

CHATBOT FOR UNIVERSITY

Submitted to

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UNIVERSITY CHATBOT

Chatbots are programs that mimic human conversation using Artificial Intelligence (AI). It is designed to be the ultimate virtual assistant, entertainment purpose, helping one to complete tasks ranging from answering questions, getting driving directions, turning up the thermostat in smart home, to playing one's favorite tunes etc. Chatbot has become more popular in business groups right now as they can reduce customer service cost and handles multiple users at a time. But yet to accomplish many tasks there is need to make chatbots as efficient as possible. To address this problem, in this paper we provide the design of a chatbot, which provides an efficient and accurate answer for any query based on the dataset of FAQs using Artificial Intelligence Markup Language (AIML) and Latent Semantic Analysis (LSA). Template based and general questions like welcome/ greetings and general questions will be responded using AIML and other service based questions uses LSA to provide responses at anytime that will serve user satisfaction. This chatbot can be used by any University to answer FAQs to curious students in an interactive fashion.

EXISTING SYSTEM

In existing system we search the websites of university or speak to specified persons in the university. If we want to get any information about university then it is required to search through different links. It is a time consuming process.

PROPOSED SYSTEM

Proposed system can overcome all the drawbacks in existing system. The system helps us to provide the valuable time by providing correct information quickly. The system is GUI (graphical user interface) based, so it is more user friendly.

The advantages of proposed system are

- Accurate and secure.

- No redundancy
- Complete records are kept in database.
- Easy to access information.
- User friendliness and interactive.
- Travelling cost is reduced.
- It minimizes the manual data entry.

REQUIREMENTS

The following requirements are only the minimal requirement to run this utility more successfully and efficiently, there should be sufficient memory and software tools for efficient processing.

HARDWARE REQUIREMENTS

- PROCESSOR : Intel Pentium IV
- MONITOR : LCD Display
- RAM : 2 GB
- HARD DISK : 500 GB

SOFTWARE REQUIREMENT

- Operating system : Windows 7 or above, Android
- Technology Used : Python
- IDE : PyCharm
- Framework : Flask
- Database : MySQL

MODULARISATION DETAILS

The proposed system's functionality can be achieved through the following modules.

1. Android app
2. Website part

The main modules of the system are,

1. Admin
2. student
3. Department
4. Chatbot

1. Admin

- 1.1 Verify student
- 1.2 Approve course details
- 1.3 Add department
- 1.4 Manage department
- 1.5 Add colleges

2. Student

- 2.1 Ask doubt
- 2.2 Receive response

3. Department

- 3.1 Add course
- 3.2 Add admission details
- 3.3 Add notifications
- 3.4 Add fee details
- 3.5 Add exam details
- 3.6 Add result

4. Chatbot

- 4.1 Receive doubt
- 4.2 Give respon

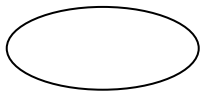
DATA FLOW DIAGRAM

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system. DFDs can also be used for the visualization of data processing (structured design).

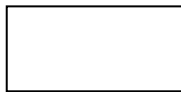
On a DFD, data items flow from an external data source or an internal data store to an internal data store or an external data sink, via an internal process.

A DFD provides no information about the timing of processes, or about whether processes will operate in sequence or in parallel. It is therefore quite different from a flowchart, which shows the flow of control through an algorithm, allowing a reader to determine what operations will be performed, in what order, and under what circumstances, but not what kinds of data will be input to and output from the system, nor where the data will come from and go to, nor where the data will be stored

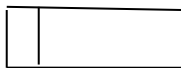
DFD NOTATIONS



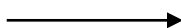
Process



Input/output



Table



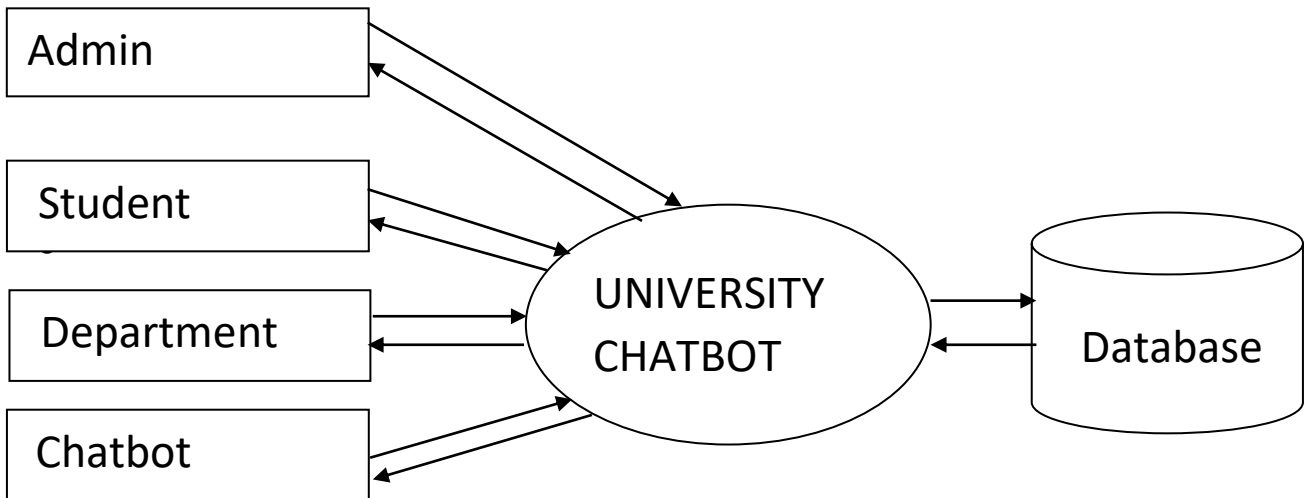
Flow

The rules used in constructing data flow diagram are as follows:

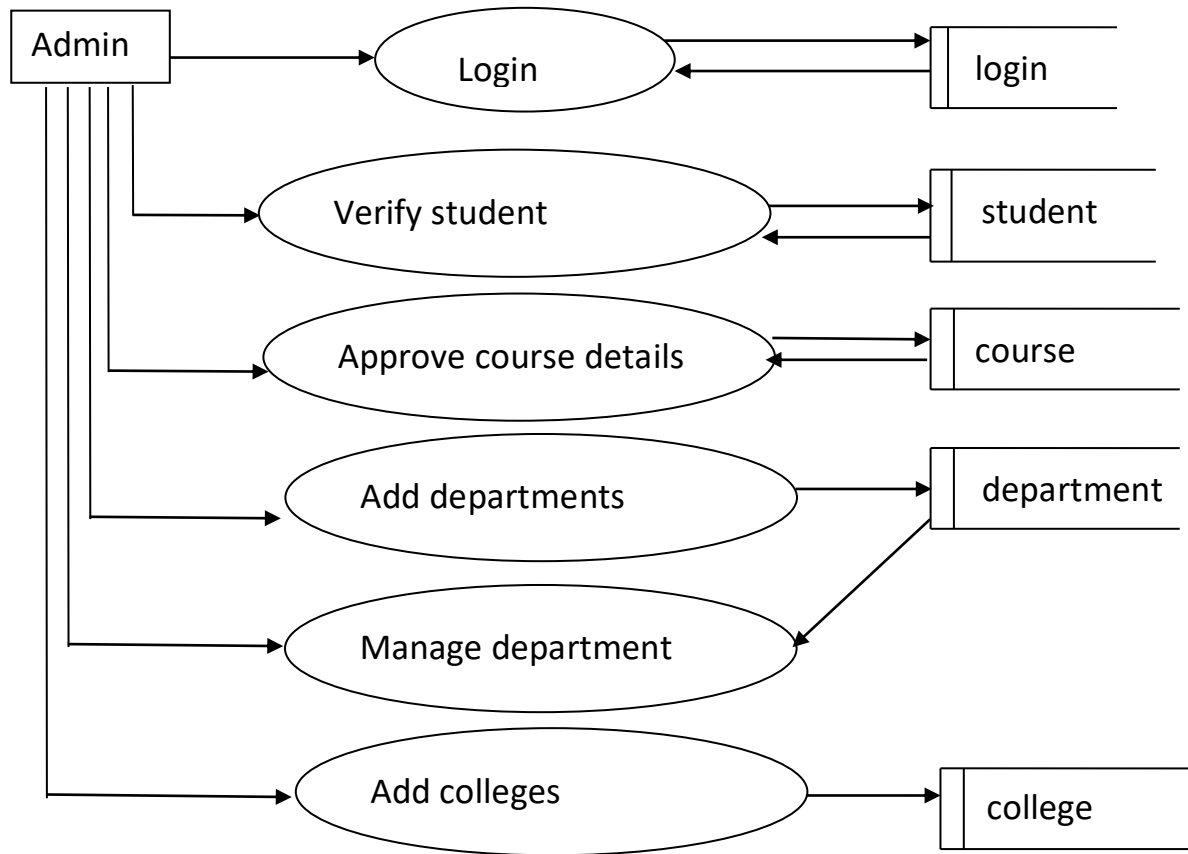
- Process should be named and numbered
- The direction of flows is from top to bottom & from left to right
- After exploding, lower level details of process are to be numbered

- The name of data stores, sources, destinations are written in upper cases
processes & data flow name have first letter of each word capitalized

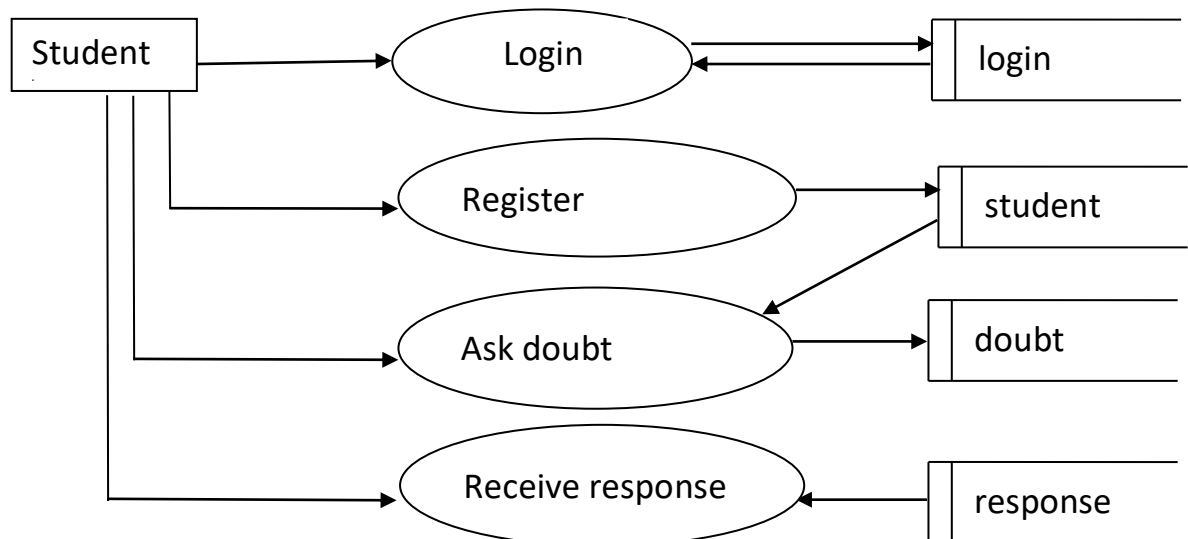
LEVEL 0



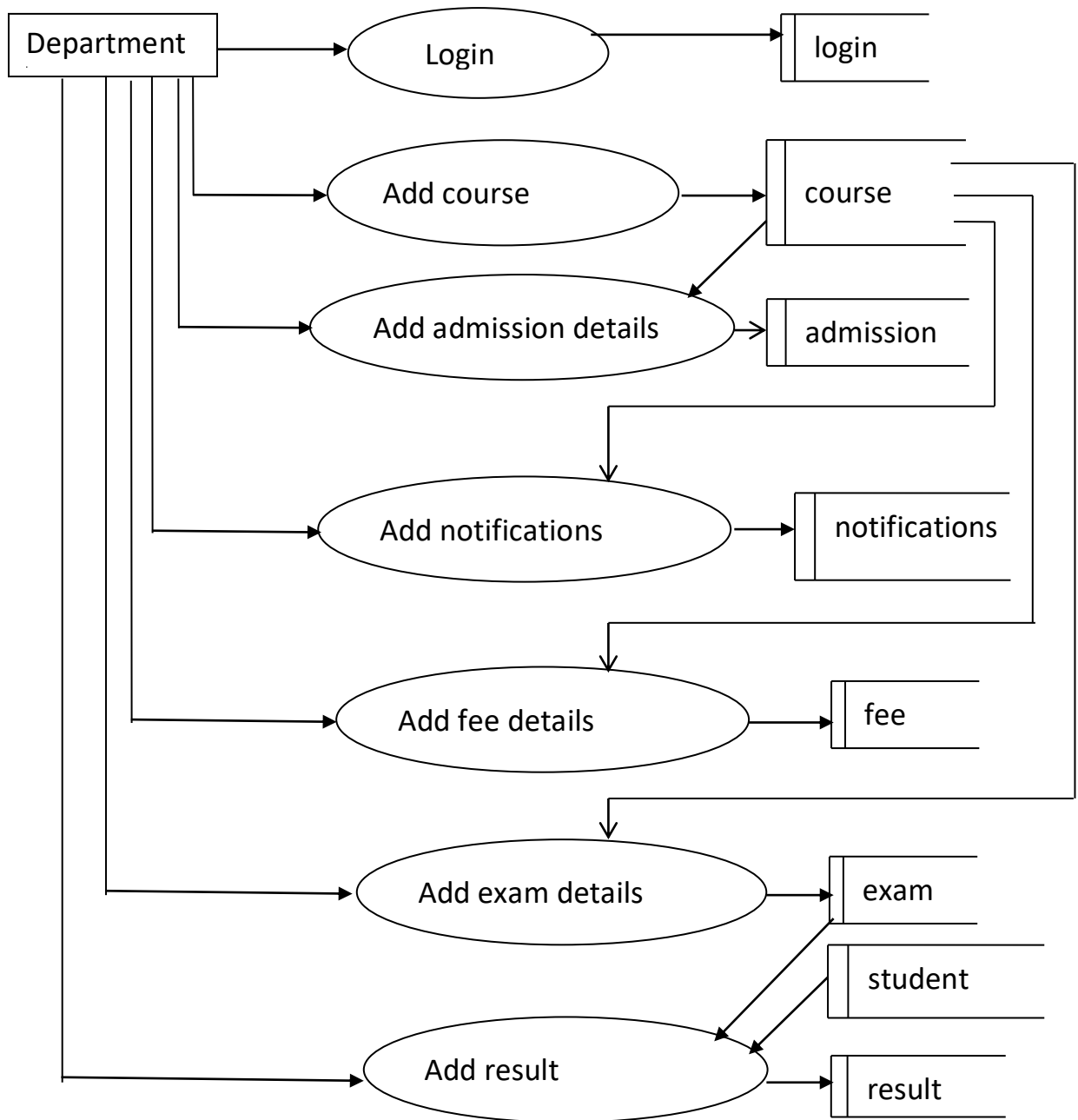
LEVEL 1



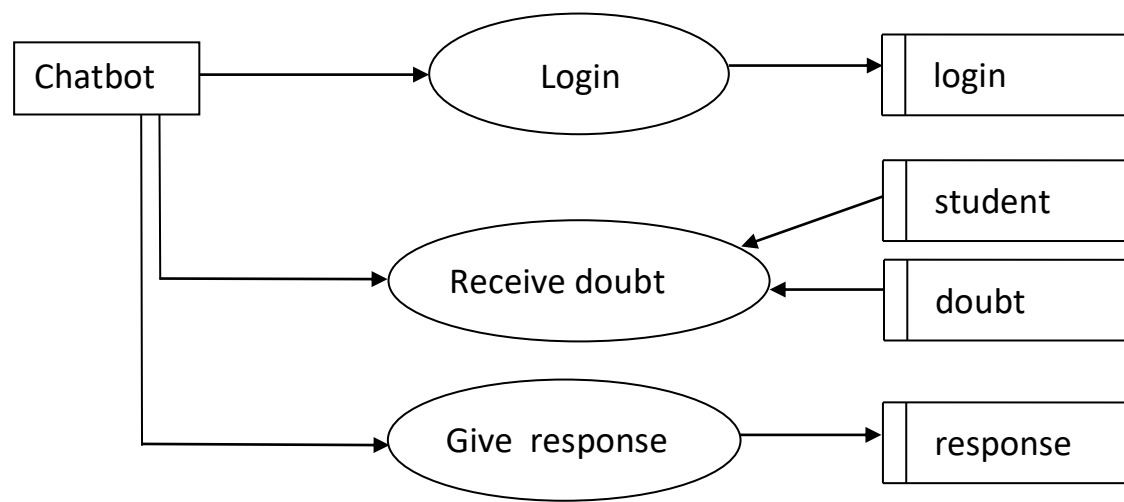
LEVEL 2



LEVEL 3



LEVEL 4



TABLES

Login

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
lid	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
lname	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
password	varchar	30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
type	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Student

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
st_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
first_name	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
last_name	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
dob	date			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
place	varchar	30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
district	varchar	30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pin	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
gender	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
email	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
college	varchar	30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
course	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
course_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
depart_name	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
regno	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
sem	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
password	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
username	varchar	30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Course

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
course_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
cname	varchar	30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
dept_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
duration	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
syllabus	varchar	300		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Department

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
dept_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
depart_name	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cont_no	bigint	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lid	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

College

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
clg_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
clg_name	varchar	30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
location	varchar	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
phone	bigint	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
email	varchar	30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

College_course

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
clg_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
course_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Doubt

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
dbid	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
doubt	varchar	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
st_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
course_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Response

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
rs_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
response	varchar	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
db_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Course

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
course_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
cname	varchar	30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
dept_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
duration	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
syllabus	varchar	300		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Admission

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
adm_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
course_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
course_details	varchar	200		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Notification

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
not_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
notification	varchar	500		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
date	date			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
time	date			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
course_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fee

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
fee_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
course_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
course_fee	bigint	20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Exam

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
exid	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
exam_noti	varchar	300		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
date	date			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
time	date			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
course_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Result

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
reslid	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
st_id	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
exid	int	11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
stresult	varchar	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dataset

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?
qtn_id	int	11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
question	varchar	500		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
answer	varchar	500		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>