**CRUD in Spring:**

* Open Demos>Spring Boot>crud in IntelliJ and navigate to src>main>java>com.demo,crud
* Open resource>application.properties and explain to students that is defines the MySQL database we are working with and the login info as well as the dialect so that Spring can communicate with the DB
* Create a new package called model. In the new package, create a class called User
  + Annotate User as an Entity, and use the Table annotation to specify that it maps to the user table
  + Create fields for id, first name, and last name and annotate all with Column to specify which column they map to
  + The id field should also be annotated as an Id and a GeneratedValue with the GenerationType.IDENTITY strategy
  + Annotate all fields with Getter and Setter
  + Annotate the class with NoArgsConstructor and AllArgsConstructor
* Create a new package called repository. In the new package, create a new interface called UserRepository
  + Extend the JpaReposity<User, Long> which is an interface provided by Spring Data JPA that defines CRUD methods for us
* Create a new package called service. In the new package, create a new class called UserService
  + Annotate the class as a Service
  + Autowire a UserRepository dependency
  + Create a getUsers method with no args that returns a user and calls userRepository.findAll()
  + Create a createUser method with a User arg that returns a user and calls userRepository.save(user)
  + Create a updateUser method with a userId and User arg that returns a user
  + updateUser should find a user via userRepository.findByID(userId).get() and set it to a new user instance
  + The new user instance’s first and last name should be set using the getter methods on the user arg that was passed in
  + updateUser should return the result of userRepository.save(user)
  + Create a deleteUser method that takes a userId as and arg and returns void, it should call userRepository.deleteById(userId)
* Create a new package called controller. In the new package, create the class UserController
  + Annotate the class with RestController and RequestMapping(“/api/users”)
  + Autowire a UserService dependency
  + Create a getUsers method that calls userService.getUsers() and annotate it as a GetMapping
  + Create a createUser method that takes a user as a RequestBody and calls userService.createUser, annotate is as a PostMapping
  + Create a updateUser method that take a PathVariable user Id and a RequestBody user and calls userService.updateUser, annotate it as a PutMapping
  + Create a deleteUser method that takes a PathVariable userId and calls userService.deleteUser and annotate it as a DeleteMapping
* Run the program via ./mvnw spring-boot:run in the command line
* Open postman and test the URLs