**Name : MURALI KUMAR R**

**Roll no : 225229120**

**LAB-10**

**> db.student.find();**

**{ "\_id" : "arun", "name" : { "first" : "arun", "last" : "kumar" }, "year" : 1992, "courses" : [ "java", "php", "mongo db" ] }**

**{ "\_id" : "sam", "name" : { "first" : "sam", "last" : "peter" }, "year" : 1995, "courses" : [ "php", "python", "java" ] }**

**{ "\_id" : "anna", "name" : { "first" : "anna", "last" : "eva" }, "year" : 1997, "courses" : [ "java" ] }**

**{ "\_id" : "rex", "name" : { "first" : "rex", "last" : "samuel" }, "year" : 1988, "courses" : [ "python" ] }**

**{ "\_id" : "olivia", "name" : { "first" : "olivia", "last" : "freda" }, "year" : 2006 }**

**{ "\_id" : "syliva", "name" : { "first" : "syliva", "last" : "diana" }, "year" : 2008, "courses" : [ "php" ] }**

**{ "\_id" : "benita", "name" : { "last" : "benita", "first" : "sam" }, "yea" : 2008, "courses" : [ "php" ] }**

**>**

**> db.courses.find();**

**{ "\_id" : "java", "title" : { "tamil" : "java programming", "en" : "java programming" }, "year" : 2000, "rating" : 84, "students" : [ "arun", "sam", "anna" ], "department" : [ "cs", "ca" ], "campus" : [ "trichy", "dubai" ] }**

**{ "\_id" : "php", "title" : "php programming", "year" : 2007, "professor" : { "first" : "john", "last" : "peter" }, "rating" : 53, "student" : [ "arun", "sam", " sylvia", "divya", "hazel" ], "department" : [ "cs", "ca" ], "campus" : [ "trichy", "singapore" ] }**

**{ "\_id" : "os", "title" : "operation system", "year" : 2003, "professor" : { "last" : "titus", "first" : "antony" }, "rating" : 81, "student" : [ ], "department" : [ "ds", "ca" ], "campus" : [ "trichy", "sharajah", "singapore" ] }**

**{ "\_id" : "python", "title" : { "tamil" : "python programming", "en" : "python programming" }, "year" : 2006, "professor" : { "first" : "john", "last" : "santhosh" }, "rating" : 76, "student" : [ "rex", "sam", "anna" ], "department" : "cs", "campus" : "trichy" }**

**{ "\_id" : "networks", "title" : "networking fundamentals", "year" : 2005, "professor" : { "last" : "solomon", "first" : "balu" }, "rating" : 72, "awards" : [ { "type" : "national awards", "year" : 2005 } ] }**

**{ "\_id" : "graphics", "title" : "computer graphics", "year" : 1996, "rating" : 86, "awards" : [ { "type" : "national awards", "year" : 1996 }, { "type" : "international awards", "category" : "core cs", "year" : 2005 } ] }**

**>**

**1)> db.student.find({"name.first":"sam",year:1995});**

**{ "\_id" : "sam", "name" : { "first" : "sam", "last" : "peter" }, "year" : 1995, "courses" : [ "php", "python", "java" ] }**

**2)> db.courses.find({},{professor:{first:"john",last:"peter"}});**

**{ "\_id" : "java", "professor" : { "first" : "john", "last" : "peter" } }**

**{ "\_id" : "php", "professor" : { "first" : "john", "last" : "peter" } }**

**{ "\_id" : "os", "professor" : { "first" : "john", "last" : "peter" } }**

**{ "\_id" : "python", "professor" : { "first" : "john", "last" : "peter" } }**

**{ "\_id" : "networks", "professor" : { "first" : "john", "last" : "peter" } }**

**{ "\_id" : "graphics", "professor" : { "first" : "john", "last" : "peter" } }**

**> db.student.find({"name.first":"Sam",year:1995});**

**3)> db.student.find({"name.first":"sam",courses:"php"},{name:1,\_id:0});**

**{ "name" : { "first" : "sam", "last" : "peter" } }**

**{ "name" : { "last" : "benita", "first" : "sam" } }**

**4)> db.courses.find({year:{$gte:2000,$lte:2005}},{\_id:1}).sort({rating:-1,year:1});**

**{ "\_id" : "java" }**

**{ "\_id" : "os" }**

**{ "\_id" : "networks" }**

**5)> db.student.find({courses:{$in:["php","java"]}},{\_id:1});**

**{ "\_id" : "arun" }**

**{ "\_id" : "sam" }**

**{ "\_id" : "anna" }**

**{ "\_id" : "syliva" }**

**{ "\_id" : "benita" }**

**6)> db.student.find({courses:{$all:["php","java"]}},{\_id:1});**

**{ "\_id" : "arun" }**

**{ "\_id" : "sam" }**

**7)> db.courses.find({"title.tamil":"java programming"},{title:1,\_id:0});**

**{ "title" : { "tamil" : "java programming", "en" : "java programming" } }**

**8)> db.courses.find({"awards.type":"national awards",year:{$gte:2005}},{\_id:1,"awards.type":1});**

**{ "\_id" : "networks", "awards" : [ { "type" : "national awards" } ] }**

**9)> db.courses.find({$or:[{depts:{$all:["cs","ca"]}} ,{rating:{$gte:80}}]},{\_id:1,campus:{$slice:2}});**

**{ "\_id" : "java", "campus" : [ "trichy", "dubai" ] }**

**{ "\_id" : "os", "campus" : [ "trichy", "sharjah" ] }**

**{ "\_id" : "graphics" }**