الجامعة الإسلامية العالمية ماليزيا
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

Kulliyyah Of Information And Communication Technology

DEPARTMENT OF INFORMATION SYSTEMS

INFO 1103 – Database System

Semester 1 2017/1

Project Final Report **:ASNAF ZAKAT MANAGEMENT**

Section : [1]

Team Name: ZENITH

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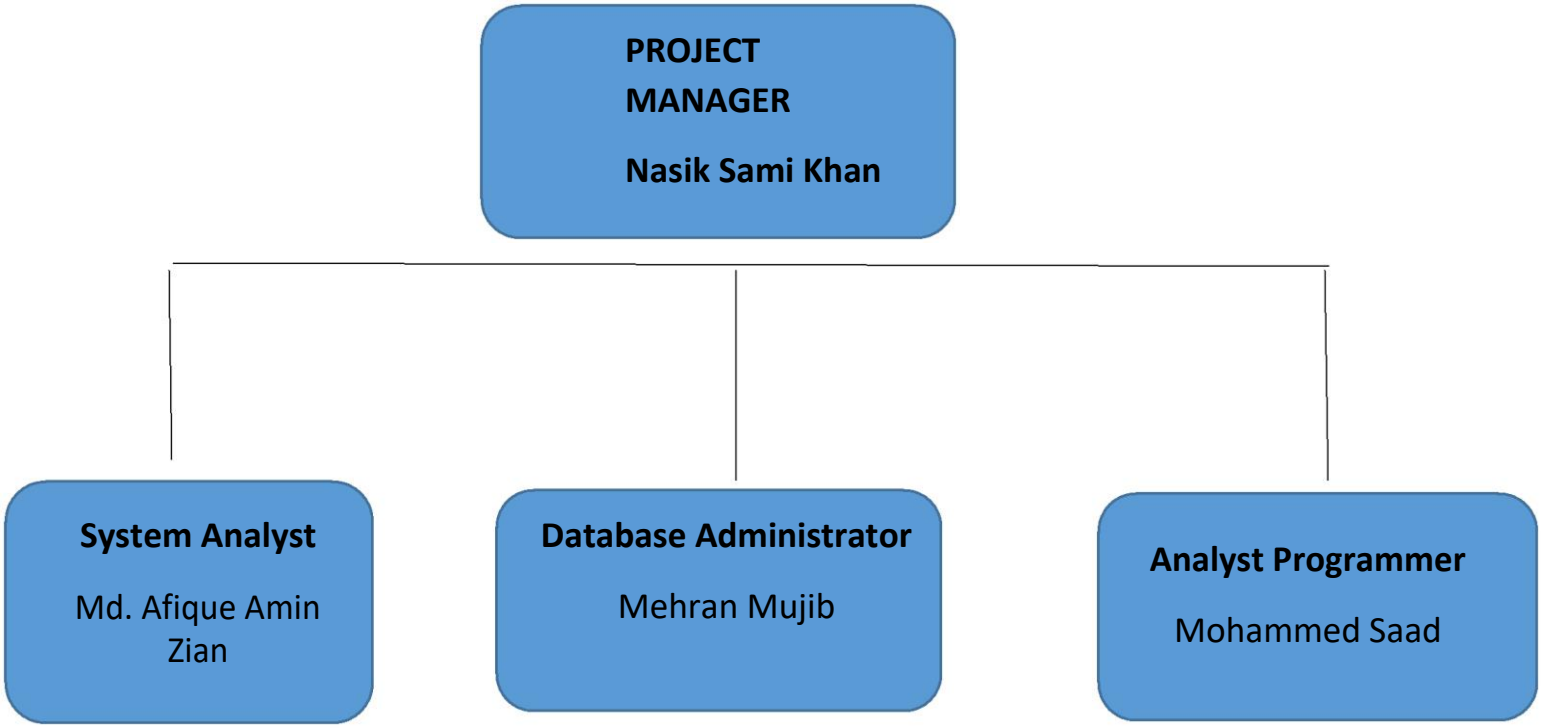
PROJECT INTRODUCTION

Create a Database for Asnaf Zakat Management

*"ZENITH" is performing a project to automate the necessary operations of Asnaf Zakat Management System (AZMS). The offered system is named Asnaf Zakat Distribution Process. At present all the operations like zakat payers listing, rightful recipients ,fund management and distribution at AZMS is done by manually (**file-based system**). Zenith wishes to substitute **70%** of the manual filling process with a compact computerized database system that will receive records, develop distribution services, alleviate operational expenses as well as time and enhance recipient allowances. The team has estimated **$50,000** for developing this project and it will take almost six months to establish. The project team "**ZENITH**" is supervised by Project Manager Mr. **Nasik Sami** from **B-Tech Computers Sdn Bhd**. Team Zenith is consisted with a project manager, one system analyst, one database administrator and one programmer. B-Tech Computers is integrated with such number of teams like Zenith and has been in system development project for the past one era. That is why our team is so reliable to all.*

1.1 Project Team Organization



1.2 Business Transactions

1. Register Donor
2. Register Recipient Type
3. Register Rightful Recipient
4. Register Staff
5. Process Distribution
6. Accept Donation
7. Print Receipt

1.3 Screen Design

Donor Registration

Donated by	
Address	
City	
State/Province	
ZIP/Postal Code	
Phone	
Email (optional)	
Age	
Occupation	
Amount of Donation	

Thank you for your generosity. We appreciate your support!

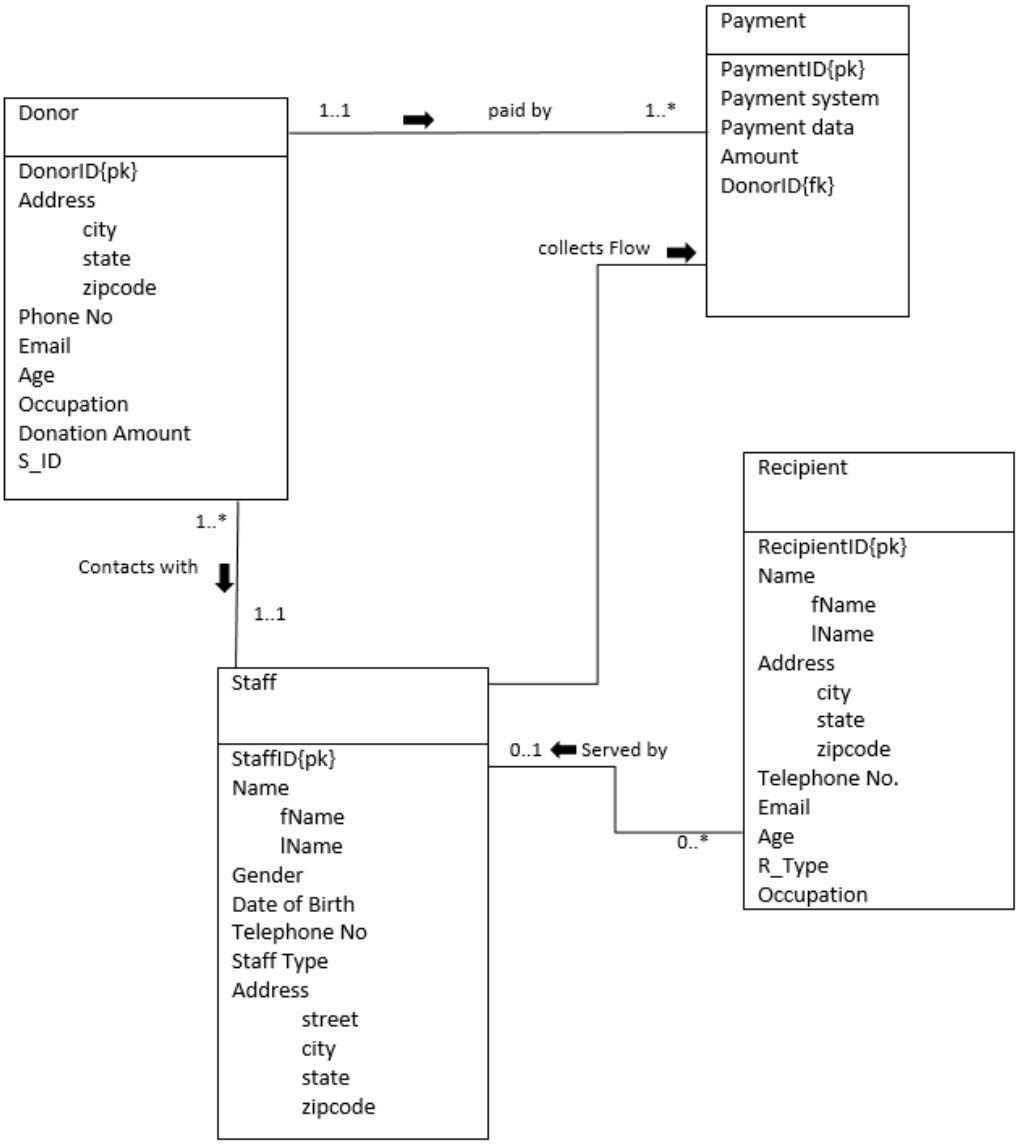
Staff Registration

.

Staff Name	
Gender	
Age	
Telephone no	
Email (optional)	
Registration Date	
Date of Birth	
Address	
State:	
Staff type	

2.0 CONCEPTUAL DATABASE DESIGN

Entity-Relationship Model



3.0 LOGICAL DATABASE DESIGN

Donor (Donor_Id, fName, lName, city,state,zip, telNo,email,age, occupation,donation amount ,S_ID)

Primary key – customer_Id
Foreign Key – S_ID

Staff (S_Id, fName, lName, gender, DOB, telephone_No,S_type, street,city,state,zip code)

Primary key – staff_Id

Payment (P_ID, P_system , P_date, amount_No)

Primary Key - P_ID
Foreign Key - Donor_ID

Recipient - (R_ID,fName,lName,city.state,Zip,telephone_No,email,age,R_Type,occupation)

Primary Key - R_ID

4.0 PHYSICAL DATABASE DESIGN

```
Create Table Donor
(
        Donor_Id        varchar(5) not null,
        fName           char(6),
        lName           char(6),
        city                    char(7),
        state           varchar(8),
        Zipcode         number(6),
    TelNo               number(11),
    Age     number(3),
    Occupation  char(9),
    S_ID    varchar(6),
        PRIMARY KEY (customer_Id),
        FOREIGN KEY (S_ID)
);
```

```
Create Table Staff
(
        s_Id            varchar(5) not null,
        fName           char(6),
        lName           char(6),
        gender          char(6),
        DOB             date,
        telNo           number(11),
    S_type          char(10),
    Street          char(10)
        city                    varchar(10),
        state           varchar(10),
        zipcode         number(6),
        PRIMARY KEY (S_Id)
);
```

```
Create Table Payment

(
    P_ID                varchar(8) not null,
    P_system            char (9),
    P_date      varchar (8),
    Amount_No                           number (8),
    Donor_ID        varchar (5)not null
    PRIMARY KEY ( P_ID),
    FOREIGN KEY ( Donor_ID)

    );
```

```
Create table recipient

    (
        R_ID                varchar(10),
        fName           char(10),
        Lname       char(10),
       City             char(10),
       State                            char(10),
       Zip                          number(6),
       Telephone_No     number(11),
       Age                              number(3),
         R_Type        varchar(6)
       Occupation           char(10)
       PRIMARY KEY (R_ID)

)
```

```
insert into Donor values ('C1569', 'Imtiaz', 'Sakib', 'Gombak', 'Selangor',53100, 0182874247,25,'Doctor', 'S1040');

insert into Donor values ('C1420', 'Yang', 'Hao', 'Setapak', 'KL',54050,0185683756, 30,'Pilot', 'S1040');


insert into Donor values ('C1430','Jack','Frost','Gombak', 'Selangor',53200,011567384, 40,'Writer', 'S1852');


insert into Donor values ('C1179', 'Piggy', 'Quene', 'KL', 'KL',50960,01115698346, 45,'Teacher', 'S1902');


insert into Donor values ('C2497', 'David', 'Thomas', 'Setapak', 'KL',54470,0183294618, 50,'Banker', 'S2506');



insert into Staff values
('S1040','John','White','Male',to_date('01/11/1965','dd/mm/yyyy'),0184236952,'Manager','205 Lane','Setapak','KL',54470);

insert into Staff values
('S2506','Ann','Beech','Female',to_date('10/10/1980','dd/mm/yyyy'),0114521252,'Assistant','1_Old road','Sri rampai','KL',54230);

insert into Staff values
('S1525','David','Ford','Male',to_date('24/03/1978','dd/mm/yyyy'),0185258563,'Supervisor','JLN p5','Putra Jaya','Putra Jaya',62200);

insert into Staff values
('S1852','Marry','Howe','Female',to_date('19/02/1985','dd/mm/yyyy'),0187478846,'Assistant','Semarak','Cyberjaya','Selangor',63000);

insert into Staff values
('S1902','Nabil','Showki','Male',to_date('21/08/1988','dd/mm/yyyy'),0186936321,'Supervisor','Putra Ht','SubangJaya','Selangor',40400);
```

```
insert into Payment
values('P00025','Cash',to_date('03/01/2017','dd/mm/yyyy'),
1300,'C1569');

 insert into Payment
values('P00028','Card',to_date('17/01/2017','dd/mm/yyyy'),
600,'C1420');

 insert into Payment
values('P00031','Card',to_date('14/02/2017','dd/mm/yyyy'),
300,'C1430');

 insert into Payment
values('P00037','Card',to_date('28/02/2017','dd/mm/yyyy'),
400,'C1179');

 insert into Payment
values('P00041','Cash',to_date('06/03/2017','dd/mm/yyyy'),
1500,'C2497');
```

```
Insert into recipient
values('R102','Kuddus','Boyati','KL','KL',50088,0171225865,63,'F
akir','Watchman');

Insert into recipient
values('R103','Khan','Helal','SubangJaya','Selangor',47500,01526
733,48,'Miskin','Labour');

Insert into recipient
values('R201','Maal','Muhith','Setapak','KL',53300,0885203455
,39,'Garimin','Sweeper');

Insert into recipient
values('R205','Ahsan','Habib','Ampang','KL',55000,01712208165
6,53,'Riqab','Beggar');

Insert into recipient values('R309','Mitila','Mujib','Setia
Alam','ShahAlam',25000,01521428011,27,'Miskin','Unemployed'
);

Insert into recipient
values('R405','Naila','Nayem','WangsaMaju','KL',54820,0162301
9070,32,'Fakir','Plumber');
```

5.0 SAMPLES QUERIES

5.1 Basic queries

Q1.1 Insert record for 1 donor named ‘Amad soleman’

```
insert into donor values('C2991', 'Amad', 'solem','KL','KL',63000, 0189541292,69,'Actor','S1040');
```

Q1.2 Change amount with ID P00025 from 1300 to 1400

```
update payment set amount_no = 1400 where P_ID = 'P00025';
```

Q1.3 Delete record for 1 payment with ID P00025

```
delete from Payment where p_Id = 'P00025';
```

Q1.4 Insert record for 1 payment with ID P10025

```
insert into payment values('P10025', ‘Cash’,to_date('03/01/2016', 'dd/mm/yyyy'), 700, 'C2991');
```

Q1.5 Change staff with ID S1902 tel_no from 0186936321 to 0186999999

```
update Staff set tel_no = 0186999999 where s_Id = 'S1902';
```

5.2 Operational queries

Q 2.1 - List Donors who donated more than 600 RM.

```
Select d.donor_ID, d.fName , d.lName, p.P_ID, p.P_date
From donor d , payment p
Where d.Donor_ID = p.Donor_ID and p.amount_No>600
Order by p.P_date;
```

Q 2.2 - List donation information processed by staff ‘Nabil showki’

```
select s.S_ID , s.fname , s.lName , d.Donor_ID
From staff s , donor d
Where s.S_ID=d.S_ID and s.S_ID='S1902' ;
```

Q 2.3 - List donor and staff information where both lives in state ‘KL’

```
Select d.donor_ID , d.fName , s.S_ID,  s.fName
From donor d  ,  staff s
Where d.S_ID = s.S_ID and s.state= 'KL' and d.state='KL' ;
```

Q 2.4- list donor information paid after 1st February, 2017

```
Select p.P_ID, d.donor_ID ,d.fName ,p.P_System,p.Amount_no
From donor d , payment p
Where d.Donor_ID=p.Donor_ID and p.P_Date>'01-Feb-2017'
order by d.donor_ID;
```

Q 2.5 -List information of donors with first letter 'D'

```
select donor_ID,fName , lName , occupation , age
from donor
where fName like 'D%';
```

5. 3 Strategic queries

Q3.1 List number of recipients based on recipient type

```
Select R_Type, count(R_ID) as No_Of_Recipient
From recipient
Group by  R_Type;
```

Q3.2 Total number of Donor who donated more than 350

```
Select COUNT(*)AS total_donor
FROM payment
Where amount_no >350;
```

Q3.3 List maximum money given by donor

```
Select MAX(Amount_no)AS Highest_Amount
FROM payment;
```

Q3.4 Total number of donation management process by individual staff who dealt with more than one donor

```
select s.S_Id, concat(s.fName, s.lName) as Name, count(d.donor_Id)
from staff s, donor d
where s.S_Id = d.S_ID
group by s.S_Id, s.fName, s.lName
having count(d.donor_ID) > 1;
```

Q3.5 Find all the donors who contributed amount that is larger than the donation of at least a donor who gave more than 600 RM.

```
Select fName  , lName , occupation , age
From donor
Where Donor_ID > some (select Donor_ID from payment where
Amount_No='600');
```

5.4 User Views

Q4.1 Create a view for Staff

```
Create view Staff_List as select s.fName , s.lName ,s.Gender,
d.Donor_ID,d.occupation
 from staff s , donor d
 where s.S_ID=d.S_ID;
```

Q4.2 Create a view for the staffs to supervise the zakat management process conveniently

```
Create view reserved_by as select d.Donor_ID, p.Amount_No,
r.R_Type,r. R_ID as processed_BY
From Donor d , payment p , recipient r
Where d.Donor_ID= p.Donor_ID;
```

Q4.3 Create a view for the payment system receiver to integrate donors and staffs contribution

```
Create view relation_of as select s.S_ID , s.fName , s.lName,
s.DOB, d.Donor_ID, d.occupation  as processed_BY
From Donor d  , staff s
Where s.S_ID= d.S_ID;
```

6.0 RECORD LISTING

DONOR RECORDS

Donor_id	fName	lName	Age	tel_no	city	state	zipcode	Occupation	S_ID
C1569	Imtiaz	Sakib	25	0182874247	Gombak	Selangor	53100	Doctor	S1040
C1420	Yang	Hao	30	0185683756	Setapak	KL	54050	Pilot	S1040
C1430	Jack	Frost	40	0115698346	Gombak	Selangor	53200	Writer	S1852
C1179	Piggy	Quene	45	0115673284	KL	KL	50960	Teacher	S1902
C2497	David	Thomas	50	0183294618	Setapak	KL	54470	Banker	S2506

STAFF RECORDS

Staff_id	fname	lname	Gender	dob	position	tel_no	street	city	state	zipcode
S1040	john	white	M	1/11/1965	manager	0184236952	205 lane	setapak	KL	54470
S2506	ann	beech	F	10/10/1980	assistant	0114521252	1, old road	sri petalin	KL	54230
S1525	David	ford	M	24/03/1978	supervisor	0185258563	jln p5	wp putrajaya	putrajaya	62200
S1852	Marry	howe	F	19/02/1985	assistant	0187478846	persemarak	cyberjaya	selangor	63000
S1902	Nabil	showki	M	21/08/1988	supervisor	0186936321	putra height	subang jaya	selangor	40400

PAYMENT RECORDS

P_id	Date	Amount_No	Donor_id	Payment_Type
P00025	03/01/2017	1300	C1569	Cash
P00028	17/01/2017	600	C1420	Card
P00031	14/02/2017	300	C1430	Card
P00037	28/02/2017	400	C1179	Card
P00041	06/03/2017	1500	C2497	Cash

RECIPIENT RECORDS

R_id	F_name	L_name	Occupation	Phone number	Age	R_Type	City	State	Zipcode
R102	Kuddus	boyati	Watchman	017125865	63	Fakir	KL	KL	50088
R103	Khan	helal	Labour	01526733	48	Miskin	Subangjaya	selangor	47500
R201	Maal	Muhith	Sweeper	0885203455	39	Garimin	Setapak	KL	53300
R205	Ahsan	Habib	Beggar	017122081	53	Riqab	Ampang	KL	55000
R309	Mithila	Mujib	Unemployed	01521428011	27	Miskin	setia alam	shah alam	25000
R405	Naila	Nayem	Plumber	019	32	Fokir	wangsa maju	KL	54820