| Lab 04 | Querying operations on relations |
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| IT615 Database Management System, Autumn'2021; pm_jat @ daiict | |

In this lab, you learn and practice querying databases using Relational Algebra and SQL.

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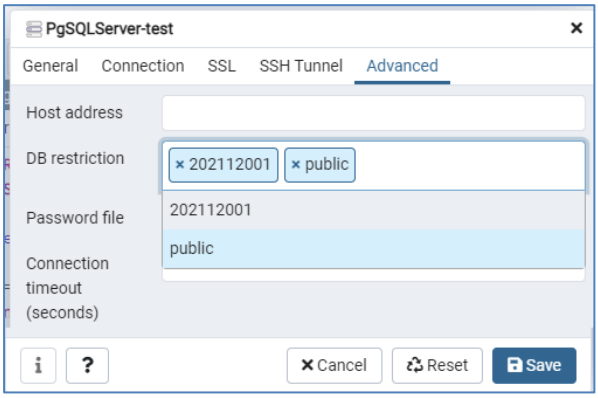
Note that for practice purposes, you are given access to a database named as **`public`** (on the same server 14.139.122.120). Where in various schemas are populated with some sample data that you can use for practice purposes.

Before accessing, add this database to DB Restriction.

While you are disconnected from the server, right click on server-name; click on properties;
go to advanced tab; add public database; typically, as shown below and save it.

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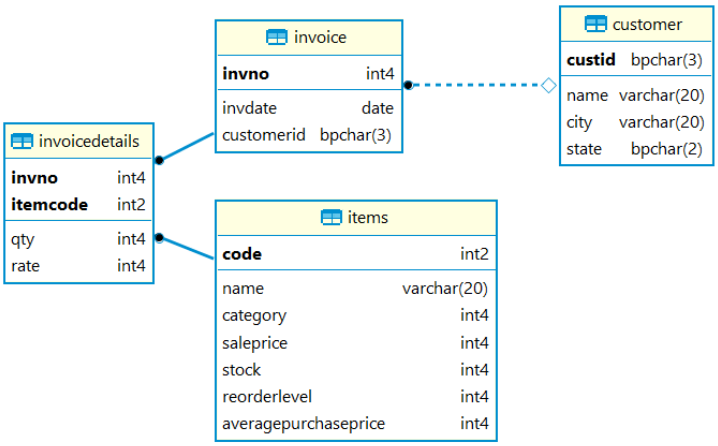
Here is schema diagram for Sales database for your reference




Your goal here is to write relational algebra expressions and SQL statements for answering following queries. [Algebraic expressions can be handwritten and scanned]

1. Give the details of items having price > 1000
2. Give the details of items having price > 1000 and are belonging to category 5;
3. List the Invoices (number, date) of a customer id = 'C05'
4. List all items (code, qty, rate) for invoice number = 1
5. List the Invoices (number, date) of the customer named Harsh.
6. List all invoices (inv no, date, customer rid) that have item code = 1103
7. List all items (inv no, item code, qty) that customer 'C05' has bought
8. List all customers (customer id, name, city) that have bought item 1101
9. List all items (item code, item name) sold on 2011-08-23
10. List all items (item code, item name) sold in month '2011-07' from category=3
11. List customers (customer id, name, city) who are from Gujarat and have bought item items from category=3
12. List the items (code, name) of items purchased by customer named 'Dev' on date 2011-08-23