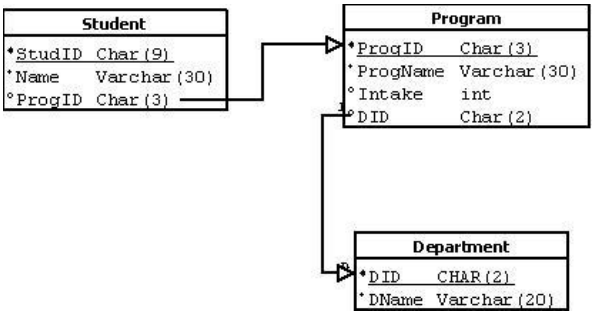
Lab 02 | Database Schema and SQL-DDL

IT615 Database Management System, Autumn'2021; pm_jat @ daiict

In this lab, you attempt understanding relational concept, and learn defining relational schema using SQL-DDL.

(1) Understand DDL script of Company Schema of Lab01 and create a detailed schema diagram as shown here for XIT schema.



Use Dia software (http://dia-installer.de/). Though it is desired that you learn Dia and use it for creating schema diagram. However, if you are not able to use it, you can create a hand sketch and upload its scan.
(PS: Dia software allows you choosing a set of graphics primitives that can be used for creating different types of diagrams). For creating relational schema diagram, you choose "Database" set of primitives.)

[Submit: Schema Diagram as PDF]

(2) Below is set of relations for creating a database for "Sales Management" module of an enterprise application. Here you are given list of attributes and primary key and foreign key information for your reference.

```
customer(cust_id, name, pin, email)
   -- a tuple of this relation represents a customer
   -- Let cust_id be the Primary Key
items(item_code, item_name, category_id, saleprice, qty_in_stock);
   -- a tuple of this relation represents an item
   -- Let item_code be Primary Key
invoice(invno, invdate, customerid)
   -- a tuple of this relation represents an invoice
   -- Let invno be the Primary Key
   -- customerid is a foreign key referring into customer table
invoicedetails(invno, itemcode, qty, price)
   -- used to record details of an invoice; a tuple of this
   -- relation represents an item entry for an invoice
   -- invno is a foreign key referring into invoice table
   -- itemcode is a foreign key referring into item table
   -- Let {invno, itemcode} jointly be the Primary Key
```

Note: For all IDs and codes you can use integer types

You are required to Create (1) Schema Diagram as above in Q1 (2) DDL script for schema of this database. [Submit: Schema Diagram and DDL script]

Also, run scripts and create a schema named `sales` and put all tables of this database under that schema. For doing this you shall require running following commands.

```
create schema sales;
set search_path to sales;
```

Below is an exercise for you only and does not require any submission.

(3) Optional. Try understanding DDL script of `DA-Acad` database schema from: http://intranet.daiict.ac.in/~pm_jat/acad_ddl.sql

Create the similar Schema diagram for this database too!