1. Identify and list the entities (letter) and attributes (numerals) of those entities.
   1. Faculty member
      1. Faculty ID
      2. Last name
      3. First name
      4. Street address
      5. City
      6. State
      7. Postal code
      8. Telephone number
      9. Date hired
   2. Student
      1. Student ID
      2. Last name
      3. First name
      4. Street address
      5. City
      6. State
      7. Postal code
      8. Telephone number
      9. Birthdate
   3. Course offered
      1. Course ID
      2. Name of the course
      3. Department of the course resides in
      4. Number of credits
      5. Day of week course meets
      6. Time course meets
      7. Faculty teaching the course
   4. Course registration
      1. Student ID
      2. Course ID
2. Identify and list the functional dependencies, the right is dependent on the left.

Fields that are functionally dependent on Faculty ID

* 1. Faculty ID 🡪Last name
  2. Faculty ID 🡪First name
  3. Faculty ID 🡪Street address
  4. Faculty ID 🡪City
  5. Faculty ID 🡪State
  6. Faculty ID 🡪Postal code
  7. Faculty ID 🡪Telephone number
  8. Faculty ID 🡪Date hired

Fields that are functionally dependent on Student ID

* 1. Student ID 🡪Last name
  2. Student ID 🡪First name
  3. Student ID 🡪Street address
  4. Student ID 🡪City
  5. Student ID 🡪State
  6. Student ID 🡪Postal code
  7. Student ID 🡪Telephone number
  8. Student ID 🡪Birthdate

Fields that are functionally dependent on Course ID

* 1. Course ID 🡪Name of the course
  2. Course ID 🡪Department of the course resides in
  3. Course ID 🡪Number of credits
  4. Course ID 🡪Day of the week course meets
  5. Course ID 🡪Time course meets
  6. Course ID 🡪Faculty teaching the course

Fields that are functionally dependent on Student ID, course registration

* 1. Student ID 🡪 Course ID

1. Create a set of third normal form (3NF) relations using the shorthand notations given in this module. Be sure to identify all primary keys and foreign keys appropriately.
   1. Faculty (Faculty ID, Last name, First name, Street address, City, State, Postal code, Telephone number, Date hired)
   2. Student (Student ID, Last name, First name, Street address, City, State, Postal code, Telephone number, Birthdate)
   3. Course (Course ID, name of the course, department, day, time, faculty)
   4. Course Registration (Student ID, Course ID)
      1. FK Student ID 🡪 Student
      2. FK Course ID 🡪 Course
2. You made several decisions while designing this database. What was the rationale behind these decisions? Are there other requirements that would have been helpful to you in the design process?

I had to determine what could be a primary key based off of what could have a unique value. Multiple people can have same name but a person can only have one. A city contains many people but a person can only be in one city. A teacher can teach many classes, but **usually** a class only has one teacher. A class starts a specific time, on specific days, but at a certain time on a single day dozens of classes are going on. A field was a foreign key if it was a primary key in another table. I’m not sure what other requirements would have made designing easier.