**Requirements**

**Hardware Requirements:**

* CPU: Intel Core or Xeon 3GHz (or Dual Core 2GHz) or equal AMD CPU
* Cores: Single (Dual/Quad Core is recommended)
* RAM: 4 GB (6 GB recommended)
* Graphic Accelerators: NVidia or ATI with support of OpenGL 1.5 or higher
* Display Resolution: 1280×1024 is recommended, 1024×768 is minimum

**Software Requirements:**

The following operating systems are officially supported:

* Windows 7 (64-bit, Professional level or higher)
* Mac OS X 10.6.1+
* Ubuntu 9.10 (64bit)
* Ubuntu 8.04 (32bit/64bit)

For convenience the following builds are also available:

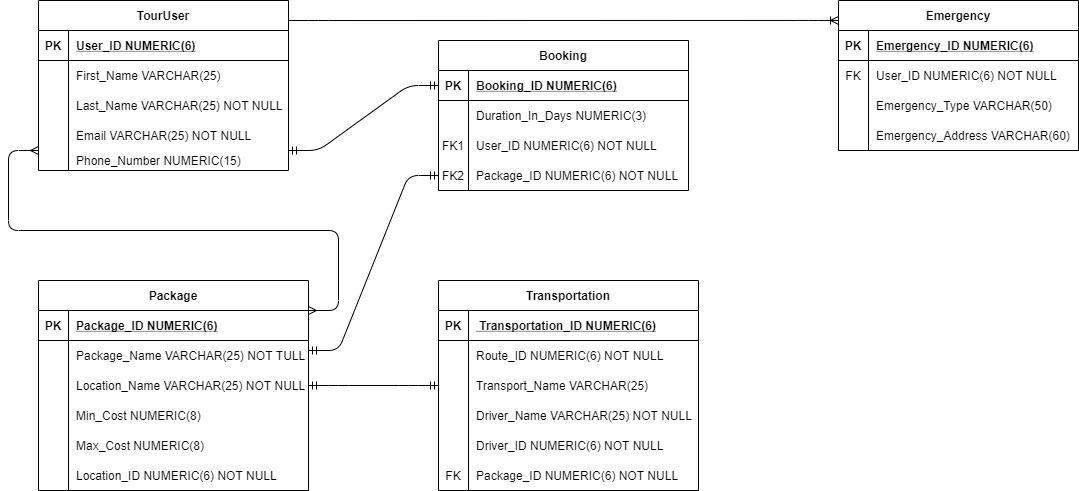
* Windows XP SP3, Vista
* Mac OSX (10.5 and 10.6) Intel
* Ubuntu 8.04 (i386/x64)
* Ubuntu 9.04 (i386/x64)
* Fedora 11 (i386/x64)

MySQL Workbench also has the following general requirements:

* The Microsoft .NET 3.5 Framework.
* Cairo 1.6.0 or later
* glib-2.10
* libxml-2.6
* libsigc++ 2.0
* pcre
* libzip

**Database Design**

**ER Diagram**



**Database Implementation**

**MySQL codes for creating the tables:**

CREATE TABLE TourUser(

First\_Name VARCHAR(25),

Last\_Name VARCHAR(25) NOT NULL,

User\_ID NUMERIC(6) PRIMARY KEY,

Email VARCHAR(25) NOT NULL,

Phone\_Number NUMERIC(15));

CREATE TABLE Packages(

Package\_ID NUMERIC(6) PRIMARY KEY,

Package\_Name VARCHAR(25) NOT NULL,

Location\_Name VARCHAR(25) NOT NULL,

Min\_Cost NUMERIC(8),

Max\_Cost NUMERIC(8),

Location\_ID NUMERIC(6) NOT NULL);

CREATE TABLE Bookings(

Booking\_ID NUMERIC(6) PRIMARY KEY,

Duration\_In\_Days NUMERIC(3),

User\_ID NUMERIC(6) NOT NULL,

Package\_ID NUMERIC (6) NOT NULL,

FOREIGN KEY (User\_ID) REFERENCES TourUser(User\_ID),

FOREIGN KEY (Package\_ID) REFERENCES Packages(Package\_ID));

CREATE TABLE Transportation(

Transportation\_ID NUMERIC(6) PRIMARY KEY,

Route\_ID NUMERIC(6) NOT NULL,

Transport\_Name VARCHAR(25),

Driver\_Name VARCHAR(25) NOT NULL,

Driver\_ID NUMERIC(6) NOT NULL,

Package\_ID NUMERIC(6) NOT NULL,

FOREIGN KEY (Package\_ID) REFERENCES Packages(Package\_ID));

CREATE TABLE Emergency(

Emergency\_ID NUMERIC(6) PRIMARY KEY,

User\_ID NUMERIC(6) NOT NULL,

Emergency\_Type VARCHAR(50),

Emergency\_Address VARCHAR(60),

FOREIGN KEY (User\_ID) REFERENCES TourUser(User\_ID));

**MySQL codes for populating the tables:**

INSERT INTO TourUser VALUES

('Samin', 'Yasar', 101, 'syasar@gmail.com', 8801724345789), ('Sami', 'Alim', 102, 'salim@yahoo.com', 8801625643890), ('Mim', 'Sarwar', 103, 'msarwar@yahoo.com', 8801711789546),

('Jesan','Rana', 104, 'jrana@live.com', 8801616057392), ('Samia', 'Tasnim', 105, 'stasnim@gmail.com', 8801911209876), ('Robin', 'Roy', 106, 'rroy@yahoo.com', 8801824567865), ('Taha', 'Islam', 107, 'tislam@gmail.com', 8801674556876), ('Abrar', 'Hasan', 108, 'ahsan@gmail.com', 880172456792), ('Kashfia', 'Rahman', 109, 'krahman@live.com', 8801911436894), ('Badhon', 'Ahmed', 110, 'bahmed@gmail.com', 880162411765);

INSERT INTO Packages VALUES

(01, 'Beach Destination', 'Cox’s Bazar', 4500, 7900, 1100),

(02, 'Beach Destination', 'Saint Martin', 5500, 8800,1101),

(03, 'Jungle Safari', 'Sundarban', 8000, 11000, 1102),

(04, 'Heritage of Dhaka','Buriganga', 2000, 3500, 1103),

(05, 'Mountain Adventures','Rangamati', 3500, 5400, 1104),

(06, 'Mountain Adventures', 'Bandarban', 3600 ,5000, 1105),

(07, 'Mountain Adventures','Sajek valley',4200, 5600, 1106),

(08, 'Land of Tea Estates','Sylhet', 4800, 6000, 1107),

(09, 'Land of Tea Estates','Srimangal', 5200,6500, 1108),

(10, 'Hill tracts','Khagrachari', 6200,7900, 1109),

(11, 'Beach Explore', 'Kuakata', 5800,7800, 1110); INSERT INTO Bookings VALUES

(10, 3, 103, 02),

(20, 2, 101, 01),

(30, 1, 101, 04),

(40, 4, 109, 03),

(50, 5, 108, 02),

(60, 3, 106, 05),

(70, 4, 104, 07),

(80, 2, 104, 11),

(90, 1, 109, 04),

(100, 5, 107, 10);

INSERT INTO Transportation VALUES

(743956, 10001, 'Hanif', 'Rafiq', 983981, 09),

(112302, 10301, 'Sb', 'Karim', 342981, 10),

(132103, 10401, 'Greenline', 'Shupriyo', 982341, 11),

(103412, 13043, 'Hanif', 'Jamal', 653981, 07),

(103123, 10311, 'Syamoli', 'Hasan', 983561, 06),

(343106, 10004, 'Sb', 'Shafiq', 945681, 04),

(102317, 10303, 'Syamoli', 'Sakib', 984561, 05),

(101238, 14041, 'Greenline', 'Ronnie', 456981, 02),

(102139, 10451, 'Hanif', 'Abdul', 984541, 01),

(111230, 12101, 'Hanif', 'Pasha', 553981, 03);

INSERT INTO Emergency VALUES

(101, 109, 'Health issue', 'Azimpur road 1205'),

(102, 108, 'Loss of personal belonging', null),

(103, 101, 'Toxic gas releases', 'Bangla Bazar road Dhaka 1205'),

(104, 107, 'Explosions', 'Dokhin Bazar Kulaura Moulvibazar'),

(105, 101, 'Floods', 'Kolatoli Cox Bazar 4700'),

(106, 103, 'Loss of property/money', null),

(107, 105, 'Tropical storms', ' Zubli Road Booking Booth Enayet Bazar Ctg'),

(108, 102, 'Fire', null),

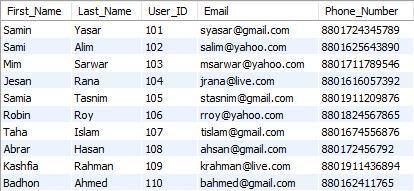
(109, 102, 'Wildfire emergency', 'Moulvibazar Road Srimangal'),

(110, 103, 'Criminal act', null);

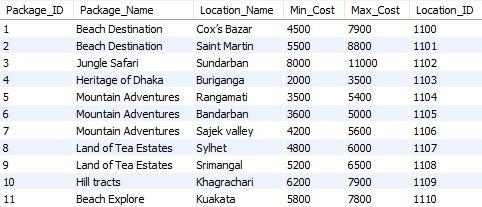
**Testing**

**Screenshots of all the tables from MySQL Workbench:**

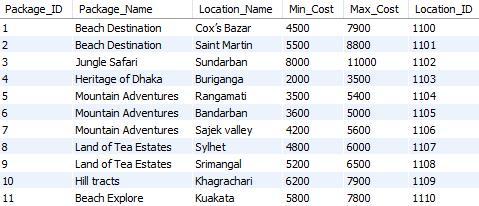
*TourUser*



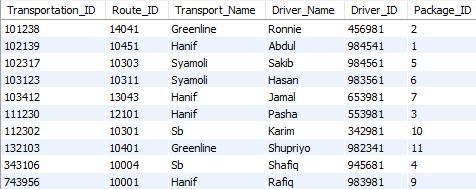
*Packages*



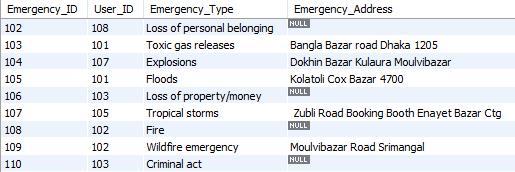
*Bookings*



*Transportation*



*Emergency*



**Some queries and their produced results are below to test the database:**

Creating a view joining all the tables and showing all the columns without repetition:

CREATE VIEW ALLTABLES

AS SELECT tu.User\_ID, tu.First\_Name, tu.Last\_Name, tu.Email,

tu.Phone\_Number, b.Booking\_ID, b.Duration\_days, p.Package\_ID,

p.Package\_Name, p.Location\_Name, p.Location\_ID, p.Max\_Cost,

p.Min\_Cost, t.Transportation\_ID, t.Transport\_Name, t.Route\_ID,

t.Driver\_Name, t.Driver\_ID, e.Emergency\_ID, e.Emergency\_Type,

e.Emergency\_Address

FROM touruser tu

LEFT OUTER JOIN bookings b

ON tu.User\_ID = b.User\_ID

LEFT OUTER JOIN packages p

ON p.Package\_ID = b.Package\_ID

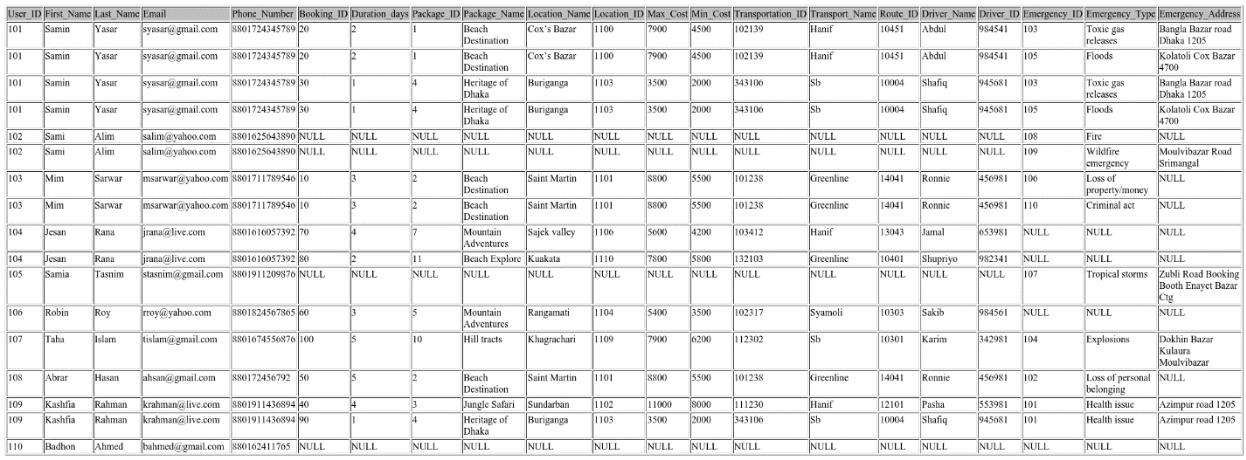
LEFT OUTER JOIN transportation t

ON t.Package\_ID = p.Package\_ID

LEFT OUTER JOIN emergency e

ON e.User\_ID = tu.User\_ID

ORDER BY User\_ID;



Finding all the tourists who booked for the location Sundarban:

SELECT tu.User\_ID, tu.First\_Name, tu.Last\_Name, b.Booking\_ID, b.Duration\_days, p.Package\_ID, p.Package\_Name, p.Location\_Name, p.Location\_ID, p.Max\_Cost, p.Min\_Cost FROM touruser tu

LEFT OUTER JOIN bookings b

ON tu.User\_ID = b.User\_ID

LEFT OUTER JOIN packages p

ON p.Package\_ID = b.Package\_ID

WHERE Location\_Name = 'Sundarban'

ORDER BY User\_ID;



Finding all the tourists who booked for the package Mountain Adventures:

SELECT tu.User\_ID, tu.First\_Name, tu.Last\_Name, b.Booking\_ID, b.Duration\_days, p.Package\_ID, p.Package\_Name, p.Location\_Name, p.Location\_ID, p.Max\_Cost, p.Min\_Cost FROM touruser tu

LEFT OUTER JOIN bookings b

ON tu.User\_ID = b.User\_ID

LEFT OUTER JOIN packages p

ON p.Package\_ID = b.Package\_ID

WHERE Package\_Name = 'Mountain Adventures' ORDER BY User\_ID;



Finding all the tourists who will be using the transportation named Hanif:

SELECT tu.User\_ID, tu.First\_Name, tu.Last\_Name, b.Booking\_ID,

p.Package\_ID, p.Package\_Name, p.Location\_Name, p.Location\_ID,

t.Transport\_Name

FROM touruser tu

LEFT OUTER JOIN bookings b

ON tu.User\_ID = b.User\_ID

LEFT OUTER JOIN packages p

ON p.Package\_ID = b.Package\_ID

LEFT OUTER JOIN transportation t

ON t.Package\_ID = p.Package\_ID

WHERE Transport\_Name = 'Hanif'

ORDER BY User\_ID;