LAB 1 – DBI202

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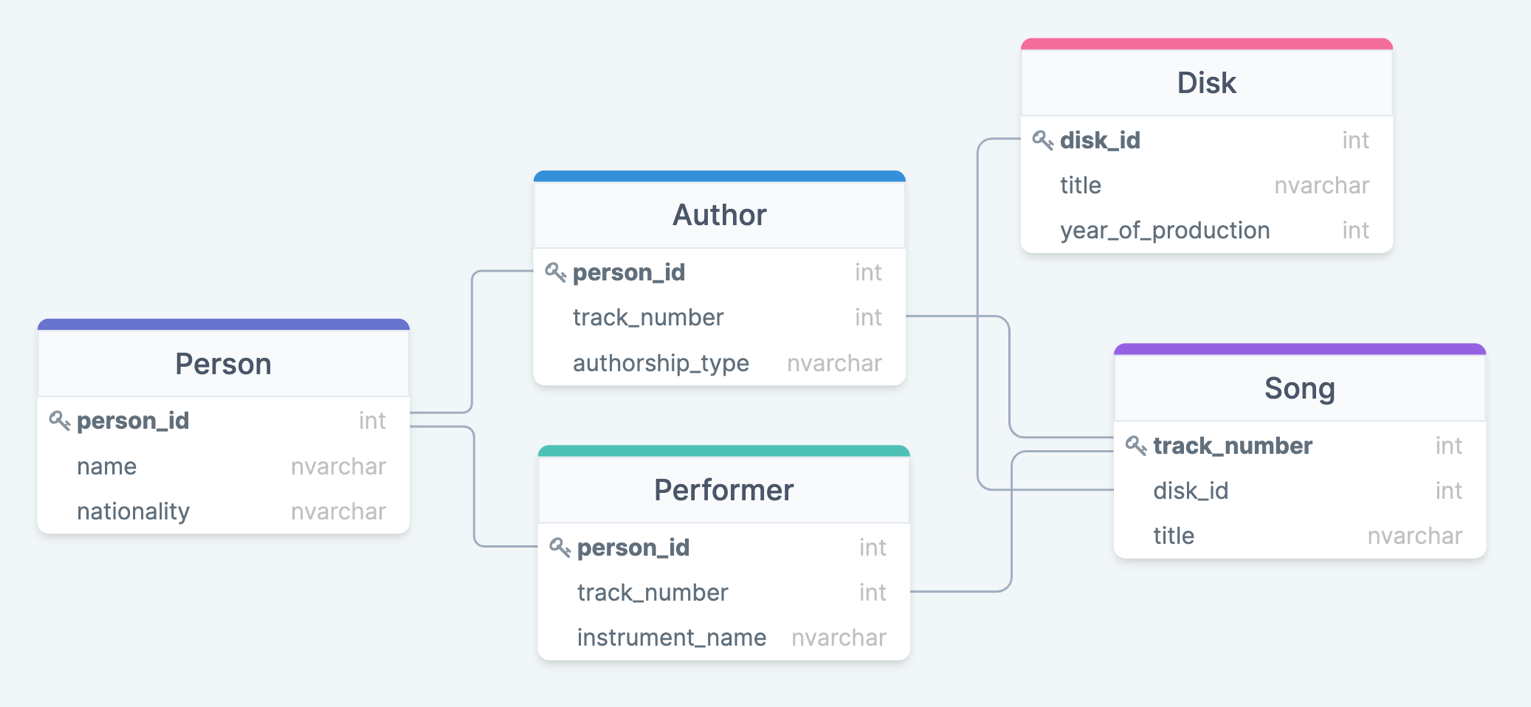
Class: AI1602

# Exercise 1: Music Database

1. Disk(**disk\_id**: integer; title: String; year\_of\_production: integer)
2. Song(**track\_number**: integer; disk\_id: integer; title: String)
3. Person(**person\_id**: integer; name: String; nationality: String)
4. Author(**person\_id**: integer; track\_number: integer; authorship\_type: string)
5. Performer(**person\_id**: integer; track\_number: integer; instrument\_name: string)

In this database schema,

* **Bold text** is referred to **Primary key**.
* Underlined text is referred to Foreign key.
* **“nvarchar”** is a set of Unicode character data as string.



# Exercise 2: Relational Algebra

1. πFirstname, Lastname, Salary(σDepartment\_id == 103(Employee))
2. πFirstname, Lastname, Salary(σgender == “Nam”(Employee))
3. πFirstname, Lastname, Salary(σgender == “Nữ” AND Salary > 7000000(Employee))
4. πFirstname, Lastname, Salary(σgender == “Nam” AND Department\_id == 103 AND Salary > 6000000(Employee))
5. πFirstname, Lastname, Salary(σgender == “Nữ” AND Department\_id == 102 AND Salary >= 4000000 (Employee))
6. πDept\_name(σDept\_name == “HR”(Department))
7. COUNT(σgender == “Nam”(Employee))
8. COUNT(σgender == “Nữ” AND Department\_id == 102(Employee))
9. COUNT(σgender == “Nam” AND Department\_id == 101 AND Salary >= 7000000(Employee))
10. SUM(πSalary(σDepartment\_id == 103(Employee)))