002');

insert into Staff values('S3449','Faiz','Rhman','Clerk','m','0112245456',
'faizRhaman@iium.edu.com','4000');


insert into Student values('1210383','Fatimah','Hassany','F.hassany@gmail.com',
'183713737','ICT','A002');

insert into Student values('1318339','Zahrah','Ehsani','Zhehsani@yahoo.com',
'187172072','ENMS','A005');

insert into Student values('1421038','Maryam','Hussainy','Mr.hussainy@yahoo.cm',
'182303821','LAWS','A003');

insert into Student values('1103839','Sakinah','Nazary','SaNazary@gmail.com',
'163327487','ENGIN','A001');

insert into Student values('1221038','Roqayyh','Mahmoody','Mahmoody12@hotmail.com',
'162186577','ENGIN','A003');

insert into Student values('1483032','Zainab','Muhamady','Zainab_324@gmail.com',
'136074758','ENMS','A007');

insert into Student values('1183739','Gulsom','Mostafawi','Gmostafawi1@yahoo.com',
'112853795','ENMS','E002');

insert into Student values('1223819','Fahimah','Haidary','H_fah21@hotmail.com',
'136283474','ICT','A006');

insert into Student
values('1221847','Zubidah','Sadiqi','Sadiqi_z@gmail.com','168237428','ICT','A005');

insert into Student
values('1317937','Fithriah','Sajadi','F_sajadi@yahoo.com','112743987','ICT','A002');

```

```

insert into Participant values('E002','1210383');
insert into Participant values('E005','1318339');
insert into Participant values('E003','1421038');
insert into Participant values('E001','1103839');
insert into Participant values('E003','1221038');
insert into Participant values('E007','1483032');
insert into Participant values('E002','1183739');
insert into Participant values('E006','1223819');
insert into Participant values('E005','1221847');
insert into Participant values('E002','1317937');

```

```

insert into Venue values('V001','Main_Audi','Near masjid');
insert into Venue values('V002','KICT_HALL','KICT');
insert into Venue values('V003','Halloween','Near_CAC');
insert into Venue values('V004','CACbanquet','iium');
insert into Venue values('V005','Masjid','AT_Masque');
insert into Venue values('V006','Confrce_R','Mainbuild');
insert into Venue values('V007','CAC_Hall','CAC');
insert into Venue values('V008','Library','At_Library');
insert into Venue values('V009','KICT_RC','KICT');
insert into Venue values('V0010','CIELLC','CELPAD_LIB');

```

```

insert into Equipment values('A001','CD-Player','sony');
insert into Equipment values('A002','DVD-Player','nokia');
insert into Equipment values('A003','TV25','LG');
insert into Equipment values('A004','Loudspeaker','HP');
insert into Equipment values('A005','LCD','Dell');
insert into Equipment values('A006','Computer','sony');
insert into Equipment values('A007','Plasma TV','LG');
insert into Equipment values('A008','Vedio carry','Dell');

```

```
insert into Equipment values('A009','Screen','HP');
insert into Equipment values('A0010','Hailer','sony');
```

```
insert into EquipmentBorrowing values('B001','A001','1-Jan-2014','5-Jan-2014','2','E001');
insert into EquipmentBorrowing values('B002','A002','2-Sep-2014','6-Sep-2014','1','E002');
insert into EquipmentBorrowing values('B003','A003','3-Oct-2013','4-Oct-2013','3','E003');
insert into EquipmentBorrowing values('B004','A004','9-Feb-12','11-Feb-2012','4','E004');
insert into EquipmentBorrowing values('B005','A005','20-Jan-14','24-Jan-2014','2','E005');
insert into EquipmentBorrowing values('B006','A006','5-Mar-14','7-Mar-2014','3','E006');
insert into EquipmentBorrowing values('B007','A007','19-Aug-14','30-Aug-2014','1','E007');
insert into EquipmentBorrowing values('B008','A008','18-Apr-14','23-Apr-2014','2','E008');
insert into EquipmentBorrowing values('B009','A009','9-Apr-2014','12-Apr-2014','4','E009');
insert into EquipmentBorrowing values('B010','A010','5-Jun-14','10-Jun-2014','3','E010');
```

```
insert into Event values('E001','Pgraduation','KOS','1-Jan-2014','4:00pm','500','V001');
insert into Event values('E002','EidFithr','AFSA','2-sep-2014','7:30am','1000','V002');
insert into Event values('E003','EidAdha','INSA','3-Oct-2013','7:30am','1200','V003');
insert into Event values('E004','Taarufweek','TWK','9-Feb-12','8:30am','2000','V004');
insert into Event values('E005','Ugraduation','KOS','20-Jan-14','5:30pm','700','V005');
insert into Event values('E006','Workshop','Selue','5_Mar-14','9:00am','100','V006');
insert into Event values('E007','Seminar','Selue','19-Aug-14','9:30am','80','V007');
insert into Event values('E008','Ummaticweek','ISA','18-Apr-14','9:00am','1300','V008');
insert into Event values('E009','MuslimHero','CPD','9-Apr-2014','9:00pm','800','V009');
insert into Event values('E010','Debate','CPD','5-Dec-14','3:40pm','600','V010');
```

## **SQL Script (create view statements)**

### **1. EquipmentType**

#### **View Description**

Shows equipment's with sony types.

### **SQL Command**

Create view EquipmentType AS  
Select \* from equipment  
Where type ='sony';

## **2. DisplayStudents**

### **View Description**

Shows information of students whose Kuliyah is KICT

### **SQL Command**

Create view DisplayStudent AS  
Select \* from student  
Where kuliyah = 'ICT';

## **3. FemaleStaff**

### **View Description**

Shows only description of female staff

### **SQL Command**

Create view FemaleStaff AS  
Select \* from staff  
Where sex = 'f';