

*Department of Computer Applications*  
*Sample Tutorial – TRC and DRC [27.04.2020]*

1. An orchestra database consists of the following relations:

*CONDUCTS (conductor, composition)*

*REQUIRES (composition, Instrument)*

*PLAYS (Player, Instrument)*

*Write the expression in both Tuple calculus and Domain calculus for each of the queries:*

*(i) List the compositions and the players.*

*(ii) List the compositions which require the 'violin' and the 'congo'*

2. Consider the following relational schema:

*Doctor(DName,Reg\_no)*

*Patient(Pname, Disease)*

*Assigned\_To (Pname,Dname)*

*Write the expression in both Tuple calculus and Domain calculus for each of the queries:*

*(i) Get the names of patients who are assigned to more than one doctor*

*(ii) Get the names of doctors who are treating patients with 'Polio'.*

3. Consider the following relation schemes:

*Project (Project#, Project\_name, chief\_architect)*

*Employee (Emp#, Empname)*

*Assigned\_To (Project#, Emp#)*

*Write the expression in both Tuple calculus and Domain calculus for each of the queries:*

*(i) Get the employee numbers of employees who work on all projects.*

*(ii) Get the employee numbers of employees who do not work on the COMP123 project.*

[AS]