



```
File Edit Source Refactor Navigate
Rental.java RentACarService RentACarAPI.java RentACarApplica RentalDTO.java
1 package com.rentacar;
2
3 import java.time.LocalDate;
4
5 import javax.persistence.Entity;
6 import javax.persistence.GeneratedValue;
7 import javax.persistence.GenerationType;
8 import javax.persistence.Id;
9
10 @Entity
11 public class Rental
12 {
13
14     @Id
15     @GeneratedValue(strategy=GenerationType.IDENTITY)
16     private Integer rentalId;
17     private String carType;
18     private LocalDate bookingStartDate;
19     private Integer duration;
20     private String customerName;
21     private Long mobileNumber;
22
23
24     public Integer getRentalId() {
25         return rentalId;
26     }
27     public void setRentalId(Integer rentalId) {
28         this.rentalId = rentalId;
29     }
30     public String getCarType() {
31         return carType;
32     }
33     public void setCarType(String carType) {
34         this.carType = carType;
35     }
36     public LocalDate getBookingStartDate() {
```

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File Edit Source Refactor Navigate Search

Rental.java RentACarService RentACarAPI.java RentACarApplica RentalDTO.java "4"

```
1 package com.infy.rentacar.dto;
2
3+import java.time.LocalDate;
4
5
6
7     private Integer rentalId;
8
9     @NotNull(message = "{rental.cartype.absent}")
10    @Pattern(regexp = "(Automatic|Electric|Manual)", message = "{rental.cartype.invalid}")
11    private String carType;
12
13    @NotNull(message = "{rental.bookingdate.absent}")
14    @FutureOrPresent(message = "{rental.bookingstartdate.invalid}")
15    private LocalDate bookingStartDate;
16
17    @NotNull(message = "{rental.duration.absent}")
18    @Min(value = 1, message = "{rental.duration.invalid}")
19    @Max(value = 30, message = "{rental.duration.invalid}")
20    private Integer duration;
21
22    @NotNull(message = "{rental.customername.absent}")
23    @Pattern(regexp = "(([A-Z][a-z]+)\s)*", message = "{rental.customername.invalid}")
24    private String customerName;
25    private Long mobileNumber;
26
27    public String getCustomerName() {
28        return customerName;
29    }
30
31    public void setCustomerName(String customerName) {
32        this.customerName = customerName;
33    }
34
35
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```

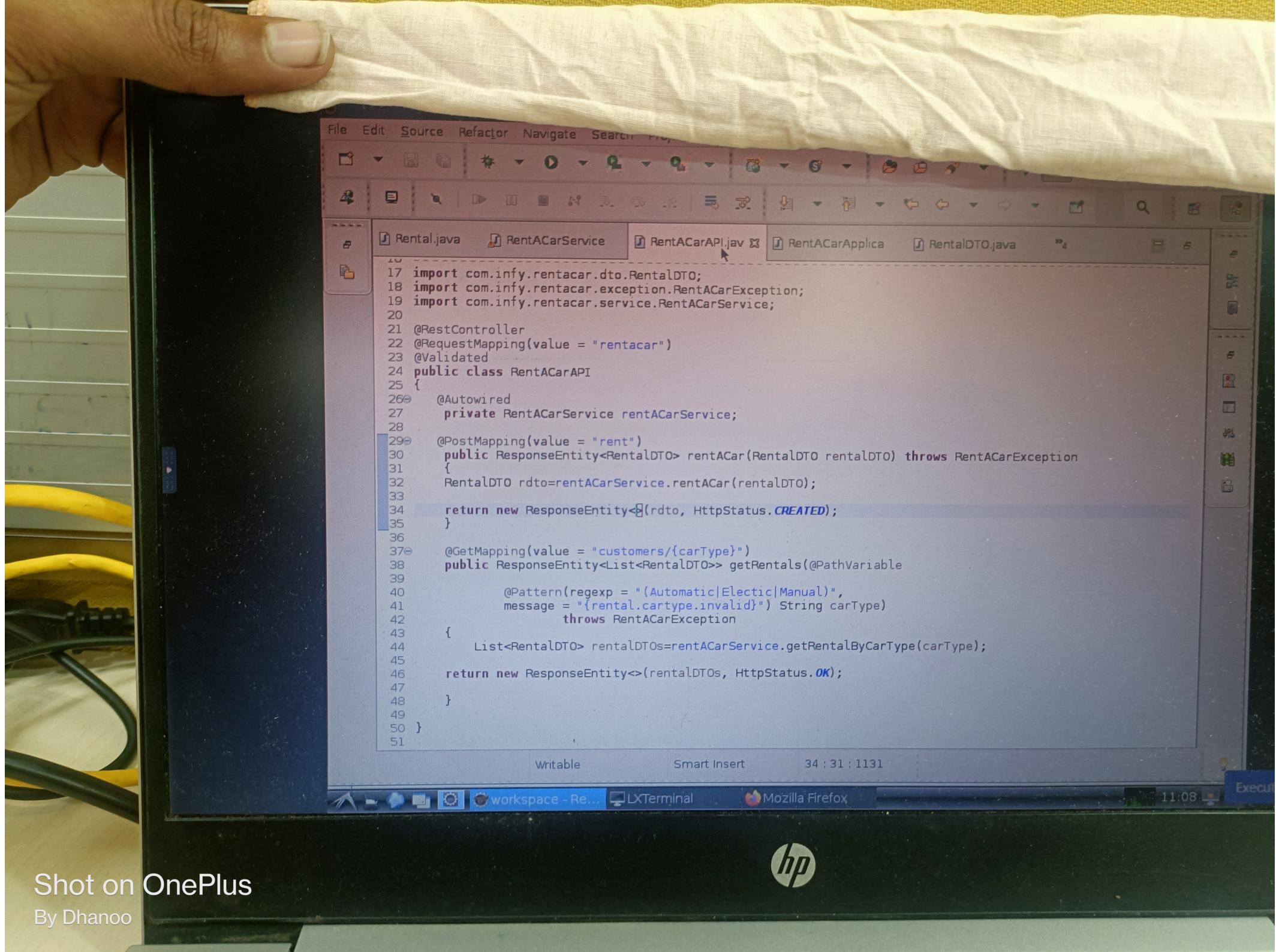
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```
File Edit Source Refactor Navigate Search Project
Rental.java RentACarService RentACarAPI.java RentACarApplica RentalDTO.java
16
17 import com.infy.rentacar.dto.RentalDTO;
18 import com.infy.rentacar.exception.RentACarException;
19 import com.infy.rentacar.service.RentACarService;
20
21 @RestController
22 @RequestMapping(value = "rentacar")
23 @Validated
24 public class RentACarAPI
25 {
26     @Autowired
27     private RentACarService rentACarService;
28
29     @PostMapping(value = "rent")
30     public ResponseEntity<RentalDTO> rentACar(RentalDTO rentalDTO) throws RentACarException
31     {
32         RentalDTO rdto=rentACarService.rentACar(rentalDTO);
33
34         return new ResponseEntity<Object>(rdto, HttpStatus.CREATED);
35     }
36
37     @GetMapping(value = "customers/{carType}")
38     public ResponseEntity<List<RentalDTO>> getRentals(@PathVariable
39
40         @Pattern(regexp = "(Automatic|Electric|Manual)",
41         message = "{rental.cartype.invalid}") String carType)
42         throws RentACarException
43     {
44         List<RentalDTO> rentalDTOS=rentACarService.getRentalByCarType(carType);
45
46         return new ResponseEntity<Object>(rentalDTOS, HttpStatus.OK);
47     }
48 }
49
50 }
51
```

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```
File Edit Source Refactor Navigate Search Help
Rental.java RentACarService.java RentACarAPI.java RentACarApplica.java RentalDTO.java
1 package com.infy.rentacar.service;
2
3 import java.util.ArrayList;
4
5 @Service(value = "rentACarService")
6 @Transactional
7 public class RentACarServiceImpl implements RentACarService {
8
9
10    @Autowired
11    private RentalRepository rentalRepository;
12
13
14    @Override
15    public RentalDTO rentACar(RentalDTO rentalDTO) throws RentACarException {
16        Validator.validate(rentalDTO);
17        Rental rent=rentalDTO.prepareEntity(rentalDTO);
18        Integer rentalId=rentalRepository.save(rent).getRentalId();
19        rent.setRentalId(rentalId);
20        return rentalDTO;
21    }
22
23
24    @Override
25    public List<RentalDTO> getRentalByCarType(String carType) throws RentACarException {
26        List<Rental> rent= rentalRepository.findByCarType(carType);
27        if(rent.isEmpty())
28            throw new RentACarException("Service.RENTAL_NOT_FOUND");
29        List<RentalDTO> dto=new ArrayList<RentalDTO>();
30        for(Rental rental:rent) {
31            RentalDTO rdto=RentalDTO.prepareDTO(rental);
32            dto.add(rdto);
33        }
34        return dto;
35    }
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52 }
```

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```
File Edit Source Refactor Navigate Search
ValidationMessa ExceptionControllerAdvice RentACarService RentACarAPI.java RentalDTO.java
24 {
25
26     private static final Log LOGGER = LoggerFactory.getLog(ExceptionControllerAdvice.class);
27
28     @Autowired
29     private Environment environment;
30
31     @ExceptionHandler(RentACarException.class)
32     public ResponseEntity<ErrorInfo> rentACarExceptionHandler(RentACarException exception)
33     {
34         LOGGER.error(exception.getMessage(), exception);
35         ErrorInfo errorInfo = new ErrorInfo();
36         errorInfo.setErrorCode(HttpStatus.BAD_REQUEST.value());
37         errorInfo.setErrorMassage(environment.getProperty(exception.getMessage()));
38         return new ResponseEntity<>(errorInfo, HttpStatus.BAD_REQUEST);
39     }
40
41     @ExceptionHandler(Exception.class)
42     public ResponseEntity<ErrorInfo> generalExceptionHandler(Exception exception)
43     {
44         LOGGER.error(exception.getMessage(), exception);
45         ErrorInfo errorInfo = new ErrorInfo();
46         errorInfo.setErrorCode(HttpStatus.INTERNAL_SERVER_ERROR.value());
47         errorInfo.setErrorMassage(environment.getProperty("General.EXCEPTION_MESSAGE"));
48         return new ResponseEntity<>(errorInfo,
49                                     HttpStatus.INTERNAL_SERVER_ERROR);
50     }
51
52     @ExceptionHandler({MethodArgumentNotValidException.class, ConstraintViolationException.class})
53     public ResponseEntity<ErrorInfo> validatorExceptionHandler(Exception exception)
54     {
55         LOGGER.error(exception.getMessage(), exception);
56         String errorMsg;
57         if (exception instanceof MethodArgumentNotValidException)
58         {
59             errorMsg = exception.getBindingResult().getAllErrors().stream()
60                     .map(ObjectError::getDefaultMessage)
61                     .collect(Collectors.joining(", "));
62         }
63         else
64         {
65             errorMsg = exception.getConstraintViolations().stream()
66                     .map(ConstraintViolation::getMessage)
67                     .collect(Collectors.joining(", "));
68         }
69         ErrorInfo errorInfo = new ErrorInfo();
70         errorInfo.setErrorCode(HttpStatus.BAD_REQUEST.value());
71         errorInfo.setErrorMassage(errorMsg);
72         return new ResponseEntity<>(errorInfo, HttpStatus.BAD_REQUEST);
73     }
}
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```





A screenshot of an IDE (IntelliJ IDEA) showing Java code for a Validator class. The code handles validating contact numbers.

```
1 package com.infy.rentacar.validator;
2
3
4
5 import com.infy.rentacar.dto.RentalDTO;
6
7 public class Validator {
8
9     public static void validate(RentalDTO rental) throws RentACarException{
10
11         String errorMsg=null;
12         if(Boolean.FALSE.equals(isValidContactNumber(rental.getMobileNumber()))){
13             errorMsg="Validator.INVALID_CONTACT";
14         }
15         if(errorMsg!=null)
16             throw new RentACarException(errorMsg);
17         else
18             errorMsg=null;
19         //throw new RentACarException("Validator.INVALID_CONTACT");
20     }
21
22
23
24
25
26     public static Boolean isValidContactNumber(Long contactNumber) {
27         return contactNumber.toString().matches("[0-9]{10}");
28     }
29
30 }
31
```

The Project Explorer shows the project structure under 'RentACar' (in iap\_rentacar), including packages like com.infy.rentacar, com.infy.rentacar.api, com.infy.rentacar.dto, com.infy.rentacar.entity, com.infy.rentacar.exception, com.infy.rentacar.repository, com.infy.rentacar.service, com.infy.rentacar.utility, and com.infy.rentacar.validator. The Validator.java file is selected in the Project Explorer.

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A screenshot of a Java Integrated Development Environment (IDE) showing a project structure and a code editor. The project structure is displayed in the Project Explorer on the left, and the code editor shows a Java interface named `RentalRepository`.

**Project Explorer:**

- > RentACar (in iap\_rentacar)
- src/main/java
  - com.infy.rentacar
    - RentACarApplication.java
  - com.infy.rentacar.api
    - RentACarAPI.java
  - com.infy.rentacar.dto
    - RentalDTO.java
  - com.infy.rentacar.entity
    - Rental.java
  - com.infy.rentacar.exception
    - RentACarException.java
  - com.infy.rentacar.repository
    - RentalRepository.java
  - com.infy.rentacar.service
    - RentACarService.java
    - RentACarServiceImpl.java
  - com.infy.rentacar.utility
    - ErrorInfo.java
  - com.infy.rentacar.controller
    - ExceptionControllerAd
  - com.infy.rentacar.validator
    - Validator.java

**Code Editor (RentalRepository.java):**

```
1 package com.infy.rentacar.repository;
2
3 import java.util.List;
4
5 import org.springframework.data.repository.CrudRepository;
6
7 import com.infy.rentacar.entity.Rental;
8
9 public interface RentalRepository extends CrudRepository<Rental, Integer>{
10     List<Rental> findByCarType(String carType);
11 }
12
13
```

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11:09

Execute View Result