```
マニマスマログマロター質マ科マやウク・ウード
          Studentjava 23
            1 backage com.infy.globaleducation.entity;
            20 import javax.persistence.Entity;
            9 PEntity
           10 @Table(name="student")
           11 public class Student {
           1200Id
           13 @GeneratedValue(strategy=GenerationType.IDENTITY)
           14 private Integer studentId;
           15 private String studentName;
eption
          16 private String emilId;
ository
          17 private String interestedCountry;
vice
          18 private Integer intakeYear:
          19 private String studyLevel;
dator
          20 private String courseInterested;
          21
          22- public Integer getStudentId() {
          23
                  return studentId:
          24 }
ations
          25= public String getStudentName() {
est-annotatio
                  return studentName;
          26
          27 }
          28-public String getEmilId() {
          29
                  return emilId;
          30 1
          31-public String getInterestedCountry() {
          32
                  return interestedCountry;
          33 }
          34- public Integer getIntakeYear() {
          35
                  return intakeYear;
          36 }
          37-public String getStudyLevel() {
                  return studyLevel;
          38
          39 }
```

```
Student.java
                      ☑ StudentDTO.java 🖾
          1 package com.infy.globaleducation.dto:
          20 import javax.validation.constraints.Email;
             public class StudentDTO {
                 private Integer studentId:
         10
         11
         120
                 @NotNull(message="{Student.Name.Notpresent}")
                //@Pattern(regexp="/^[a-z][a-z\\s]*$/",message="{Student.Name.Invalid}")
         13
         14
                @Pattern(regexp = "[a-zA-Z\s]+", message="{Student.Name.Invalid}")
         15
                 private String studentName:
         16
         170
                 @Email(message = "{Student.Email.Invalid}")
tory
         18
                 eNotNull(message="{Student.email.notpresent}")
         19
                 private String emilId:
         20
         219
tor
                 @NotNull(message="{Student.interestedCountry.notpresent}")
         22
                 private String interestedCountry:
         23
         240
                 @NotNull(message="{Student.intakeYear.notpresent}")
         25
               // @Pattern(regexp = "[0-9]{4}", message="{Student.intakeyear.Invalid}")
         26
                private Integer intakeYear: I
-annotatio
         27
         28#
                @NotNull(message="{Student.studyLevel.notpresent)")
         29
                private String studyLevel;
         30
         31-
                @NotNull(message="{Student.courseInterested.notpresent}")
         32
                private String courseInterested;
         33
                public Integer getStudentId() {
         34-
         35
                    return studentId:
         36
         375
                public String getStudentName() {
         38
                    return studentName:
         39
         49-
                 public String getEmilId() {
```

```
Project Run Window Help
                  ☑ StudentDTO java ☑ StudentRepository java 🗵

☑ Student.java

      package com.infy.globaleducation.repository:
    3º import java.util.List:
      public interface StudentRepository extends CrudRepository<Student, Integer>{
   13
   14
           public Optional<Student> findByEmilId(String emilId);
   15
   16
   17
          public List<Student> findStudentByInterestedCountryAndIntakeYear(String Country, Integer intakeYear)
  18
  19
  20
```

```
700
               public void setStudyLevel(String studyLevel) {
                                                                                                                                                       comunity.gl
       71
                   this studyLevel = studyLevel:
       72
                                                                                                                                                      StudentDT
       730
               public void setCourseInterested(String courseInterested) {

    student

                   this.courseInterested = courseInterested:
       74
                                                                                                                                                         * student
       75
                                                                                                                                                         - emillid:
       75
                                                                                                                                                         = Interest
       77
       780
                public static Student prepareEntity(StudentDTO dto) {
                                                                                                                                                         * studyt
       79
                   Student std = new Student():

    course

                   std.setStudentId(dto.getStudentId());
       80
                                                                                                                                                          getStu
                   std.setStudentName(dto.getStudentName());
       81
                                                                                                                                                          e getStu
                   std.setEmilId(dto.getEmilId());
       82
                                                                                                                                                          · getEm
                   std.setInterestedCountry(dto.getInterestedCountry());
       83
                                                                                                                                                          e getint
       84
                   std.setIntakeYear(dto.getIntakeYear());
                                                                                                                                                          a getint
                   std.setStudyLevel(dto.getStudyLevel());
       85
                                                                                                                                                          · getStr
                   std.setCourseInterested(dto.getCourseInterested());
       86

    getCo

                   return std:
       87
                                                                                                                                                          • setSti
       88
                                                                                                                                                          e setStu
       89
otatic

    setErr

       90
                                                                                                                                                          e setin
               public static StudentDTO prepareDTO(Student std) {
       91#
                                                                                                                                                           o setin
                   StudentDTO dto = new StudentDTO():
       92
                                                                                                                                                           e seist
                   dto.setStudentId(std.getStudentId());
       93
                                                                                                                                                           e setCo
                   dto.setStudentName(std.getStudentName());
       94
                                                                                                                                                           e 5 prep
                   dto.setEmilId(std.getEmilId());
       95
                   dto.setInterestedCountry(std.getInterestedCountry());
                                                                                                                                                           e s prep
       96
                   dto.setIntakeYear(std.getIntakeYear());
       97
                   dto.setStudyLevel(std.getStudyLevel());
       98
                   dto.setCourseInterested(std.getCourseInterested());
       99
                   return dto:
      100
      101
      102
      103
      194
      105 }
      125
```

69

```
C | D Studenting
                                          M StudentDIDiana
                                                          A StudentRepository ava
                                                                                   I StudentServiceImpliava #
                             > import java.util.ArrayList:□
bood! node
                                                                                                                                                                            S consist
                            13 @Service(value = "studentService")
ly plobaleducation
                            19 Alransactional
                               mublic class StudentServiceImpl implements StudentService (
te plobaleduration ani
                                                                                                                                                                              O- regis
                            21
halobaleducationato
                           220
                                   Mutowired
Sent DTO LIVE
                                   private StudentRepository studentrepo:
                            23
Numbaleducation entity
                            24
leat into
                           250
                                   #Override
k plobaleducation exception
                          426
                                   public StudentDTO registerStudent(StudentDTO studentDTO) throws GlobalEducationException {
kalobaleducation/repository
                           27
                                       StudentValidator.validateStudent(studentDTO):
                            28
                                       Optional < Student > optional = studentrepo.findByEmilId(studentDTO.getEmilId());
entitropatanuava
                            29
v.olobaleducation.service
                                       if(optional.isPresent()) {
                            30
entService.uva
                                           throw new GlobalEducationException("StudentService.STUDENT_ALREADY_EXISTS");
                           31
entServiceImpLieu
                            32
uniobaleducationumity
                           33
                                       Student std = StudentDTO.prepareEntity(studentDTO);
globaleducation validator
                           34
                                       std = studentrepo.save(std);
                           35
SOUTES
                                       studentDTD.setStudentId(std.getStudentId());
                           36
Library UsivaSE-141
                           37
                                       return studentDTO:
endencies
                           38
erated-sources/annotations
                           130-
                                   @Override
rated-test-sources/test-annotation
                                   public List(StudentDTO) findStudentByInterestedCountryAndIntakeYear(String country, Return type of YindStudentByInterestedCountryAndIntakeYear(
                           40
                                           throws GlobalEducationException {
                           41
                           42
                                       List<Student> std = studentrepo.findStudentByInterestedCountryAndIntakeYear(country, intakeYear):
                           43
                                       if (std.isEmpty() || std.size() == 0)
                                           throw new GlobalEducationException("StudentService.NO_STUDENTS FOUND");
                           45
gement [boot]
booti
                                       List<StudentDTO> dtos = new ArrayList<>();
                                       std.stream().forEach(x -> dtos.add(new StudentDTO().prepareDTO(x)));
tuler (boot) (device)s)
                                       dtos.sort((x1,x2) -> x1.getStudentName().compareTo(x2.getStudentName()));
1 (boot
                          49
est!
                          51
                                       return dtos;
(sevtopis) -
                         152
ioti
                           53
```

to a contract of the property of the property

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Project Kun Window Help
                                      (i) Studentiava
                                                2 StudentDTOJava
                                                                  In StudentRepository inva
                                                                                          D StudentServiceImpliana
                                                                                                                  ☑ ExceptionControllerAdvice.iava 22
[boot]
                                  1 backage com.infy.globaleducation.utility:
Education (boot)
                                  30 import java, time.LocalDateTime:
nain/java
om infy globaleducation
om.infy.globaleducation.api
                                 21 @RestControllerAdvice
m.mfv.olobaleducation.dto
                                    public class ExceptionControllerAdvice {
StudentDTO.iava
                                 230
                                         MAutowired
om.infy.globaleducation.entity
                                 24
                                         Environment environment:
                                 25
Studentiava
                                 260
                                        @ExceptionHandler(Exception.class)
om.infy.olobaleducation.exception
                                        public ResponseEntity<ErrorInfo> exceptionHandler(Exception exception) {
                                27
muinfy, globaleducation, repository
                                 28
                                             ErrorInfo error = new ErrorInfo():
StudentRepository.iava
                                 29
                                             error.setErrorMessage(environment.getProperty("General.EXCEPTION MESSAGE")):
minfyglobaleducation.service
                                 30
                                             error.setErrorCode(HttpStatus.INTERNAL_SERVER_ERROR.value());
StudentService.iava
                                 31
                                             error.setTimestamp(LocalDateTime.now());
StudentServiceImpl.java
                                 32
                                             return new ResponseEntity<ErrorInfo>(error, HttpStatus.INTERNAL_SERVER_ERROR);
                                 33
m.infy.globaleducation.utility
                                 34
Emorinfo.java
                                35
                                        @ExceptionHandler(GlobalEducationException.class)
ExceptionControllerAdvice.iava
                                 36
                                        public ResponseEntity<ErrorInfo> GlobalEducationExceptionHandler(GlobalEducationException exception) {
LoggingAspectiava
                                37
                                             ErrorInfo error = new ErrorInfo():
munfy.globaleducation.validator
                                 38
                                             error.setErrorMessage(environment.getProperty(exception.getMessage()));
ain/resources
                                 39
                                             error.setTimestamp(LocalDateTime.now()):
                                             error.setErrorCode(HttpStatus.NOT_FOUND.value());
                                40
stem Library DavaSE-141
                                41
                                            return new ResponseEntity<ErrorInfo>(error, HttpStatus, NOT FOUND):
Dependencies
                                42
/generated-sources/annotations
                                        BExceptionHandler({MethodArgumentNotValidException.class, ConstraintViolationException.class})
                                43=
/generaled-test-sources/test-annotation
                                        public ResponseEntity<ErrorInfo> exceptionHandler(MethodArgumentNotValidException exception)
                                45
                                46
                                            ErrorInfo errorInfo = new ErrorInfo();
                                            errorInfo.setErrorCode(HttpStatus.BAD_REQUEST.value());
                                47
Management [boot]
                                            String errorMsg = exception.getBindingResult().getAllErrors().stream().map(x -> x.getDefaultMessage())
                                50
sape 'boot!
                                51
                                                     .collect(Collectors.joining(", "));
cheduler [boot] idevtools]
                                52
oking1 [boot]
                                            errorInfo.setErrorMessage(errorMsg);
                                53
                                            encorinfo setTimestamn(IncalDateTime now()).
d tooti
                                54
opt (devicos)
```

Debugger

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urce Refactor Navigate Search Project Run Window Help
                                  ☑ StudentRepositoryjava
                                                                                       In StudentServicelmoLiava
                               (I) Student inves
                                              D StudentDTOJava
                                21 MestControllerAdvice
                                22 public class ExceptionControllerAdvice {
Education (boot)
                                       MAutowired
nain/java
                                       Environment environment;
                                24
mainly.globaleducation
                                25
munty.globaleducation.apf
                                260
                                       @ExceptionHandler(Exception.class)
                                       public ResponseEntity<ErrorInfo> exceptionHandler(Exception exception) {
                                27
m.infv.globaleducation.dto
                                            ErrorInfo error = new ErrorInfo():
StudentDTO.iava
                                           error.setErrorMessage(environment.getProperty("General.EXCEPTION MESSAGE"));
                                29
m.infy.globaleducation.entity
                                           error.setErrorCode(HttpStatus.INTERNAL SERVER ERROR.value());
StudenLiava
                                           error.setTimestamp(LocalDateTime.now());
                                31
                                           return new ResponseEntity<ErrorInfo>(error, HttpStatus.INTERNAL_SERVER_ERROR);
m infralobaleducation.exception
                               32
m.infy.globaleducation.repository
                               33
                                34
Student Repository, iava
                                       #ExceptionHandler(GlobalEducationException.class)
                                350
m.infv.olobaleducation.service
                                       public ResponseEntity<ErrorInfo> GlobalEducationExceptionHandler(GlobalEducationException exception) {
                                36
StudentService.iava
                                           ErrorInfo error = new ErrorInfo();
                                37
StudentServiceImplyava
                                           error.setErrorMessage(environment.getProperty(exception.getMessage()));
                                38
m.infy.globaleducation.utility
                                           error.setTimestamp(LocalDateTime.now());
                                39
                                           error.setErrorCode(HttpStatus.NOT_FOUND.value());
Errortofo java
                                40
                                           return new ResponseEntity<ErrorInfo>(error, HttpStatus.NOT_FOUND);
ExceptionControllerAdvice.java
                                41
                                42
LoggingAspect.java
                                       @ExceptionHandler({MethodArgumentNotValidException.class, ConstraintViolationException.class})
                               430
m.infy.globaleducation.validator
                                       public ResponseEntity<ErrorInfo> exceptionHandler(MethodArgumentNotValidException exception) {
                               44
ain/resources
                                45
                                           ErrorInfo errorInfo = new ErrorInfo();
stem Library DavaSE-14]
                                46
                                           errorInfo.setErrorCode(HttpStatus.BAD_REQUEST.value());
Dependencies
                                47
/generated-sources/annotations
                                48
/generaled-test-sources/test-annotation
                                           String errorMsg = exception.getBindingResult().getAllErrors().stream().map(x -> x.getDefaultMessage())
                                50
                                                    .collect(Collectors.joining(", "));
                               51
                                52
                                           errorInfo.setErrorMessage(errorMsg);
                                53
                                           errorInfo.setTimestamp(LocalDateTime.now());
                                54
                                           return new ResponseEntity<>(errorInfo, HttpStatus.BAD_REQUEST);
Management [boot]
                               55
                                56
Jood! ggar
Scheduler 'boot! [devicols]
                                57
                               58
plana1 [poot]
                                59
d (bost)
```

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In Studentiava
                                   ☑ StudentDTO.iava

☑ StudentRepository.java

                                                                               D StudentServiceImpLiava
                                                                                                        D ExceptionControllerAdvice.iava
                                                                                                                                      A Student Validatoriava 25
                   1 backage com.infy.globaleducation.validator;
                    30 import java.time.LocalDate;
ation
                   10 public class StudentValidator {
ation.api
                   11
ation.dto
                   120
                           public static void validateStudent(StudentDTO studentDTO) throws GlobalEducationException (
                                if (| isValidIntakeYear(studentDTO.getIntakeYear())) {
                   13
                                     throw new GlobalEducationException("StudentValidator.INVALID INTAKE YEAR");
                   14
ation.entity
                   15
                   16
ation.exception
                   17
ationrepository
                   18
                           public static Boolean isValidIntakeYear(Integer intakeYear) {
y.java
                   190
                                //int currentYear = new Date().getYear();
ation_service
                   20
                   21
                   22
pl.java
                                if (intakeYear < LocalDate.now().getYear()) {
                   23
ation.utility
                   24
                                     return false;
                   25
lerAdvice.java
                   26
                                else {
                                    return true;
                   27
                   28
ation validator
                   29
                   30 }
                   31
SE-14]
es/annotations
ources/test-annotation
```

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```
In Studentiava
                           ☑ StudentDTOJava
                                             D StudentRepository java
                                                                     D) StudentServiceImpl...
                                                                                           D ExceptionControllerA...
                                                                                                                  D StudentValidator.iava
                                                                                                                                      StudentAPLiava M
            1 backage com.infy.globaleducation.api;
             20 import java.util.List;
            21
            22 MRestController
            23 @RequestMapping(value="/global-edu")
            24 @Walidated
            25 public class StudentAPI {
            26
            270
                    MAUtowired
            28
                    private StudentService studentservice:
VIII
            29
            300
                        @PostMapping(value="/student")
noitquo
                    public ResponseEntity<StudentDTO> regiserStudent(@Valid @RequestBody StudentDTO studentDTO)
            31
pository
            32
                             throws GlobalEducationException{
            33
                        StudentDTO studentdto=studentservice.registerStudent(studentDTO);
                        return new ResponseEntity<>(studentdto, HttpStatus, CREATED);
            34
TVICE
            35
            36
            37
            380
                    @GetMapping(value="/student/{country}/{intakeYear}")
                    public ResponseEntity<List<StudentDTO>> findStudentByInterestedCountryAndIntakeYear(@PathVariable String country .
            39
                             @PathVariable @Pattern(regexp = "[0-9]{4}". message="{Student.intakeyear.Invalid}") Integer intakeYear)
            40
                                      throws GlobalEducationException(
            41
                        List<StudentDTO> studentdto1 =studentservice.findStudentByInterestedCountryAndIntakeYear(country, intakeYear):
            42
lidator
                        return new ResponseEntity<>(studentdto1, HttpStatus.OK);
            43
            44
            45
            45
            47 1
tations
            48
est-annot
```

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# ( + | A + | B + | W + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C + | C +