Job Readlines Project: ComplaintRedressalSystem Complaint Management System for ABC Telecom Ltd.

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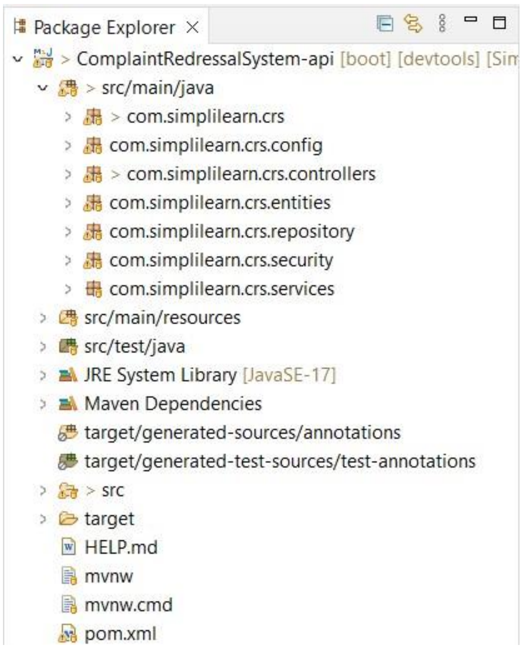
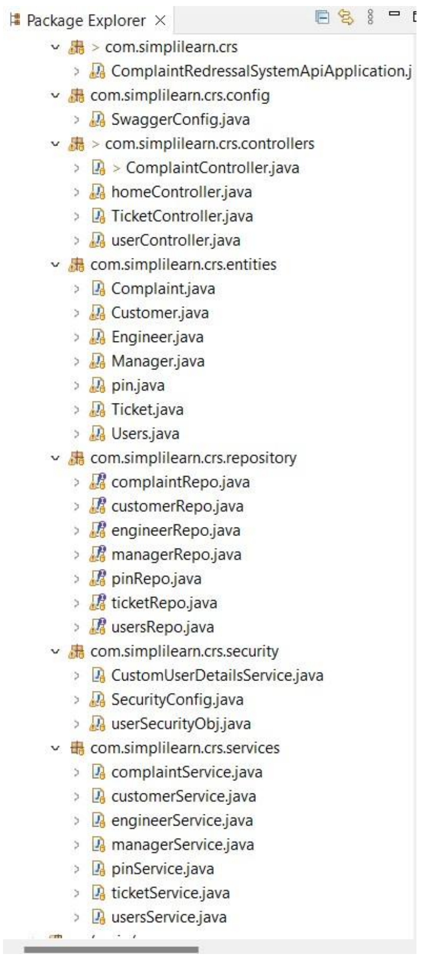
GitHub Project Repository URL :
https://github.com/ASRajakumar/ComplaintRedressalSystem.git

Backend Rest API:

Project structure:



```
Package Explorer
ComplaintRedressalSystem-api [boot] [devtools] [Sim
  > src/main/java
    > com.simplilearn.crs
    com.simplilearn.crs.config
    > com.simplilearn.crs.controllers
    com.simplilearn.crs.entities
    com.simplilearn.crs.repository
    com.simplilearn.crs.security
    com.simplilearn.crs.services
  src/main/resources
  src/test/java
  JRE System Library [JavaSE-17]
  Maven Dependencies
  target/generated-sources/annotations
  target/generated-test-sources/test-annotations
  > src
  target
  HELP.md
  mvnw
  mvnw.cmd
  pom.xml
```



```
Package Explorer
  > com.simplilearn.crs
    ComplaintRedressalSystemApiApplication.j
  com.simplilearn.crs.config
    SwaggerConfig.java
  > com.simplilearn.crs.controllers
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    engineerService.java
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    ticketService.java
    usersService.java
```

ComplaintRedressalSystemApiApplication.java

```
package com.simplilearn.crs;

import java.util.ArrayList;
import java.util.List;

import
org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.CommandLineRunner; import
org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.context.annotation.Bean;
import org.springframework.security.crypto.password.PasswordEncoder;

import com.simplilearn.crs.entities.Engineer; import
com.simplilearn.crs.entities.Manager; import
com.simplilearn.crs.entities.Users; import
com.simplilearn.crs.entities.pin; import
com.simplilearn.crs.repository.engineerRepo;
import
com.simplilearn.crs.repository.managerRepo;
```

```
import com.simplilearn.crs.repository.pinRepo; import
com.simplilearn.crs.repository.usersRepo; import
com.simplilearn.crs.services.usersService;


@SpringBootApplication

public class ComplaintRedressalSystemApiApplication implements CommandLineRunner{

		@Autowired
	engineerRepo repo;
	@Autowired
	pinRepo pRepo;
		@Autowired
			PasswordEncoder encoder;
		@Autowired
			usersService usrservice;

				public static void main(String[] args) {

SpringApplication.run(ComplaintRedressalSystemApiApplication.class, args);
		}

		@Override
					public void run(String... args) throws Exception {

		}

}
```

ComplaintController.java

```
package com.simplilearn.crs.controllers;

import java.util.HashMap;
import java.util.List;
import java.util.Map;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpStatus; import
org.springframework.http.ResponseEntity; import
org.springframework.security.access.prepost.PreAuthorize; import
org.springframework.web.bind.annotation.GetMapping; import
org.springframework.web.bind.annotation.PostMapping; import
org.springframework.web.bind.annotation.RequestBody; import
org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.RestController;

import com.simplilearn.crs.entities.Complaint;
import com.simplilearn.crs.entities.Manager; import
com.simplilearn.crs.entities.Ticket; import
com.simplilearn.crs.entities.pin; import
com.simplilearn.crs.services.complaintService;
import com.simplilearn.crs.services.managerService;
import com.simplilearn.crs.services.pinService;
import com.simplilearn.crs.services.ticketService;
```

```
@RestController
@RequestMapping("api/complaint")

public class ComplaintController {
                    @Autowired
                                        complaintService complaintservice;

                    @Autowired
                              ticketService ticketservice;

                    @Autowired
                                        managerService managerservice;

                    @Autowired
                              pinService pinservice;

                                        @PreAuthorize("hasAuthority('ADMIN')")
                              @GetMapping("/hi")
                              public String Handshake() {
                              return "HI!!";
                    }


          @PreAuthorize("hasAnyAuthority('ADMIN','CUSTOMER')")
                              @PostMapping("/raise")
          public ResponseEntity<Map<String,Long>> raiseComplaint(@RequestBody Complaint
cmp){
                                                  Map<String,Long> res = new HashMap<>();

                              try{
                                                                      Complaint createdcomplaint =
complaintservice.createComplaint(cmp);
                                                  Ticket tempticket =new Ticket();
                    Manager tempmgr = managerservice.getManagerForPin(cmp.getPin());
          tempticket.setStatus("RAISED");
                                                  tempticket.setManager(tempmgr);
                    Ticket createdticket = ticketservice.createTicket(tempticket);
          complaintservice.addTicketToComplaint(createdcomplaint,createdticket);
          ticketservice.setComplaint(createdticket, createdcomplaint);
          res.put("status",1L);
                    res.put("complaintId", createdcomplaint.getComplaintId());
          res.put("ticketId",createdticket.getTicketId());
                                                                      return new
ResponseEntity<Map<String,Long>>(res,HttpStatus.OK);
                    }catch(Exception e) {
          res.put("status",0L);
                                        return new
ResponseEntity<Map<String,Long>>(res,HttpStatus.EXPECTATION_FAILED);
                              }
                    }
                                                  @PreAuthorize("hasAnyAuthority('ADMIN','MANAGER')")
```

```
                        @GetMapping("/all")
        public List<Complaint> getAllComplaints(){
        return complaintservice.getAllComplaints();
                    }
        @PreAuthorize("hasAnyAuthority('ADMIN','MANAGER','CUSTOMER')")
        @GetMapping("/cuscomplaints")
```

```
          public List<Complaint> getAllCustomerComplaints(@RequestParam(name = "cid") Long
cusId){
                                                            return
complaintservice.getAllCustomerComplaints(cusId);
                    }


          @PreAuthorize("hasAnyAuthority('ADMIN','CUSTOMER')")
                                        @PostMapping("/ticketreraise")
                                                                      public
ResponseEntity<Map<String,Long>> reRaiseTicket(@RequestBody Complaint cmp){
                                                  Map<String,Long> res = new HashMap<>();
                              try {
                                                            Ticket tempticket = new Ticket();
                              Manager tempmgr = managerservice.getManagerForPin(cmp.getPin());
                    tempticket.setStatus("RAISED");
                                                            tempticket.setManager(tempmgr);
                              Ticket createdticket = ticketservice.createTicket(tempticket);
                              complaintservice.addTicketToComplaint(cmp, createdticket);
                              ticketservice.setComplaint(createdticket, cmp);
                    res.put("status", 1L);
                              res.put("complaintId", cmp.getComplaintId());
          res.put("ticketId", createdticket.getTicketId());
                                                                                return new
ResponseEntity<Map<String,Long>>(res,HttpStatus.OK);
                    }catch(Exception e) {
          res.put("status",0L);
                                        return new
ResponseEntity<Map<String,Long>>(res,HttpStatus.EXPECTATION_FAILED);
                              }
                    }

          @PreAuthorize("hasAnyAuthority('ADMIN','CUSTOMER')")
                                        @PostMapping("/addfeedback")
          public  ResponseEntity<Map<String,Long>> addFeedback(@RequestBody Complaint
cmp){
                                                  Map<String,Long> res = new HashMap<>();
                    Long status = complaintservice.addFeedback(cmp.getComplaintId(),
cmp.getFeedback());
                                        res.put("status", status);
                                                                      return new
ResponseEntity<Map<String,Long>>(res,HttpStatus.OK);
                    }
                              @GetMapping("/allpin")
          @PreAuthorize("hasAnyAuthority('ADMIN','ENGINEER','MANAGER','CUSTOMER')")
          public List<pin> getAllPins(){
                                        return pinservice.getAllPin();
                    }
                              @PostMapping("/addpin")
                                        @PreAuthorize("hasAuthority('ADMIN')")
```

```
                                                public  ResponseEntity<Map<String,Integer>>
addpin(@RequestBody pin p){
                Map<String,Integer> res = new HashMap<>();
        int status = pinservice.addPin(p);
                                res.put("status", status);

                                                        return new
ResponseEntity<Map<String,Integer>>(res,HttpStatus.OK);
                }
        @GetMapping("/managerforpin")
        @PreAuthorize("hasAuthority('ADMIN')")
        public ResponseEntity<Manager> getManagerForpin(@RequestParam(name="pin") long
pin){
```

```
                    Manager m = managerservice.getManagerForPin(new pin(pin));
                    return new ResponseEntity<Manager>(m,HttpStatus.OK);
                    }
                    }
```

homeController.java

```
package com.simplilearn.crs.controllers;

import
org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpStatus; import
org.springframework.http.HttpStatusCode; import
org.springframework.http.ResponseEntity;
import
org.springframework.security.crypto.password.PasswordEncoder;
import org.springframework.web.bind.annotation.GetMapping; import
org.springframework.web.bind.annotation.PostMapping; import
org.springframework.web.bind.annotation.RequestBody; import
org.springframework.web.bind.annotation.RequestMapping; import
org.springframework.web.bind.annotation.RestController;

import com.simplilearn.crs.entities.Users;
import com.simplilearn.crs.services.usersService;

@RestController
@RequestMapping("api/home")
public class homeController {

                              @Autowired
                                        usersService service;
                              @Autowired
                                        PasswordEncoder encoder;

                                        @GetMapping("/")
                                        public String welcome() {
                                        return "Hi";
                              }
                                        @PostMapping("/add")
                    public ResponseEntity<String> adduser(@RequestBody Users usr){
                    System.out.println("Method initiated, Receivedobject: "+usr);
          String password = usr.getPassword();
                                                            usr.setPassword(encoder.encode(password));
                                                  service.addUser(usr);
                                                                      return new
ResponseEntity<String>("Success!",HttpStatus.OK);
                              }
                                        @GetMapping("/user")
                                                  public ResponseEntity<String> user(){
                                                                                return new
ResponseEntity<>("Welcome User!",HttpStatus.OK);
```

```
                    }

                            @GetMapping("/admin")
                                    public ResponseEntity<String> admin(){
                                                        return new
ResponseEntity<>("Welcome Admin!",HttpStatus.OK);
                    }
}
```

TicketController.java

```
package com.simplilearn.crs.controllers;

import java.util.HashMap;
import java.util.List;
import java.util.Map;

import
org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpStatus; import
org.springframework.http.ResponseEntity;
import org.springframework.security.access.prepost.PreAuthorize;
import org.springframework.security.core.Authentication; import
org.springframework.web.bind.annotation.GetMapping; import
org.springframework.web.bind.annotation.PatchMapping; import
org.springframework.web.bind.annotation.RequestBody; import
org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.RestController;

import com.simplilearn.crs.entities.Complaint;
import com.simplilearn.crs.entities.Engineer; import
com.simplilearn.crs.entities.Ticket; import
com.simplilearn.crs.entities.Users; import
com.simplilearn.crs.entities.pin; import
com.simplilearn.crs.security.userSecurityObj; import
com.simplilearn.crs.services.engineerService;
import com.simplilearn.crs.services.ticketService;
import com.simplilearn.crs.services.usersService;

@RestController
@RequestMapping("api/ticket")
public class TicketController {
@Autowired
ticketService tktservice;
@Autowired
engineerService engineerservice;
@Autowired
usersService usrService;

@PreAuthorize("hasAnyAuthority('ADMIN','MANAGER')")
@GetMapping("/all")
public List<Ticket> getAllTicket(){
                                        return tktservice.getAllTickets();
}

@PreAuthorize("hasAnyAuthority('ADMIN','CUSTOMER','ENGINEER','MANAGER')")
@GetMapping("/ticketdata")
public Ticket getTicketData(@RequestParam(name="ticketId")Long ticketID) {
          return tktservice.getTicket(ticketID);
}
@PreAuthorize("hasAnyAuthority('ADMIN','CUSTOMER','ENGINEER','MANAGER')")
```

```
@GetMapping("/complaintdata")
public Complaint getComplaintData(@RequestParam(name="ticketId")Long ticketID) {
	return tktservice.getTicket(ticketID).getComplaint();
}
```

```
@PatchMapping("/updatestatus")
@PreAuthorize("hasAnyAuthority('ADMIN','ENGINEER','MANAGER')")
public  ResponseEntity<Map<String,Long>> statusUpdate (@RequestBody Ticket tkt){
                                        Map<String,Long> res = new HashMap<>();
          Long status = tktservice.updateStatus(tkt.getTicketId(), tkt.getStatus());
          res.put("status", status);
                                                            return new
ResponseEntity<Map<String,Long>>(res,HttpStatus.OK);
}
@PatchMapping("/updatecomment")
@PreAuthorize("hasAnyAuthority('ADMIN','ENGINEER','MANAGER')")
public  ResponseEntity<Map<String,Long>> commentUpdate (@RequestBody Ticket tkt){
                                        Map<String,Long> res = new HashMap<>();
          Long status = tktservice.updateComment(tkt.getTicketId(), tkt.getComment());
          res.put("status", status);
                                                            return new
ResponseEntity<Map<String,Long>>(res,HttpStatus.OK);
}
@PatchMapping("/assignEngineer")
@PreAuthorize("hasAnyAuthority('ADMIN','MANAGER')")
public ResponseEntity<Map<String,Long>> assignEngineer(@RequestBody Ticket tkt){
          Map<String,Long> res = new HashMap<>();
          Long status = tktservice.assignEngineer(tkt);
          res.put("status", status);
                                                            return new
ResponseEntity<Map<String,Long>>(res,HttpStatus.OK);
}
@GetMapping("/engineeralltickets")
@PreAuthorize("hasAnyAuthority('ADMIN','ENGINEER','MANAGER')")
public ResponseEntity<List<Ticket>> getEngineerTickets(@RequestParam(name="engineerid")
Long engineerId){
          List<Ticket> engrTickets = tktservice.getEngTickets(engineerId);
          return new ResponseEntity<List<Ticket>>(engrTickets,HttpStatus.OK);
}

@GetMapping("/engineeropentickets")
@PreAuthorize("hasAnyAuthority('ADMIN','ENGINEER','MANAGER')") public
ResponseEntity<List<Ticket>>
getEngineerOpenTickets(@RequestParam(name="engineerid") Long
engineerId){     List<Ticket> engrTickets =
tktservice.getEngOpenTickets(engineerId);        return new
ResponseEntity<List<Ticket>>(engrTickets,HttpStatus.OK);
}
 @GetMapping("/manageropentickets")
 @PreAuthorize("hasAnyAuthority('ADMIN','MANAGER')")
 public ResponseEntity<List<Ticket>>
getManagerOpenTickets(@RequestParam(name="managerid") Long managerId){
          List<Ticket> mgrTickets = tktservice.getManagerOpenTickets(managerId);
          return new ResponseEntity<List<Ticket>>(mgrTickets,HttpStatus.OK);
                    }
 @GetMapping("/manageralltickets")
 @PreAuthorize("hasAnyAuthority('ADMIN','MANAGER')")
 public ResponseEntity<List<Ticket>> getManagerTickets(@RequestParam(name="managerid")
Long managerId){
                        List<Ticket> mgrTickets = tktservice.getManagerTickets(managerId);
            return new ResponseEntity<List<Ticket>>(mgrTickets,HttpStatus.OK);
                        }
 @GetMapping("/engineerforpin")
 @PreAuthorize("hasAnyAuthority('ADMIN','MANAGER')")
 public ResponseEntity<List<Engineer>> getEngineerForpin(@RequestParam(name="pin") Long
Pin){
  List<Engineer> location_engineers = engineerservice.getEngineerForPin(new pin(Pin));
                                                                                                   return new
ResponseEntity<List<Engineer>>(location_engineers,HttpStatus.OK);
 }
 @GetMapping("/getcurrentuser")
 @PreAuthorize("hasAnyAuthority('ADMIN','MANAGER','ENGINEER','CUSTOMER')")
            public Users getCurrentUser(Authentication authentication) {
                                                                                       userSecurityObj t = (userSecurityObj)
authentication.getPrincipal();
                                                                           Users usr =
usrService.findUser(t.getUsername());
                                    return usr;
                        }
 @PatchMapping("/assignmanager")
@PreAuthorize("hasAuthority('ADMIN')")
 public ResponseEntity<Map<String,Long>> assignManager(@RequestBody Ticket
tkt){       Map<String,Long> status = new HashMap<>();    status.put("status",
tktservice.assignManager(tkt));               return new
ResponseEntity<>(status,HttpStatus.ACCEPTED);
 }
}
```

userController.java

```
package com.simplilearn.crs.controllers;

import java.util.HashMap;
import java.util.List;
import java.util.Map;

import
org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpStatus; import
org.springframework.http.HttpStatusCode; import
org.springframework.http.ResponseEntity;
import org.springframework.security.access.prepost.PreAuthorize;
import org.springframework.security.core.Authentication; import
org.springframework.security.core.userdetails.UserDetails; import
org.springframework.web.bind.annotation.DeleteMapping; import
org.springframework.web.bind.annotation.GetMapping; import
org.springframework.web.bind.annotation.PostMapping; import
org.springframework.web.bind.annotation.RequestBody; import
org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.RestController;

import com.simplilearn.crs.entities.Customer; import
com.simplilearn.crs.entities.Engineer; import
com.simplilearn.crs.entities.Manager; import
com.simplilearn.crs.entities.Users; import
com.simplilearn.crs.repository.customerRepo;
import com.simplilearn.crs.security.userSecurityObj;
import com.simplilearn.crs.services.customerService;
import com.simplilearn.crs.services.engineerService;
import com.simplilearn.crs.services.managerService;
import com.simplilearn.crs.services.usersService;

@RestController
```

```
@RequestMapping("api/user")
@PreAuthorize("hasAuthority('ADMIN')") public
class userController {

                    @Autowired
                              usersService usrService;
                    @Autowired
                              managerService mgrService;
                    @Autowired
                              engineerService engrService;
                    @Autowired
                              customerService cusService;


                              @GetMapping("/")
                              public String hanshake() {
                                        return "Hello!";
                    }

                              @GetMapping("/all")
          public ResponseEntity<List<Users>> getAllUsers() {
          List<Users> listOfUsers = usrService.findAllUsers();
                                                                                ResponseEntity<List<Users>> res
= new ResponseEntity<List<Users>>(listOfUsers,
HttpStatus.OK);
                              return res;
                    }


                              @PostMapping("/adduser")
                                                                      public ResponseEntity<Map<String,
Integer>> addUser(@RequestBody Users user) {
                    Map<String, Integer> status = new HashMap<>();
          status.put("status", usrService.addUser(user));
                                                                      return new ResponseEntity<Map<String,
Integer>>(status, HttpStatus.OK);
                    }


                                        @DeleteMapping("/deleteuser")
 public ResponseEntity<Map<String, Integer>> deleteUser(@RequestParam("userid") long userid )
{
                    Map<String, Integer> status = new HashMap<>();
          status.put("status", usrService.deleteUser(userid));
                                                                      return new ResponseEntity<Map<String,
Integer>>(status, HttpStatus.OK);
                    }


                                        @PostMapping("/addmanager")
```

```
                                                        public ResponseEntity<Map<String,
Integer>> addManager(@RequestBody Manager mgr)
{
                Map<String, Integer> status = new HashMap<>();
        status.put("status", mgrService.addManager(mgr));
                                                        return new ResponseEntity<Map<String,
Integer>>(status, HttpStatus.OK);
                }


                                @PostMapping("/addengineer")
```

```
                                                        public ResponseEntity<Map<String,
Integer>> addEngineer(@RequestBody Engineer eng)
{
                Map<String, Integer> status = new HashMap<>();
        status.put("status", engrService.addEngineer(eng));
                                                        return new ResponseEntity<Map<String,
Integer>>(status, HttpStatus.OK);
                }


                                @PostMapping("/addcustomer")
        public ResponseEntity<Map<String, Integer>> addCustomer(@RequestBody Customer
cus) {
                Map<String, Integer> status = new HashMap<>();
        status.put("status", cusService.addCustomer(cus));
                                                        return new ResponseEntity<Map<String,
Integer>>(status, HttpStatus.OK);
                }

                                @GetMapping("/allmanagers")
        public ResponseEntity<List<Manager>> getAllManagers() {
        List<Manager> mgrs = mgrService.getAllManagers();
                                                        return new
ResponseEntity<List<Manager>>(mgrs, HttpStatus.OK);
                }

                                @GetMapping("/allengineers")
        public ResponseEntity<List<Engineer>> getAllEngineer(){
        List<Engineer> egrs = engrService.findAllEngineers();
                                                        return new
ResponseEntity<List<Engineer>>(egrs,HttpStatus.OK);
                }

                                @GetMapping("/allcustomers")
        public ResponseEntity<List<Customer>> getAllCustomers(){
        List<Customer> customers = cusService.getAllCustomers();
                                                        return new
ResponseEntity<List<Customer>>(customers,HttpStatus.OK);
                }


}
```

Complaint.java

```
package com.simplilearn.crs.entities;

import java.time.LocalDateTime;
import java.util.List;

import org.hibernate.annotations.CreationTimestamp;
import org.hibernate.annotations.UpdateTimestamp;

import jakarta.persistence.Column; import
jakarta.persistence.Entity; import
jakarta.persistence.GeneratedValue;
import jakarta.persistence.GenerationType;
import jakarta.persistence.Id; import
jakarta.persistence.ManyToOne; import
jakarta.persistence.OneToMany; import
lombok.Data;

@Entity
```

```
@Data
public class Complaint {
                @Id
        @GeneratedValue(strategy =
GenerationType.IDENTITY)        private long complaintId;
        private String name;    private String address;
                @ManyToOne
        private pin pin;
        private long
contactNo;
                @ManyToOne
        private Customer customer;
        private String subject;
        private String details;
        private String feedback;
                                @OneToMany(mappedBy = "complaint")
                        private List<Ticket> ticket;
        @Column(updatable = false)
        @CreationTimestamp
                                private LocalDateTime createdAt;
                        @UpdateTimestamp
                                private LocalDateTime lastUpdated;

        public void addTicket(Ticket tkt) {
        this.ticket.add(tkt);
                }
}
```

Customer.java

```
package com.simplilearn.crs.entities;

import jakarta.persistence.Entity; import
jakarta.persistence.GeneratedValue;
import jakarta.persistence.GenerationType;
import jakarta.persistence.Id;
import jakarta.persistence.OneToOne;

@Entity
public class Customer extends Users {

                              private String address;
                    @OneToOne
          private pin pin;
          private long
contactNo;


}
```

Engineer.java

```
package com.simplilearn.crs.entities;

import java.io.Serializable;
import java.util.List;

import jakarta.persistence.Column; import
jakarta.persistence.Entity; import
jakarta.persistence.GeneratedValue;
```

```
import jakarta.persistence.GenerationType;
import jakarta.persistence.Id;
import jakarta.persistence.ManyToMany;
import lombok.Data;

@Entity @Data
public class Engineer extends Users {



/**
            *
            */
                                                                    private static final long serialVersionUID
=2899903505215516240L;
@ManyToMany
private List<pin> locations;
private Long contactNo;


public void addPin(pin pin) {
                                  this.locations.add(pin);
}


@Override
public String toString() {
                                                                                return "Engineer [locations=" + locations
+ ", contactNo=" + contactNo  + super.toString()
                                                                    + ", getClass()=" + getClass() + "]";
}

}
```

Manager.java

```
package com.simplilearn.crs.entities;

import jakarta.persistence.Entity; import
jakarta.persistence.GeneratedValue;
import jakarta.persistence.GenerationType;
import jakarta.persistence.OneToOne;
import lombok.Data;
import lombok.EqualsAndHashCode;

@Entity
@Data

public class Manager extends Users {

                @OneToOne
        private pin pin;
        private long
contactNo;


}
```

Pin.java

```
package com.simplilearn.crs.entities;

import java.io.Serializable;

import jakarta.persistence.Entity;
import jakarta.persistence.Id;
import lombok.Data;

@Entity @Data
public class pin implements Serializable{

                @Id

 private   long   pin;     public
pin(long pin) {   this.pin=pin;
                }
                public pin() {
                                        // TODO Auto-
generated constructor stub
                }
                        public pin(Long pin) {
                        this.pin=pin;
                }

}
```

Ticket.java

```
package com.simplilearn.crs.entities;

import java.time.LocalDateTime;

import org.hibernate.annotations.CreationTimestamp;
import org.hibernate.annotations.UpdateTimestamp;

import com.fasterxml.jackson.annotation.JsonIgnore;

import jakarta.persistence.Column; import
jakarta.persistence.Entity; import
jakarta.persistence.GeneratedValue;
import jakarta.persistence.GenerationType;
import jakarta.persistence.Id; import
jakarta.persistence.ManyToOne; import
jakarta.persistence.OneToMany; import
jakarta.persistence.OneToOne; import
lombok.Data;

@Entity
@Data
public class Ticket {
                    @Id
          @GeneratedValue(strategy =
GenerationType.IDENTITY)        private long ticketId;     private
String status;
                    @JsonIgnore
```

```
                    @ManyToOne
                              private Complaint complaint;
                    @ManyToOne
                              private Manager manager;
                    @ManyToOne
          private Engineer engineer;
          private String comment;
          @Column(updatable = false)
          @CreationTimestamp
                                        private LocalDateTime createdAt;
                              @UpdateTimestamp
                                        private LocalDateTime updatedAt;
}
```

Users.java

```
package com.simplilearn.crs.entities;

import java.io.Serializable;

import jakarta.persistence.Column; import
jakarta.persistence.Entity; import
jakarta.persistence.GeneratedValue;
import jakarta.persistence.GenerationType;
import jakarta.persistence.Id; import
jakarta.persistence.Inheritance; import
jakarta.persistence.InheritanceType; import
lombok.Data;

@Entity
@Data
@Inheritance(strategy = InheritanceType.JOINED) public
class Users implements Serializable{
                    @Id
          @GeneratedValue(strategy =
GenerationType.SEQUENCE)     private long userid;       private
String firstName;          private String lastName;
          @Column(unique = true)          private String username;
          private String Password;          private String email;
          private String roles;
                                        private boolean accountStatus;

}
```

complaintRepo.java

```
package com.simplilearn.crs.repository;

import java.util.List;

import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;

import com.simplilearn.crs.entities.Complaint;
import com.simplilearn.crs.entities.Customer;
```

```
@Repository
public interface complaintRepo extends JpaRepository<Complaint, Long> {

                                                  public List<Complaint> findByCustomer(Customer
customer);
}
```

customerRepo.java

```
package com.simplilearn.crs.repository;

import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;

import com.simplilearn.crs.entities.Customer;

@Repository
public interface customerRepo extends JpaRepository<Customer, Long> {

}
```

engineerRepo.java

```
package com.simplilearn.crs.repository;

import java.util.List;

import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;

import com.simplilearn.crs.entities.Engineer;
import com.simplilearn.crs.entities.pin;

@Repository
public interface engineerRepo extends JpaRepository<Engineer, Long> {

                                            public List<Engineer> findByLocations(pin locations);
}
```

managerRepo.java

```
package com.simplilearn.crs.repository;

import java.util.List;

import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;

import com.simplilearn.crs.entities.Manager;
import com.simplilearn.crs.entities.pin;

@Repository
public interface managerRepo extends JpaRepository<Manager, Long> {

                                   public Manager findByPin(pin pin);

}
```

pinRepo.java
```
package com.simplilearn.crs.repository;

import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;

import com.simplilearn.crs.entities.pin;

@Repository
public interface pinRepo extends JpaRepository<pin, Long> {

}
```

ticketRepo.java
```
package com.simplilearn.crs.repository;

import java.util.List;

import
org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.data.jpa.repository.Query; import
org.springframework.stereotype.Repository;

import com.simplilearn.crs.entities.Engineer;
import com.simplilearn.crs.entities.Manager;
import com.simplilearn.crs.entities.Ticket;

@Repository
public interface ticketRepo extends JpaRepository<Ticket, Long> {

                                        public List<Ticket> findByEngineer(Engineer engineer);
        @Query("Select t from com.simplilearn.crs.entities.Ticket t where t.engineer=:engineer
and not t.status ='CLOSED'")
        public List<Ticket> findByEngineerOpen(Engineer engineer);
        public List<Ticket> findByManager(Manager manager);
        @Query("Select t from com.simplilearn.crs.entities.Ticket t where t.manager=:manager
and not t.status ='CLOSED'")
                                        public List<Ticket> findByManagerOpen(Manager
manager);
}
```

usersRepo.java
```
package com.simplilearn.crs.repository;

import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;

import com.simplilearn.crs.entities.Users;

@Repository
public interface usersRepo extends JpaRepository<Users, Long> {
        public Users findByUsername(String Username);
}
```

CustomUserDetailsService.java

```
package com.simplilearn.crs.security;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.security.core.userdetails.UserDetails;
import org.springframework.security.core.userdetails.UserDetailsService;
```

```
import org.springframework.security.core.userdetails.UsernameNotFoundException; import
org.springframework.stereotype.Component;

import com.simplilearn.crs.entities.Users; import
com.simplilearn.crs.repository.usersRepo;
@Component
public class CustomUserDetailsService implements UserDetailsService{

                    @Autowired
                              usersRepo repo;

                    @Override
                                                            public UserDetails loadUserByUsername(String
username) throws
UsernameNotFoundException {
                                                            System.out.println("Finding by username -----
>"+username);
                    if(username!=null && username!="") {
          Users usr = repo.findByUsername(username);

                              if(usr!=null) {
                    userSecurityObj securityUser = new userSecurityObj(usr);
          System.out.println("Created user----------->"+securityUser);
          return securityUser;
                              }else {
                                                            System.out.println("User not Found!!");
                                                                      throw new
UsernameNotFoundException("User not present!");
                              }
                              }else {
                                                            System.out.println("Username not Found!!");
                                                                                throw new
UsernameNotFoundException("Username not present!");
                              }
                    }

}
```

SecurityConfig.java

```
package com.simplilearn.crs.security;
import static org.springframework.security.config.Customizer.withDefaults;

import java.io.IOException;
import java.util.Arrays; import
java.util.Collections; import
java.util.List;


import org.springframework.context.annotation.Bean; import
org.springframework.context.annotation.Configuration; import
org.springframework.http.HttpMethod;
import org.springframework.security.authentication.AuthenticationManager; import
org.springframework.security.authentication.AuthenticationProvider; import
org.springframework.security.authentication.dao.DaoAuthenticationProvider; import
org.springframework.security.config.annotation.authentication.configuration.AuthenticationConfi
guration; import
org.springframework.security.config.annotation.method.configuration.EnableMethodSecurity;
import org.springframework.security.config.annotation.web.builders.HttpSecurity;
```

```
import
org.springframework.security.config.annotation.web.configuration.EnableWebSecurity;
import org.springframework.security.config.http.SessionCreationPolicy; import
org.springframework.security.core.Authentication; import
org.springframework.security.core.AuthenticationException; import
org.springframework.security.core.userdetails.UserDetailsService; import
org.springframework.security.crypto.bcrypt.BCryptPasswordEncoder; import
org.springframework.security.crypto.password.PasswordEncoder; import
org.springframework.security.web.SecurityFilterChain; import
org.springframework.security.web.authentication.AuthenticationFailureHandler; import
org.springframework.security.web.authentication.AuthenticationSuccessHandler; import
org.springframework.web.cors.CorsConfiguration; import
org.springframework.web.cors.CorsConfigurationSource;
import org.springframework.web.cors.UrlBasedCorsConfigurationSource;

import jakarta.servlet.ServletException; import
jakarta.servlet.http.Cookie; import
jakarta.servlet.http.HttpServletRequest; import
jakarta.servlet.http.HttpServletResponse;



@Configuration
@EnableWebSecurity
@EnableMethodSecurity(prePostEnabled = true) public
class SecurityConfig  {

                    @Bean
                                                            public SecurityFilterChain filterchain(HttpSecurity
http) throws Exception {
                              http
                                        .csrf((csrf)->csrf.disable())
                              .cors(cors -> {
                                                    cors.configurationSource(request -> {
                                                                         CorsConfiguration corsConfiguration =
new CorsConfiguration();

corsConfiguration.setAllowedOrigins(Collections.singletonList("http://localhost:4200"));
              corsConfiguration.setAllowedMethods(Arrays.asList("GET", "POST",
"PUT","PATCH", "DELETE"));
                        corsConfiguration.setAllowedHeaders(Collections.singletonList("*"));
              corsConfiguration.setAllowCredentials(true);
                                            return corsConfiguration;
                                });
                               })
                                                             .authorizeHttpRequests((authorize) -> authorize
                                                                  .anyRequest().authenticated()
                                          )
     .authenticationProvider(authProvider())
     .sessionManagement((sessmgmt)->
                              sessmgmt
```

```
.sessionCreationPolicy(SessionCreationPolicy.ALWAYS)
                                                  .maximumSessions(1)
                              )

     .logout((logout) ->
                                                            logout.deleteCookies("JSESSIONID")
                                                            .invalidateHttpSession(true)
```

```
                                                .logoutUrl("/logout")
                                        )
    .formLogin((login)->{
        login.loginProcessingUrl("/auth")
        .usernameParameter("username")
                                .passwordParameter("password")
                                .successHandler(successHandler())
                               .failureHandler(failureHandler());
    });
    return http.build();
                }
        private AuthenticationSuccessHandler successHandler() {
           return new AuthenticationSuccessHandler() {


                                @Override
                                                public void
onAuthenticationSuccess(HttpServletRequest request,
HttpServletResponse response,
                                                        Authentication authentication)
throws IOException,
ServletException {
                                                        userSecurityObj usr =
(userSecurityObj) authentication.getPrincipal();

                                        // Serialize the roles as a string
                                                String roles =
authentication.getAuthorities().toString();


        response.getWriter().append("{\"authentication\":\""+usr.getUsername()+ "\","
                                                +"\"roles\":\""+roles+"\""
                                        + "}");

response.setStatus(HttpServletResponse.SC_OK);

                        }
                    };
                }

        private AuthenticationFailureHandler failureHandler() {
return new AuthenticationFailureHandler() {

                                @Override
                                                        public void
onAuthenticationFailure(HttpServletRequest request,
HttpServletResponse response,
                                                                AuthenticationException
exception) throws IOException,
ServletException {
```

```
                                        response.getWriter().append("Authentication failure");
response.setStatus(401);
                                        }
                                        };

                    }

                    @Bean
                                        public UserDetailsService userDetailsService() {
                                                  return new CustomUserDetailsService();
                    }
                    @Bean
                                        public AuthenticationProvider authProvider() {
                    DaoAuthenticationProvider provider = new DaoAuthenticationProvider();
          provider.setUserDetailsService(userDetailsService());
                                                  provider.setPasswordEncoder(encoder());
                                        return provider;
                    }

                    @Bean
          public PasswordEncoder encoder () {
          return new BCryptPasswordEncoder();
                    }

                    @Bean
 public    AuthenticationManager    authManager(AuthenticationConfiguration    config)    throws
Exception {
                                                  return config.getAuthenticationManager();
                    }
}
```

userSecurityObj.java

```
package com.simplilearn.crs.security;

import java.util.Arrays;
import java.util.Collection;
import java.util.List;
import java.util.stream.Collectors;

import org.springframework.security.core.GrantedAuthority;
import org.springframework.security.core.authority.SimpleGrantedAuthority;
import org.springframework.security.core.userdetails.UserDetails;

import com.simplilearn.crs.entities.Users;

public class userSecurityObj implements
UserDetails{      private Users usr;
          userSecurityObj(Users usr){
                              this.usr =usr;
                    }
                    @Override
                                                            public Collection<? extends GrantedAuthority>
getAuthorities() {
                                                  String[] role = usr.getRoles().split(",");
                                                  List<GrantedAuthority> authorities =
Arrays.stream(role).map(SimpleGrantedAuthority::new).collect(Collectors.toList());
                                                  System.out.println(authorities);
                                        return authorities;
                    }

                    @Override
                              public String getPassword() {
                                        return usr.getPassword();
                    }

                    @Override
          public String getUsername() {
          return usr.getUsername();
```

```
                    }

                    @Override
                                        public boolean isAccountNonExpired() {
                                        return usr.isAccountStatus();
                    }

                    @Override
                                        public boolean isAccountNonLocked() {
                                        return usr.isAccountStatus();
                    }

                    @Override
                                        public boolean isCredentialsNonExpired() {
                                        return usr.isAccountStatus();
                    }

                    @Override
                              public boolean isEnabled() {
                                        return usr.isAccountStatus();
                    }


}
```

complaintService.java

```
package com.simplilearn.crs.services;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;

import com.simplilearn.crs.entities.Complaint; import
com.simplilearn.crs.entities.Customer; import
com.simplilearn.crs.entities.Ticket; import
com.simplilearn.crs.repository.complaintRepo;
import com.simplilearn.crs.repository.customerRepo;

@Service
public class complaintService {

                @Autowired
                        complaintRepo repo;

                @Autowired
                        customerRepo crepo;

        public List<Complaint> getAllComplaints(){
        return repo.findAll();
                }

        public Complaint createComplaint(Complaint cmp) {
                try {
                                        return repo.save(cmp);
                                  }catch(Exception e) {
                                  return null;
                        }
                }

                                        public int addTicketToComplaint(Complaint cmp, Ticket
tkt) {
                        try {
                        cmp.addTicket(tkt);
                        repo.save(cmp);
                        return 1;
                                  }catch(Exception e) {
                                  return 0;
                        }
                }
                                                        public List<Complaint>
getAllCustomerComplaints(Long CustomerId){
                                                        Customer cus = crepo.findById(CustomerId).get();
                                        return repo.findByCustomer(cus);
                }
                                        public Long addFeedback(Long cId, String feedback) {
                        try {
                                                        System.out.println("complaintid-->"+cId);
                                                                  System.out.println("Feedback---------
>"+feedback);
                                        Complaint cmp =repo.findById(cId).get();
                cmp.setFeedback(feedback);
        repo.save(cmp);
                        return 1L;
                                  }catch(Exception e) {
                                        System.out.println(e);
                                  return 0L;
                        }
                }
}
```

customerService.java

```
package com.simplilearn.crs.services;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.security.crypto.password.PasswordEncoder;
import org.springframework.stereotype.Service;

import com.simplilearn.crs.entities.Customer; import
com.simplilearn.crs.repository.customerRepo;

@Service
public class customerService {
                @Autowired
                        customerRepo repo;
                @Autowired
                        PasswordEncoder encoder;
        public List<Customer> getAllCustomers() {
        return repo.findAll();
                }

                                public int addCustomer(Customer cus) {
```

```
                        try {

cus.setPassword(encoder.encode(cus.getPassword()));;
                        repo.save(cus);
                        return 1;
                                } catch (Exception e) {
                                return 0;
                        }
                }

                                public int deleteCustomer(Customer cus) {
                        try {
                        repo.delete(cus);
                        return 1;
                                }catch(Exception e) {
                                return 0;
                        }
                }
}
```

engineerService.java

```
package com.simplilearn.crs.services;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.security.crypto.password.PasswordEncoder;
import org.springframework.stereotype.Service;

import com.simplilearn.crs.entities.Engineer; import
com.simplilearn.crs.entities.pin; import
com.simplilearn.crs.repository.engineerRepo;
import com.simplilearn.crs.repository.pinRepo;

@Service
public class engineerService {
		@Autowired
			engineerRepo repo;

		@Autowired
			pinRepo prepo;

		@Autowired
			PasswordEncoder encoder;

	public List<Engineer> findAllEngineers() {
		return repo.findAll();
		}

				public int addEngineer(Engineer eng) {
			try {
					System.out.println(eng);

eng.setPassword(encoder.encode(eng.getPassword()));
			repo.save(eng);
			return 1;
				}catch(Exception e) {
					System.out.println(e);
```

```
                                        return 0;
                              }
                    }

                                        public int deleteEngineer(Engineer eng) {
                              try {
                              repo.delete(eng);
                    return 1;
                                        }catch(Exception e) {
                                        return 0;
                              }
                    }

                                        public int allocatePin(Long pin, Engineer eng) {
                              try {
                                                  pin p = prepo.findById(pin).get();
                    eng.addPin(p);
          repo.save(eng);
          return 1;
                                        }catch(Exception e) {
                                        return 0;
                              }
                    }

                                                  public List<Engineer> getEngineerForPin(pin pin){
                              try {
                                                            return repo.findByLocations(pin);
                                        }catch(Exception e) {
                                                  System.out.println(2);
                                        return null;
                              }
                    }
}
```

managerService.java

```
package com.simplilearn.crs.services;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.security.crypto.password.PasswordEncoder;
import org.springframework.stereotype.Service;

import com.simplilearn.crs.entities.Manager;
import com.simplilearn.crs.entities.pin;
import com.simplilearn.crs.repository.managerRepo;

@Service
public class managerService {

                @Autowired
                        managerRepo repo;

                @Autowired
        PasswordEncoder encoder;        public
List<Manager>getAllManagers() {
```

```
                                        return repo.findAll();
                    }

                                        public int addManager(Manager mgr) {
                              try {

mgr.setPassword(encoder.encode(mgr.getPassword()));;
                              repo.save(mgr);
                              return 1;
                                        }catch(Exception e) {
                                                  System.out.println(e);
                                        return 0;
                              }
                    }

                                        public int deleteManager(Manager mgr) {
                              try {
                              repo.delete(mgr);
                    return 1;
                                        }catch(Exception e) {
                                        return 0;
                              }
                    }

                                        public int setPin(Long managerId, pin pin) {
                              try {
                    Manager mgr =
repo.findById(managerId).get();
          mgr.setPin(pin);                        return 1;
                                        }catch(Exception e) {
                                        return 0;
                              }
                    }
                                        public Manager getManagerForPin(pin pin) {
                              try {
                              return repo.findByPin(pin);
          }catch(Exception e) {
                                                  System.out.println(e);
                                        return null;
                              }
                    }
}
```

pinService.java

```
package com.simplilearn.crs.services;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;

import com.simplilearn.crs.entities.pin;
import com.simplilearn.crs.repository.pinRepo;

@Service
public class pinService {
```

```
		@Autowired
			private pinRepo repo;

			public int addPin(pin pin) {
			try {
			repo.save(pin);
			return 1;
				} catch (Exception e) {
				return 0;
			}
		}

			public List<pin> getAllPin() {
				return repo.findAll();
		}

			public int deletePin(pin pin) {
			try {
			repo.delete(pin);
			return 1;
				} catch (Exception e) {
				return 0;
			}
		}
}
```

ticketService.java

```
package com.simplilearn.crs.services;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;

import com.simplilearn.crs.entities.Complaint;
import com.simplilearn.crs.entities.Engineer; import
com.simplilearn.crs.entities.Manager; import
com.simplilearn.crs.entities.Ticket; import
com.simplilearn.crs.repository.engineerRepo;
import
com.simplilearn.crs.repository.managerRepo;
import com.simplilearn.crs.repository.ticketRepo;

@Service
public class ticketService {
@Autowired
ticketRepo repo;

@Autowired
engineerRepo erepo;

@Autowired
managerRepo mrepo;

public List<Ticket> getAllTickets(){
        return repo.findAll();
}
```

```
public Ticket createTicket(Ticket tkt) {
        return repo.save(tkt);
}

public int setComplaint(Ticket tkt,Complaint cmp) {
                try {
                                tkt.setComplaint(cmp);
                repo.save(tkt);
        return 1;
                        }catch(Exception e) {
                        return 0;
                }
}
public Ticket getTicket(Long Id) {
                        return repo.findById(Id).get();
}
public Long updateStatus(Long id, String Status) {
                try {
                                Ticket tkt = repo.findById(id).get();
        tkt.setStatus(Status);
        repo.save(tkt);
                return 1L;
                        }catch(Exception e) {
                        return 0L;
                }

}
public Long updateComment(Long id, String Comment) {
                try {
        Ticket tkt =
repo.findById(id).get();
        tkt.setComment(Comment);
        repo.save(tkt);  return 1L;
                        }catch(Exception e) {
                        return 0L;
                }

}
public Long assignEngineer(Ticket tkt) {
                try {
                                        Ticket tk = repo.findById(tkt.getTicketId()).get();
                Engineer eng = erepo.findById(tkt.getEngineer().getUserid()).get();
        tk.setEngineer(eng);

        tk.setStatus("ASSIGNED");
        repo.save(tk);          return 1L;
                        }catch(Exception e) {
                System.out.println(e);
        return 0L;
                }
```

```
}
public List<Ticket> getEngTickets(Long engineerId){
        Engineer engineer = erepo.findById(engineerId).get();
        return repo.findByEngineer(engineer);
```

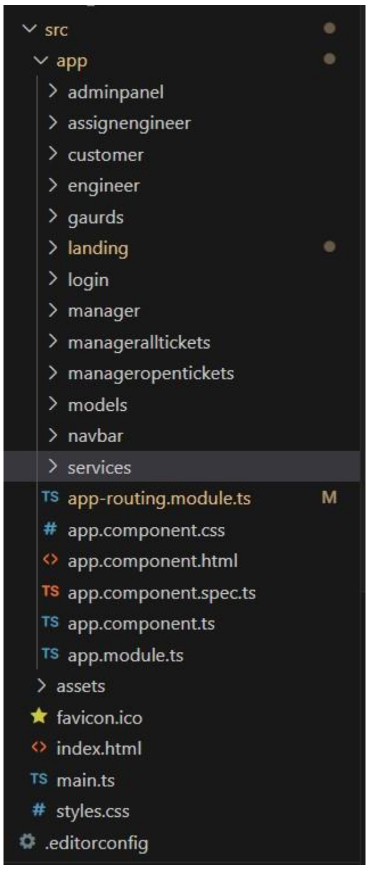
```
}
public List<Ticket> getEngOpenTickets(Long engineerId){
        Engineer engineer = erepo.findById(engineerId).get();
        return repo.findByEngineerOpen(engineer);
}
public List<Ticket> getManagerTickets(Long managerId){
        Manager manager = mrepo.findById(managerId).get();
        return repo.findByManager(manager);
}
public List<Ticket> getManagerOpenTickets(Long managerId){
        Manager manager = mrepo.findById(managerId).get();
        return repo.findByManagerOpen(manager);
}
public Long assignManager(Ticket tkt) {
                try {
                Manager m = mrepo.findById(tkt.getManager().getUserid()).get();
                Ticket t = repo.findById(tkt.getTicketId()).get();
                t.setManager(m);
                repo.save(t);
        return 1L;
                        } catch (Exception e) {
                                e.printStackTrace();
                        return 0L;
                }
}

}
```

usersService.java

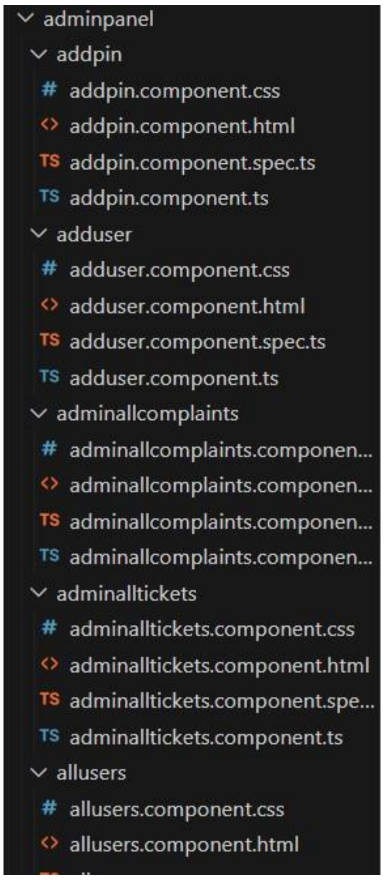
```
package com.simplilearn.crs.services;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;

import com.simplilearn.crs.entities.Users; import
com.simplilearn.crs.repository.usersRepo;

@Service
public class usersService {

                @Autowired
                        private usersRepo repo;

        public int addUser(Users usr) {
        repo.save(usr);
                        return 1;
                }

                                public int deleteUser(long usrid) {
                Users usr =
repo.findById(usrid).get();
        repo.delete(usr);               return 1;
                }
```

```
        public int changeStatus(String username, boolean status) {
        Users usr = repo.findByUsername(username);
        usr.setAccountStatus(status);
                return 1;

        }
        public Users findUser(String username) {
                return repo.findByUsername(username);
        }
        public List<Users> findAllUsers(){
                return repo.findAll();
        }
}
```

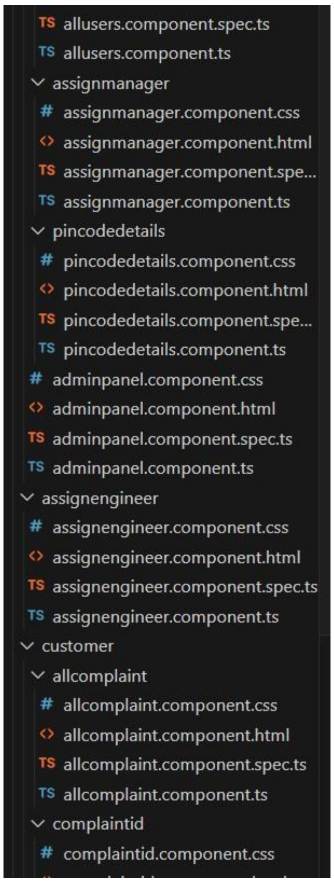
Frontend – Angular – UI



```
v src
  v app
    > adminpanel
    > assignengineer
    > customer
    > engineer
    > gaurds
    > landing
    > login
    > manager
    > manageralltickets
    > manageropentickets
    > models
    > navbar
    > services
    TS app-routing.module.ts        M
    # app.component.css
    <> app.component.html
    TS app.component.spec.ts
    TS app.component.ts
    TS app.module.ts
  > assets
  favicon.ico
  <> index.html
  TS main.ts
  # styles.css
.editorconfig
```

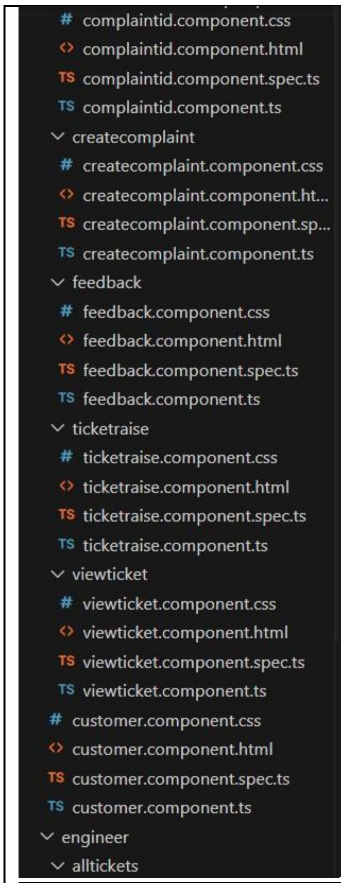


```
v adminpanel
  v addpin
    # addpin.component.css
    <> addpin.component.html
    TS addpin.component.spec.ts
    TS addpin.component.ts
  v adduser
    # adduser.component.css
    <> adduser.component.html
    TS adduser.component.spec.ts
    TS adduser.component.ts
  v adminallcomplaints
    # adminallcomplaints.componen...
    <> adminallcomplaints.componen...
    TS adminallcomplaints.componen...
    TS adminallcomplaints.componen...
  v adminalltickets
    # adminalltickets.component.css
    <> adminalltickets.component.html
    TS adminalltickets.component.spe...
    TS adminalltickets.component.ts
  v allusers
    # allusers.component.css
    <> allusers.component.html
```

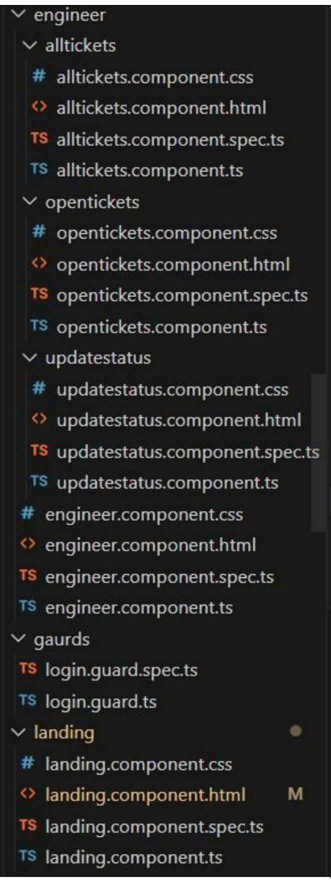


```
    TS allusers.component.spec.ts
    TS allusers.component.ts
  v assignmanager
    # assignmanager.component.css
    <> assignmanager.component.html
    TS assignmanager.component.spe...
    TS assignmanager.component.ts
  v pincodedetails
    # pincodedetails.component.css
    <> pincodedetails.component.html
    TS pincodedetails.component.spe...
    TS pincodedetails.component.ts
  # adminpanel.component.css
  <> adminpanel.component.html
  TS adminpanel.component.spec.ts
  TS adminpanel.component.ts
v assignengineer
  # assignengineer.component.css
  <> assignengineer.component.html
  TS assignengineer.component.spec.ts
  TS assignengineer.component.ts
v customer
  v allcomplaint
    # allcomplaint.component.css
    <> allcomplaint.component.html
    TS allcomplaint.component.spec.ts
    TS allcomplaint.component.ts
  v complaintid
    # complaintid.component.css
```

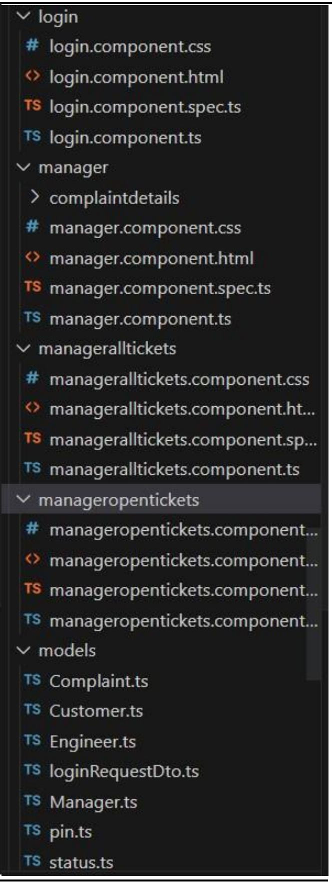
Project Structure:



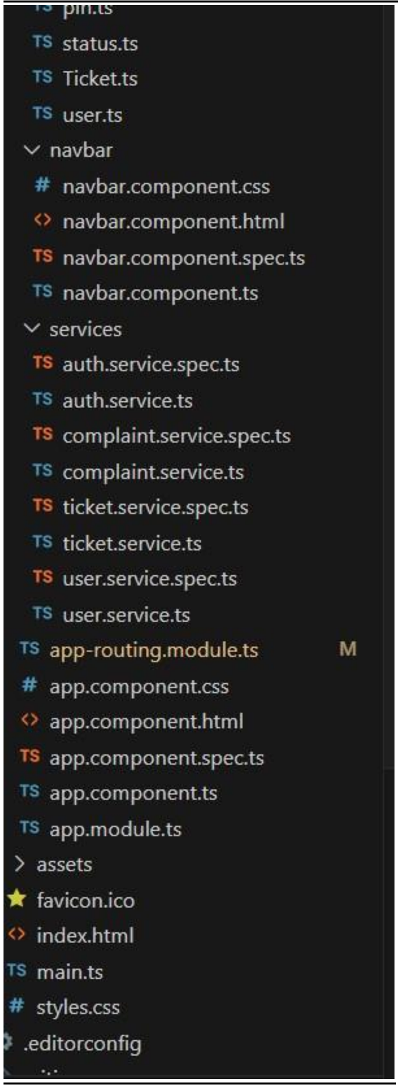
```
    # complaintid.component.css
    <> complaintid.component.html
    TS complaintid.component.spec.ts
    TS complaintid.component.ts
  ∨ createcomplaint
    # createcomplaint.component.css
    <> createcomplaint.component.ht...
    TS createcomplaint.component.sp...
    TS createcomplaint.component.ts
  ∨ feedback
    # feedback.component.css
    <> feedback.component.html
    TS feedback.component.spec.ts
    TS feedback.component.ts
  ∨ ticketraise
    # ticketraise.component.css
    <> ticketraise.component.html
    TS ticketraise.component.spec.ts
    TS ticketraise.component.ts
  ∨ viewticket
    # viewticket.component.css
    <> viewticket.component.html
    TS viewticket.component.spec.ts
    TS viewticket.component.ts
  # customer.component.css
  <> customer.component.html
  TS customer.component.spec.ts
  TS customer.component.ts
∨ engineer
  ∨ alltickets
```



```
∨ engineer
  ∨ alltickets
    # alltickets.component.css
    <> alltickets.component.html
    TS alltickets.component.spec.ts
    TS alltickets.component.ts
  ∨ opentickets
    # opentickets.component.css
    <> opentickets.component.html
    TS opentickets.component.spec.ts
    TS opentickets.component.ts
  ∨ updatestatus
    # updatestatus.component.css
    <> updatestatus.component.html
    TS updatestatus.component.spec.ts
    TS updatestatus.component.ts
  # engineer.component.css
  <> engineer.component.html
  TS engineer.component.spec.ts
  TS engineer.component.ts
∨ gaurds
  TS login.guard.spec.ts
  TS login.guard.ts
∨ landing                                   ●
  # landing.component.css
  <> landing.component.html                 M
  TS landing.component.spec.ts
  TS landing.component.ts
```



```
∨ login
  # login.component.css
  <> login.component.html
  TS login.component.spec.ts
  TS login.component.ts
∨ manager
  > complaintdetails
  # manager.component.css
  <> manager.component.html
  TS manager.component.spec.ts
  TS manager.component.ts
∨ manageralltickets
  # manageralltickets.component.css
  <> manageralltickets.component.ht...
  TS manageralltickets.component.sp...
  TS manageralltickets.component.ts
∨ manageropentickets
  # manageropentickets.component...
  <> manageropentickets.component...
  TS manageropentickets.component...
  TS manageropentickets.component...
∨ models
  TS Complaint.ts
  TS Customer.ts
  TS Engineer.ts
  TS loginRequestDto.ts
  TS Manager.ts
  TS pin.ts
  TS status.ts
```



```
    TS pin.ts
    TS status.ts
    TS Ticket.ts
    TS user.ts
  ∨ navbar
    # navbar.component.css
    <> navbar.component.html
    TS navbar.component.spec.ts
    TS navbar.component.ts
  ∨ services
    TS auth.service.spec.ts
    TS auth.service.ts
    TS complaint.service.spec.ts
    TS complaint.service.ts
    TS ticket.service.spec.ts
    TS ticket.service.ts
    TS user.service.spec.ts
    TS user.service.ts
  TS app-routing.module.ts                M
  # app.component.css
  <> app.component.html
  TS app.component.spec.ts
  TS app.component.ts
  TS app.module.ts
> assets
★ favicon.ico
<> index.html
TS main.ts
# styles.css
.editorconfig
```

Addpin.component.html

```
<div class="card px-3 py-3 mx-3 my-3" >
   <div class="row">
   <div class="col" style="float: left;display: inline;"><h1>Add Pincode</h1></div>
   <div class="col"><button class="btn btn-warning" style="float: right; display: inline;"
(click)="closedialog()">X</button></div>
   </div>
   <label for="pin">Enter the pincode to add</label>
   <input type="number" maxlength="6" id="pin" name="pin" class="form-control"
[(ngModel)]="pin.pin">
   <button class="btn btn-primary my-2" (click)="addpin()">Add pincode</button>
</div>
```

Addpin.component.ts

```
import { Component } from '@angular/core';
import { MatDialogRef } from '@angular/material/dialog';
import { pin } from 'src/app/models/pin';
import { ComplaintService } from 'src/app/services/complaint.service';

@Component({
  selector: 'app-addpin',   templateUrl:
'./addpin.component.html',   styleUrls:
['./addpin.component.css']
})
export class AddpinComponent {
pin:pin={
   pin:0
  };
  constructor(
   private ref:MatDialogRef<AddpinComponent>,
private compservice:ComplaintService
  ){}
   closedialog(){
     this.ref.close();
   }
  addpin(){
   this.compservice.addPin(this.pin).subscribe(x=>{
if(x.status==1){
      alert("Pincode added successfully");
this.ref.close();
     }
   })
  }
}
```

Adduser.component.html

```
<h1 style="display: inline;" mat-dialog-title>Add user</h1>
<div mat-dialog-actions style="display:inline;margin-left: 80%;">
<button class="btn btn-danger mx-4 my-4" style="float:right;"
(click)="closeDialog()">X</button>
</div>
<div mat-dialog-content>
   <label id="example-radio-group-label">Select the User category:</label>
   <mat-radio-group aria-labelledby="example-radio-group-label" class="example-radio-group "
[(ngModel)]="usertype">
```

```
      <mat-radio-button class="example-radio-button" *ngFor="let type of usertypes"
[value]="type"
         style="display:inline;">
         {{type}}
      </mat-radio-button>
   </mat-radio-group>

   <div class="card my-4">
      <form class="form-group py-4 px-4" #form="ngForm">
         <div class="row">
            <div class="col">
               <label for="firstname">Enter First Name:</label>
               <input type="text" id="firstname" name="firstname" class="form-control"
[(ngModel)]="usr.firstName"
                  required>
            </div>
            <div class="col">
               <label for="lastname">Enter Last Name:</label>
               <input type="text" id="lastname" name="lastname" class="form-control"
[(ngModel)]="usr.lastName"
                  required>
            </div>
            <div class="col">
               <label for="username">Enter Username:</label>
               <input type="text" id="username" name="username" class="form-control"
[(ngModel)]="usr.username"
                  required>
            </div>
            <div class="row">
               <div class="col">
                  <label for="password">Choose Password:</label>
                  <input type="password" id="password" name="password" class="form-control"
[(ngModel)]="pass"
                     required
                     [ngStyle]="{'border-
color':form.touched?(pass==repass&&repass!=='')?'green':'red':''}">
               </div>
               <div class="col">
                  <label for="repassword">Re-enter Password:</label>
                  <input type="password" id="repassword" name="repassword" class="form-control"
[(ngModel)]="repass" required
                     [ngStyle]="{'border-
color':form.touched?(pass==repass&&repass!=='')?'green':'red':''}">
               </div>
               <div class="col">
                  <label for="email">Enter e-mail:</label>
                  <input type="email" id="e-mail" name="email" class="form-control" required
[(ngModel)]="usr.email">
               </div>
            </div>
            <div *ngIf="usertype=='CUSTOMER'">
```

```
<div class="row">
  <div class="col">
    <label for="address">Enter customer address:</label>
    <input type="text" id="address" name="address" class="form-control" required
```

```
                    [(ngModel)]="cus.address">
                </div>
              </div>
              <div class="row">
                <div class="col">
                  <label for="pin">Select customer Pin:</label>
                  <select class="form-control" name="pin" id="pin" required [(ngModel)]="cus.pin">
<option>Select Pin</option>
                    <option *ngFor="let pin of pins" value="{{pin.pin}}">{{pin.pin}}</option>
                  </select>
                </div>
                <div class="col">
                  <label for="contact">Enter customer contact No:  </label>
                  <input type="number" id="contact" name="contact" class="form-control"
[(ngModel)]="cus.contactNo" required>
                </div>
              </div>
            </div>
            <div *ngIf="usertype=='MANAGER'">

              <div class="row">
                <div class="col">
                  <label for="pin">Select Manager service area Pin:</label>
                  <select class="form-control" name="pin" id="pin" required
[(ngModel)]="mngr.pin">
                    <option>Select Pin</option>
                    <option *ngFor="let pin of pins" value="{{pin.pin}}">{{pin.pin}}</option>
                  </select>
                </div>
                <div class="col">
                  <label for="contact">Enter Manager contact No:</label>
                  <input type="number" id="contact" name="contact" class="form-control"
[(ngModel)]="mngr.contactNo" required>
                </div>
              </div>
            </div>
            <div *ngIf="usertype=='ENGINEER'">

              <div class="row">
                <div class="col">
                  <label for="pin">Add Engineer service area Pin:</label>
                  <select    class="form-control"    name="pin"    id="pin"    [(ngModel)]="temppin"
required>
                    <option>Select Pin</option>
                    <option *ngFor="let pin of pins" value="{{pin.pin}}">{{pin.pin}}</option>
                  </select><button class="btn btn-sm btn-primary" *ngIf="temppin"
(click)="addpintoengineer(temppin)">Add</button>
                  <br>
                  <ol>
                    Engineer Service Locations:
                    <li *ngFor="let pin of engr.locations">{{pin.pin}}</li>
```

```
  </ol>
</div>
<div class="col">
  <label for="contact">Enter Engineer contact No:</label>
```

```
                        <input type="number" id="contact" name="contact" class="form-control"
[(ngModel)]="engr.contactNo" required>
                    </div>
                </div>
            </div>
        </div>
    </form>
    <br><br><br>
    <button class="btn btn-primary mx-4 my-4" style="width:10%;" [disabled]="!form.valid"
(click)="adduser(usertype)">Add {{usertype}}</button>

  </div>
</div>
```

Adduser.component.ts

```
import { Component } from '@angular/core';
import { MatDialogRef } from
'@angular/material/dialog'; import { Router } from
'@angular/router'; import { Customer } from
'src/app/models/Customer'; import { Engineer } from
'src/app/models/Engineer'; import { Manager } from
'src/app/models/Manager';
import { pin } from 'src/app/models/pin';
import { user } from 'src/app/models/user';
import { ComplaintService } from 'src/app/services/complaint.service';
import { UserService } from 'src/app/services/user.service';

@Component({
  selector: 'app-adduser',   templateUrl:
'./adduser.component.html',   styleUrls:
['./adduser.component.css']
})
export class AdduserComponent {
  usertype:string;
  usertypes:string[] = ["CUSTOMER","MANAGER","ENGINEER"];
pins:pin[];
  usr:user={userid:0,firstName:"",lastName:"",username:"",password:"", roles:"", email:"",
accountStatus:true };
  engr:Engineer = new Engineer(this.usr);
mngr:Manager = new Manager(this.usr);
cus:Customer =new Customer (this.usr);
temppin:number;   pass:string="";
repass:string=""   constructor(
     private ref:MatDialogRef<AdduserComponent>,
     private compservice:ComplaintService,
     private usrservice:UserService,
private router:Router
     ){


  }
  ngOnInit(){
    this.compservice.getAllPin().subscribe(x=>this.pins=x);
this.engr.locations=[];
  }
  closeDialog(){
   this.ref.close();
  }
  addpintoengineer(p:number){
this.engr.locations.push(new pin(p));
this.temppin=0;
  }
  adduser(type:string){
if(type=="CUSTOMER"){
      let c:Customer = new Customer(this.usr);
c.address=this.cus.address;
      c.pin=this.cus.pin;
      c.contactNo=this.cus.contactNo;
if(this.pass==this.repass){
c.password=this.pass;
        c.roles="CUSTOMER";
this.usrservice.addCustomer(c).subscribe(x=>{
if(x.status==1){
            alert("Customer added Successfully!");
this.closeDialog();
            this.router.navigateByUrl("adminpanel/viewall")
          }
        });
      }else{
        alert("Password does not match!");
this.pass="";
        this.repass="";
      }
      this.reset();
    }else if(type=="MANAGER"){
     let m:Manager = new Manager(this.usr);
m.pin=this.mngr.pin;
     m.contactNo=this.mngr.contactNo;
if(this.pass==this.repass){
m.password=this.pass;
      m.roles="MANAGER";
this.usrservice.addManager(m).subscribe(x=>{
if(x.status==1){
          alert("Manager added Successfully!!");
this.closeDialog();
          this.router.navigateByUrl("adminpanel/viewall")
        }
      });
     }else{
      alert("Password does not match!")
this.pass="";
      this.repass="";
     }
     this.reset();
    }else if(type=="ENGINEER"){
      let  e:Engineer = new Engineer(this.usr);
e.locations=this.engr.locations;
```

```
     e.contactNo=this.engr.contactNo;
if(this.pass==this.repass){
e.password=this.pass;
       e.roles="ENGINEER";
       this.usrservice.addEngineer(e).subscribe(x=>{

         if(x.status==1){
           alert("Engineer added Successfully!!");
this.closeDialog();
           this.router.navigateByUrl("adminpanel/viewall")
         }
       });
     }else{
       alert("Password does not match!");
this.pass='';
       this.repass='';
     }
     this.reset();
   }
  }

  reset(){
    this.usr={userid:0,firstName:"",lastName:"",username:"",password:"", roles:"", email:"",
accountStatus:true };
    this.engr=new Engineer(this.usr);
this.engr.locations=[];     this.mngr=
new Manager(this.usr);
this.cus=new Customer (this.usr);
this.pass="";     this.repass="";
    this.temppin=0;
  }
}
```

Adminallcomplaints.component.html

```
<div class="px-3 py-3">
  <table class="table table-outlined table-striped">
    <thead class="table table-dark">
      <tr>
        <th>Complaint Id</th>
        <th>Customer Name</th>
        <th>Customer Address</th>
        <th>Pincode</th>
        <th>Customer Contact</th>
        <th>Complaint Subject</th>
        <th>Complaint Details</th>
        <th>Feedback</th>
        <th>Tickets</th>
        <th>Created At</th>
      </tr>
    </thead>
    <tbody>
      <tr *ngFor="let comp of complaints">
        <td>{{comp.complaintId}}</td>
        <td>{{comp.name}}</td>
        <td>{{comp.address}}</td>
        <td>{{comp.pin.pin}}</td>
        <td>{{comp.contactNo}}</td>
        <td>{{comp.subject}}</td>
        <td>{{comp.details}}</td>
```

```
        <td>{{comp.feedback?comp.feedback:"Not given"}}</td>
        <td>
          <ul *ngFor="let tkt of comp.ticket" class="list-group list-group-horizontal-sm">
            <li class="list-group-item">{{tkt.ticketId}}</li>
            <li class="list-group-item"><b>{{tkt.status}}</b></li>
            <li class="list-group-item"><button class="btn btn-warning btn-sm"
(click)="viewticket(tkt)"><i class="bi bi-eye-fill"></i></button></li>
          </ul>
        </td>
        <td>{{comp.createdAt | date:"dd-MMM-yy hh:mm"}}</td>
      </tr>
    </tbody>
  </table>
</div>
```

Adminallcomplaints.component.ts import {

```
Component } from '@angular/core'; import {
MatDialog } from '@angular/material/dialog';
import { ViewticketComponent } from
'src/app/customer/viewticket/viewticket.component'; import { complaint } from
'src/app/models/Complaint'; import { Ticket } from 'src/app/models/Ticket';
import { ComplaintService } from 'src/app/services/complaint.service';

@Component({
  selector: 'app-adminallcomplaints',   templateUrl:
'./adminallcomplaints.component.html',   styleUrls:
['./adminallcomplaints.component.css']
})
export class AdminallcomplaintsComponent {
  complaints:complaint[];
constructor(
    private compservice:ComplaintService,
private dialog:MatDialog
    ){}
  ngOnInit(){
    this.compservice.getAllComplaints().subscribe(x=>this.complaints=x);
   };


  viewticket(tkt:Ticket){
    this.dialog.open(ViewticketComponent,{width:'30%',data:tkt})
  }
}
```

Adminalltickets.component.html

```
<table class="table table-striped table-outlined">
    <thead class="table-dark">
        <tr>
            <th class="text-center">TicketID</th>
            <th class="text-center">Status</th>
            <th class="text-center">Date of creation</th>
            <th class="text-center" >Last Updated</th>
            <th class="text-center">Area Manager</th>
            <th class="text-center">Complaint Details</th>
            <th class="text-center">Assigned Engineer</th>
        </tr>
    </thead>
```

```
  <tbody>

      <tr *ngFor="let ticket of tickets">

          <td class="text-center">{{ticket.ticketId}}</td>
          <td [ngStyle]="{'background-color': (ticket.status=='CLOSED')?
'#00db3a':(ticket.status=='RAISED')? '#00b3ff':(ticket.status=='ASSIGNED')?'#f5c105':'#d9d1e3' }"
class="text-center" style="color: white;"> {{ticket.status}} </td>
          <td class="text-center">{{ticket.createdAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
          <td class="text-center">{{ticket.updatedAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
<td class="text-center"><button *ngIf="ticket.manager==null" class='btn btn-warning'
(click)='assignmanager(ticket)'>Assign Manager</button>{{(ticket.manager!==null)?
ticket.manager.firstName:'' + "  " }}{{ (ticket.manager!==null)? ticket.manager.lastName : ''
}}</td>
          <td class="text-center"><button class="btn btn-warning btn-sm"
(click)="complaintdetails(ticket)"><i class="bi bi-eye-fill"></i></button></td>
          <td class="text-center"><button *ngIf="ticket.engineer==null" class='btn btn-warning'
(click)='assignengineer(ticket)'>Assign
Engineer</button>{{(ticket.engineer!==null)?ticket.engineer.firstName:"" + "  " }}{{
(ticket.engineer!==null)? ticket.engineer.lastName :" " }}</td>

      </tr>

  </tbody>
</table>
```

Adminalltickets.component.ts

```
import { Component } from '@angular/core'; import {
MatDialog } from '@angular/material/dialog'; import
{ ComplaintdetailsComponent } from
'src/app/manager/complaintdetails/complaintdetails.component';
import { Ticket } from 'src/app/models/Ticket';
import { TicketService } from 'src/app/services/ticket.service';
import { AssignmanagerComponent } from '../assignmanager/assignmanager.component';
import { AssignengineerComponent } from 'src/app/assignengineer/assignengineer.component';

@Component({
  selector: 'app-adminalltickets',   templateUrl:
'./adminalltickets.component.html',   styleUrls:
['./adminalltickets.component.css']
})
export class AdminallticketsComponent
{   tickets:Ticket[];   constructor(
    private tktService:TicketService,
private dialog:MatDialog
    ){

}
  ngOnInit(){
    this.tktService.getAllTickets().subscribe(x=>{this.tickets=x;});

  }
  complaintdetails(tkt:Ticket){
    this.dialog.open(ComplaintdetailsComponent,{width:'40%',data:tkt.ticketId});
  }
  assignmanager(tkt:Ticket){
```

```
    this.dialog.open(AssignmanagerComponent,{width:'40%',data:tkt});
  }
  assignengineer(tkt:Ticket){
    this.dialog.open(AssignengineerComponent,{width:'40%',data:tkt});
  }
}
```

Allusers.component.html

```
<button class="btn btn-primary" style="margin-left: 90%;" (click)="adduser()">Add User</button>
<table class="table table-striped table-outlined">
  <thead class="table-dark">
    <tr>
      <th>UserId</th>
      <th>Full Name</th>
      <th>Username</th>
      <th>Email</th>
      <th>Roles</th>
      <th>Account Status</th>
    </tr>
  </thead>
  <tbody>
    <tr *ngFor="let user of usrs">
      <td>{{user.userid}}</td>
      <td>{{user.firstName+' '+user.lastName}}</td>
      <td>{{user.username}}</td>
      <td>{{user.email}}</td>
      <td>
        {{user.roles}}
      </td>
      <td>{{user.accountStatus}}</td>
    </tr>
  </tbody>
</table>
```

Allusers.component.ts

```
import { Component } from '@angular/core'; import {
MatDialog } from '@angular/material/dialog';
import { AdduserComponent } from '../adduser/adduser.component';
import { user } from 'src/app/models/user';
import { UserService } from 'src/app/services/user.service';

@Component({
 selector: 'app-allusers',   templateUrl:
'./allusers.component.html',   styleUrls:
['./allusers.component.css']
})
export class AllusersComponent {
usrs:user[];
 constructor(private dialog:MatDialog, private usrService:UserService){

 }
 ngOnInit(){
  this.usrService.getAllUsers().subscribe(x=>this.usrs=x);
 }
 adduser(){
  this.dialog.open(AdduserComponent,{width:'80%',height:'75%'})
 }
}
```

Assignmanager.component.html

```
<div class="card px-3 py-3 mx-3 my-3">
   <div class="row">
      <div class="col"><h1 style="float: left;">Assign Manager</h1></div>
      <div class="col"><button style="float: right;" (click)="closedialog()" class="btn
btnwarning">X</button></div>
   </div>
   <table class="table table-outlined">
      <tbody>
         <tr>
            <th>TicketID</th>
            <td>{{data.ticketId}}</td>
         </tr>
         <tr>
            <th>Pincode</th>
            <td>{{comp.pin.pin}}</td>
         </tr>
         <tr>
            <th>Select Manager</th>
            <td>
               <select class="form-control" name="manager" id="manager" #mgr>
                  <option *ngFor="let mgr of managers" value={{mgr.userid}}>{{mgr.firstName+'
'+mgr.lastName}} </option>

               </select>
               <button class="btn btn-warning" (click)="assignmanager(mgr.value)">Assign</button>
            </td>
         </tr>
      </tbody>
   </table>
</div>
```

Assignmanager.component.ts

```
import { Component ,Inject} from '@angular/core';
import { MAT_DIALOG_DATA, MatDialogRef } from
'@angular/material/dialog'; import { complaint } from
'src/app/models/Complaint'; import { Manager } from
'src/app/models/Manager'; import { Ticket } from 'src/app/models/Ticket';
import { user } from 'src/app/models/user';
import { ComplaintService } from
'src/app/services/complaint.service'; import { TicketService } from
'src/app/services/ticket.service'; import { UserService } from
'src/app/services/user.service';

@Component({
  selector: 'app-assignmanager',   templateUrl:
'./assignmanager.component.html',   styleUrls:
['./assignmanager.component.css']
})
export class AssignmanagerComponent
{ managers:Manager[]; comp:complaint;
constructor(
   @Inject(MAT_DIALOG_DATA) public data:Ticket,
private ref:MatDialogRef<AssignmanagerComponent>,
    private userservice:UserService,
    private tktservice:TicketService
  ){}
ngOnInit(){
  console.log(this.data);
  this.userservice.getAllManagers().subscribe(x=>this.managers=x);
  this.tktservice.getComplaintdataByTicketid(this.data.ticketId).subscribe(x=>this.comp=x);
}
  closedialog(){
    this.ref.close();
  }

  assignmanager(managerId:any){
let mgr:Manager = {
userid:Number(managerId),
      firstName:"",
lastName:"",
username:"",
password:"",
email:"",
      roles:"",

accountStatus:true,
contactNo:0,      pin:{
        pin:0
      }
    }
    this.data.manager=mgr;
    this.tktservice.assignmanager(this.data).subscribe(x=>{
if(x.status==1){
        alert("Manager Assigned");
        this.ref.close();
      }
  });
  }
}
```

Pincodedetails.component.html
```
<div class="px-3 py-3 mx-3 my-3">
  <div class="pin" style="width: 30%;display: inline;float: left;">
    <button class="btn btn-primary my-3" (click)="addpin()">Add
Pin</button>    <table class="table table-outlined table-bordered">
<thead>
      <tr>
        <th >Available Pincodes</th>

      </tr>
    </thead>
    <tbody>
      <tr *ngFor="let pin of pins">
        <td>{{pin.pin}}</td>
      </tr>
    </tbody>
  </table>
</div>
<div class="manager" style="width: 30%; float: right;">
```

```
<table class="table table-bordered">
   <thead>
      <tr>
         <th colspan="2">List of Managers</th>
      </tr>
   </thead>
   <tbody>
      <tr *ngFor="let mgr of managers">
         <td>{{mgr.pin.pin}}</td>
         <td>{{mgr.firstName+' '+mgr.lastName}}</td>
      </tr>
   </tbody>
</table>
</div>
<div class="engineer" style="width: 30%; display: inline-block;margin-left: 4rem;">

   <table class="table table-bordered">
      <thead>
         <tr>
            <th colspan="2">List of Engineers</th>
         </tr>
      </thead>
      <tbody>
         <tr *ngFor="let egr of engineers">
            <td>{{egr.firstName+' '+egr.lastName}}</td>
            <td><ul class="list-group">
               <li *ngFor="let pin of egr.locations" class="list-group-item">{{pin.pin}}</li>
               </ul>
         </td>
         </tr>
      </tbody>
   </table>
   </div>
</div>
```

Pincodedetails.component.ts

```
import { Component } from '@angular/core'; import {
MatDialog } from '@angular/material/dialog'; import
{ Engineer } from 'src/app/models/Engineer'; import {
Manager } from 'src/app/models/Manager';
import { pin } from 'src/app/models/pin';
import { ComplaintService } from
'src/app/services/complaint.service'; import { TicketService } from
'src/app/services/ticket.service'; import { UserService } from
'src/app/services/user.service'; import { AddpinComponent } from
'../addpin/addpin.component';


@Component({
  selector: 'app-pincodedetails',   templateUrl:
'./pincodedetails.component.html',   styleUrls:
['./pincodedetails.component.css']
})
export class PincodedetailsComponent {
pins:pin[];
engineers:Engineer[];
```

```
managers:Manager[];

constructor(   private
userservice:UserService,   private
ticketservice:TicketService,   private
compservice:ComplaintService,
private dialog:MatDialog
){}

ngOnInit(){
this.userservice.getAllEngineers().subscribe(x=>this.engineers=x);
this.userservice.getAllManagers().subscribe(x=>this.managers=x);
this.compservice.getAllPin().subscribe(x=>this.pins=x);
}
addpin(){
  this.dialog.open(AddpinComponent,{width:'40%',height:'40%'})
}
}
```

Adminpanel.component.html

```
<div class="card">
   <h1 >Admin Dashboard</h1>
   <div class="row mx-3 my-4">
   <button class="btn btn-primary mx-2" routerLink="viewall" style="width: 10%;">View All
users</button>
   <button class="btn btn-primary " style="width: 10%;" routerLink="allcomplaints">View All
Complaints</button>
   <button class="btn btn-primary mx-2" style="width: 10%;" routerLink="alltickets">View All
Tickets</button>
   <button class="btn btn-primary " style="width: 20%;" routerLink="pincodedetails">Pincode,
Area manager and Engieers</button>
</div>
</div>
<div class="card px-3 py-3">
   <router-outlet></router-outlet> </div>
```

Adminpanel.component.ts

```
import { Component } from '@angular/core';

@Component({
  selector: 'app-adminpanel',   templateUrl:
'./adminpanel.component.html',   styleUrls:
['./adminpanel.component.css']
})
export class AdminpanelComponent {

}
```

Assignengineer.component.html

```
<div class="card px-3 py-3 mx-3 my-3">
   <div class="row">
      <div class="col"><h1 style="float: left;">Assign Manager</h1></div>
      <div class="col"><button style="float: right;" (click)="closedialog()" class="btn
btnwarning">X</button></div>
   </div>
   <table class="table table-outlined">
<tbody>
```

```
      <tr>
        <th>TicketID</th>
        <td>{{data.ticketId}}</td>
      </tr>
      <tr>
        <th>Pincode</th>
        <td>{{comp.pin.pin}}</td>
      </tr>
      <tr>
        <th>Select Engineer</th>
        <td>
          <select class="form-control" name="manager" id="manager" #egr>
            <option *ngFor="let egr of engineers" value={{egr.userid}}>{{egr.firstName+'
'+egr.lastName}} </option>

          </select>
          <button class="btn btn-warning" (click)="assignEngineer(egr.value)">Assign</button>
        </td>
      </tr>
    </tbody>
  </table>
</div>
```

Assignengineer.component.ts

```
import { Component,Inject } from '@angular/core';
import { MAT_DIALOG_DATA, MatDialogRef } from
'@angular/material/dialog'; import { Ticket } from '../models/Ticket'; import {
complaint } from '../models/Complaint'; import { Engineer } from
'../models/Engineer';
import { TicketService } from '../services/ticket.service';

@Component({
  selector: 'app-assignengineer',   templateUrl:
'./assignengineer.component.html',   styleUrls:
['./assignengineer.component.css']
})
export class AssignengineerComponent {
comp:complaint;
  engineers:Engineer[];

constructor(
  @Inject(MAT_DIALOG_DATA) public data:Ticket,
private ref:MatDialogRef<AssignengineerComponent>,
private ticketservice:TicketService
){}
ngOnInit(){
  this.ticketservice.getComplaintdataByTicketid(this.data.ticketId).subscribe(x=>{
this.comp=x;
    this.ticketservice.getEngineerForPin(this.comp.pin.pin).subscribe(x=>{
this.engineers=x;
    });
  });
}
closedialog(){
  this.ref.close();
}
assignEngineer(eid:string){
let eng:Engineer={
userid:Number(eid),
   firstName:"",
lastName:"",
username:"",
password:"",
email:"",
     roles:"",
     accountStatus:true,
contactNo:0,
     locations:[],
  }
  this.data.engineer=eng;
  this.ticketservice.assignEngineer(this.data).subscribe(x=>{
if(x.status==1){
     alert("Engineer Assigned");
     this.closedialog();
    }
  });
}
}
```

Allcomplaint.component.html

```
<div class="px-3 py-3">
   <table class="table table-outlined table-striped">
      <thead class="table table-dark">
         <tr>
            <th>Complaint Id</th>
            <th>Customer Name</th>
            <th>Customer Address</th>
            <th>Pincode</th>
            <th>Customer Contact</th>
            <th>Complaint Subject</th>
            <th>Complaint Details</th>
            <th>Feedback</th>
            <th>Tickets</th>
            <th>Created At</th>
         </tr>
      </thead>
      <tbody>
         <tr *ngFor="let comp of complaints">
            <td>{{comp.complaintId}}</td>
            <td>{{comp.name}}</td>
            <td>{{comp.address}}</td>
            <td>{{comp.pin.pin}}</td>
            <td>{{comp.contactNo}}</td>
            <td>{{comp.subject}}</td>
<td>{{comp.details}}</td>
            <td>{{comp.feedback?comp.feedback:"Not given"}}<button *ngIf="comp.feedback==null
&& checkTicketClosed(comp)" class="btn btn-warning" (click)="givefeedback(comp)"><i class="bi
bi-pencil-square"></i></button></td>
            <td>
               <ul *ngFor="let tkt of comp.ticket" class="list-group list-group-horizontal-sm">
                  <li class="list-group-item">{{tkt.ticketId}}</li>
                  <li class="list-group-item"><b>{{tkt.status}}</b></li>
```

```
                  <li class="list-group-item"><button class="btn btn-warning btn-sm"
(click)="viewticket(tkt)"><i class="bi bi-eye-fill"></i></button></li>

               </ul>
               <button *ngIf="checkTicketClosed(comp)" class="btn btn-warning"
(click)="raiseticket(comp)">Raise Ticket</button>
            </td>
            <td>{{comp.createdAt | date:"dd-MMM-yy hh:mm"}}</td>
         </tr>
      </tbody>
   </table>
</div>
```

Allcomplaint.component.ts

```
import { Component } from '@angular/core'; import {
MatDialog } from '@angular/material/dialog'; import {
complaint } from 'src/app/models/Complaint'; import
{ Customer } from 'src/app/models/Customer';
import { Ticket } from 'src/app/models/Ticket';
import { AuthService } from 'src/app/services/auth.service'; import {
ComplaintService } from 'src/app/services/complaint.service'; import {
ViewticketComponent } from '../viewticket/viewticket.component'; import {
FeedbackComponent } from '../feedback/feedback.component'; import {
TicketraiseComponent } from '../ticketraise/ticketraise.component';

@Component({
  selector: 'app-allcomplaint',   templateUrl:
'./allcomplaint.component.html',   styleUrls:
['./allcomplaint.component.css']
})
export class AllcomplaintComponent {
  complaints: complaint[];
constructor(
    private compservice: ComplaintService,
private authservice: AuthService,
private dialog: MatDialog
  ) { }
  ngOnInit() {
    if (this.authservice.currentUser.roles.includes('CUSTOMER')) {
this.authservice.getCurrentUser().subscribe(x => {
        this.compservice.getCustomerComplaints(x.userid).subscribe(x => { this.complaints = x;
console.log(x) });
      });
    } else {
      alert("Bad Request!")
    }
  }
  viewticket(tkt: Ticket) {
    this.dialog.open(ViewticketComponent, { width: '30%', data: tkt })
  }
  givefeedback(c: complaint) {
    this.dialog.open(FeedbackComponent, { data: c });
  }

  checkTicketClosed(c: complaint): boolean {
    let a = c.ticket.filter(x => {

      if (x.status == "CLOSED" || x.status == "ESCALATED") {

        return true;
      } else {

        return false;
      }
    });

    if (a.length > 0) {

      return true;
    } else {

      return false;
    }
  }
  raiseticket(c: complaint) {
    this.compservice.ticketReRaise(c).subscribe(x => {
if (x.status == 1) {
        this.dialog.open(TicketraiseComponent, { data: x });
      } else {
        alert("Server error!")
      }
    });
  }
}
```

Complaintid.component.html

```
<div class="card px-3 py-3 mx-3 my-3">

<div class="row">
    <div class="col"><h1 style="float: left;display: inline;">Complaint Registered</h1></div>
    <div class="col"><button class="btn btn-danger" style="float: right;"
(click)="closedialog()">X</button></div>
</div>
<br>
<br>
<div>
    <p>Your complaint is successfully registered.</p>
    <p>Complaint reference number:ABCCR000{{data.complaintId}}</p>
    <p>Ticket Id:{{data.ticketId}} is created against your complaint. The concerned area manager
will shortly assign an engineer to resolve your issue. Keep track of the ticket status from customer
dashboard.</p>
</div>
</div>
```

Complaintid.component.ts

```
import { Component, Inject } from '@angular/core';
import { MAT_DIALOG_DATA, MatDialogRef } from '@angular/material/dialog';

@Component({
  selector: 'app-complaintid',
  templateUrl: './complaintid.component.html',
```

```
  styleUrls: ['./complaintid.component.css']
})
export class ComplaintidComponent {
constructor(
  @Inject(MAT_DIALOG_DATA) public data: any,
private ref:MatDialogRef<ComplaintidComponent>
  ){}

  closedialog(){
    this.ref.close();
  }
}
```

Createcomplaint.component.html

```
<div class="card mx-4 my-4 px-4 py-4">
  <div>
    <div style="display: inline;float: left;">
      <h1>Raise complaint</h1>
    </div>
    <button class="btn btn-sm btn-danger" style="float: right;" (click)="closedialog()">X</button>
</div>

  <form (ngSubmit)="createcomplaint()">
    <div class="row">
      <div class="col">
        <label for="cusname">Enter your name</label>
        <input type="text" id="cusname" name="cusname" class="form-control"
[(ngModel)]="complaint.name" required>
      </div>
      <div class="col">
        <label for="address">Enter your address</label>
        <input type="text" id="address" name="address" class="form-control"
[(ngModel)]="complaint.address" required>
      </div>
    </div>
    <div class="row">
      <div class="col">
        <label for="pin">Select Pin</label>
        <select class="form-control" name="pin" id="pin" required
[(ngModel)]="complaint.pin.pin" required>
          <option>Select Pin</option>
          <option *ngFor="let pin of pins" value="{{pin.pin}}">{{pin.pin}}</option>
        </select>
      </div>
      <div class="col">
        <label for="contact">Enter your contact No </label>
        <input type="number" id="contact" name="contact" class="form-control" required
[(ngModel)]="complaint.contactNo" required>
      </div>
    </div>
    <br><br>
    <div class="row">
      <div class="col">
        <label for="subject">Select Subject</label>
        <select class="form-control" name="subject" id="subject" required
[(ngModel)]="complaint.subject">
```

```
                <option>Select complaint subject</option>
                <option *ngFor="let sub of subjects" value="{{sub}}">{{sub}}</option>
            </select>
        </div>
        <div class="col">
            <label for="details">Enter complaint details</label>
            <input type="text" id="details" name="details" class="form-control"
[(ngModel)]="complaint.details" required>
        </div>
    </div>
    <br><br>
    <button class="btn btn-warning" type="submit">Submit</button>
</form>
</div>
```

Createcomplaint.component.ts

```
import { Component } from '@angular/core';
import { MatDialog, MatDialogRef } from
'@angular/material/dialog'; import { complaint } from
'src/app/models/Complaint'; import { Customer } from
'src/app/models/Customer';
import { pin } from 'src/app/models/pin';
import { AuthService } from 'src/app/services/auth.service';
import { ComplaintService } from 'src/app/services/complaint.service';
import { ComplaintidComponent } from '../complaintid/complaintid.component';

@Component({
  selector: 'app-createcomplaint',   templateUrl:
'./createcomplaint.component.html',   styleUrls:
['./createcomplaint.component.css']
})
export class CreatecomplaintComponent {
complaint:complaint = new complaint();
  subjects:string[]= ["Cannot make a call but receive a call" , "Can make calls, but cannot
receive calls","Cannot make or receive calls"];   pins:pin[];   cus:Customer;   constructor(
    private ref:MatDialogRef<CreatecomplaintComponent>,
    private compservice:ComplaintService,
private authservice:AuthService,
private dialog:MatDialog
    ){}
  ngOnInit(){
    this.compservice.getAllPin().subscribe(x=>this.pins=x);
    this.authservice.getCurrentUser().subscribe(x=>{this.cus=new Customer(x)});
this.complaint.pin=new pin(0);
  }
  closedialog(){
    this.ref.close();
  }

  createcomplaint(){
if(this.cus){
      this.complaint.customer=this.cus;
      this.compservice.raiseComplaint(this.complaint).subscribe(x=>{
if(x.status==1){
```

```
         this.dialog.open(ComplaintidComponent,{data:x});
       }
});
      this.ref.close();
    }
  }
}
```

Feedback.component.html

```
<div class="card px-3 py-3 mx-3 my-3">
   <div>
      <div style="display: inline;float: left;">
         <h1>Give Feedback</h1>
      </div>
      <button class="btn btn-sm btn-danger" style="float: right;" (click)="closedialog()">X</button>
   </div>
   <div class="my-3">


   <input type="text" name="feedback" id="feedback" class="form-control my-2"
[(ngModel)]="feedback">
   <button class="btn btn-primary" (click)="givefeedback()">Submit</button>
</div>
</div>
```

Feedback.component.ts

```
import { Component,Inject } from '@angular/core';
import { MAT_DIALOG_DATA, MatDialogRef } from
'@angular/material/dialog'; import { complaint } from
'src/app/models/Complaint'; import { Ticket } from 'src/app/models/Ticket';
import { ComplaintService } from 'src/app/services/complaint.service';
import { TicketService } from 'src/app/services/ticket.service';

@Component({
  selector: 'app-feedback',   templateUrl:
'./feedback.component.html',   styleUrls:
['./feedback.component.css']
})
export class FeedbackComponent {
  feedback:string="";
constructor(
   @Inject(MAT_DIALOG_DATA) private data:complaint,
private ref:MatDialogRef<FeedbackComponent>,     private
compservice:ComplaintService){}

  closedialog(){
    this.ref.close();
  }
  givefeedback(){
    this.data.feedback=this.feedback;
    this.compservice.postFeedback(this.data).subscribe(x=>{
if(x.status==1){
      alert("Feedback successfully posted!!");
     }
});
    this.closedialog();
  }
```

```
}
```

Ticketraise.component.html

```
<div class="card px-5 py-5">
   <p class="text-lg">Ticket successfully raised again the complaint! <br>
   Complaint Reference Number:ABCCR000{{data.complaintId}} <br>
Raised Ticket Number:{{data.ticketId}}
</p>
</div>
```

Ticketraise.component.ts

```
import { Component,Inject } from '@angular/core';
import { MAT_DIALOG_DATA } from '@angular/material/dialog';

@Component({
  selector: 'app-ticketraise',   templateUrl:
'./ticketraise.component.html',   styleUrls:
['./ticketraise.component.css']
})
export class TicketraiseComponent {
constructor(@Inject(MAT_DIALOG_DATA) public data:any){}
}
```

Viewticket.component.html

```
<div class="card px-3 py-3 mx-3 my-3">
   <div class="row">
   <div class="col">
      <h1 style="float: left;display: inline;">Ticket Details</h1>
</div>
   <div class="col">
      <button class="btn btn-warning" style="float: right;" (click)="closedialog()">X</button>
   </div>
   </div>
<table class="table table-bordered">
   <tbody>
      <tr>
         <th>Ticket ID</th>
         <td>{{ticket.ticketId}}</td>
      </tr>
      <tr>
         <th>Status</th>
         <td> <button disabled class="btn" [ngStyle]="{'background-
color':(ticket.status=='RAISED')?'#F29727':(ticket.status=='CLOSED')?'#22A699':'#B3C890'}"
style="border: none;color: black;">{{ticket.status}}</button></td>
      </tr>
      <tr>
         <th>Area Manager</th>
         <td>{{ticket.manager==null?'Not Present':ticket.manager.firstName}} {{' '}}{{
ticket.manager==null?'':ticket.manager.lastName}}</td>
      </tr>
      <tr>
         <th>Assigned Engineer</th>
         <td>{{ticket.engineer==null?'Not Assigned':ticket.engineer.firstName }}{{' '}}{{
ticket.engineer==null?'':ticket.engineer.lastName}}</td>
      </tr>
      <tr>
```

```
        <th>Ticket Created at</th>
        <td>{{ticket.createdAt | date:"dd-MMM-yy hh:mm"}}</td>
      </tr>
      <tr>
        <th>Ticket last updated at</th>
        <td>{{ticket.updatedAt | date: "dd-MMM-yy hh:mm"}}</td>
      </tr>
   </tbody>
</table>
</div>
```

Viewticket.component.ts

```
import { Component, Inject } from '@angular/core';
import { MAT_DIALOG_DATA, MatDialogRef } from '@angular/material/dialog'; import
{ Ticket } from 'src/app/models/Ticket';

@Component({
  selector: 'app-viewticket',   templateUrl:
'./viewticket.component.html',   styleUrls:
['./viewticket.component.css']
})
export class ViewticketComponent { constructor(
  @Inject(MAT_DIALOG_DATA) public ticket: Ticket,
private ref:MatDialogRef<ViewticketComponent>
){}
closedialog(){
  this.ref.close();
}
}
```

Customer.component.html

```
<div class="card">
   <div class="row">
      <div class="col px-4 py-3">
         <span>
            <h1>Customer Dashboard</h1>
         </span>
      </div>
      <div class="col px-3 py-3">
         <button class="btn btn-primary mx-2" routerLink="createcomplaint" style="float: right;"
(click)="createcomplaint()">Create a
            complaint</button>
      </div>
   </div>


   <div class="card px-4 py-3">
      <router-outlet></router-outlet>
   </div>
   </div>
```

Customer.component.ts

```
import { Component } from '@angular/core'; import {
MatDialog } from '@angular/material/dialog';
import { CreatecomplaintComponent } from './createcomplaint/createcomplaint.component';

@Component({
  selector: 'app-customer',   templateUrl:
'./customer.component.html',   styleUrls:
['./customer.component.css']
})
export class CustomerComponent {

  constructor(
    private dialog:MatDialog,
  ){}
  createcomplaint(){
    this.dialog.open(CreatecomplaintComponent,{width:'70%'});
  }
}
```

Alltickets.component.html

```
<table class="table table-striped table-outlined">
   <thead class="table-dark">
      <tr>
         <th class="text-center">TicketID</th>
         <th class="text-center">Status</th>
         <th class="text-center">Date of creation</th>
         <th class="text-center" >Last Updated</th>
         <th class="text-center">Area Manager</th>
         <th class="text-center">Complaint Details</th>
         <th class="text-center">Assigned Engineer</th>
      </tr>
   </thead>
   <tbody>

      <tr *ngFor="let ticket of tickets">

         <td class="text-center">{{ticket.ticketId}}</td>
         <td [ngStyle]="{'background-color': (ticket.status=='CLOSED')?
'#00db3a':(ticket.status=='RAISED')? '#00b3ff':(ticket.status=='ASSIGNED')?'#f5c105':'#d9d1e3' }"
class="text-center" style="color: white;"> {{ticket.status}} </td>
         <td class="text-center">{{ticket.createdAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
         <td class="text-center">{{ticket.updatedAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
         <td class="text-center">{{(ticket.manager!==null)? ticket.manager.firstName:"Not
Assigned" + "  " }}{{ (ticket.manager!==null)? ticket.manager.lastName : " " }}</td>
         <td class="text-center"><button class="btn btn-warning btn-sm"
(click)="complaintdetails(ticket)"><i class="bi bi-eye-fill"></i></button></td>
         <td class="text-center">{{(ticket.engineer!==null)?ticket.engineer.firstName:"Not
Assigned" + "  " }}{{ (ticket.engineer!==null)? ticket.engineer.lastName :" " }}</td>

      </tr>

   </tbody>
</table>
```

Alltickets.component.ts

```
import { Component } from '@angular/core'; import {
MatDialog } from '@angular/material/dialog'; import {
ComplaintdetailsComponent } from
'src/app/manager/complaintdetails/complaintdetails.component';
import { Engineer } from 'src/app/models/Engineer'; import {
Ticket } from 'src/app/models/Ticket';
import { AuthService } from 'src/app/services/auth.service';
```

```
import { TicketService } from 'src/app/services/ticket.service';

@Component({
  selector: 'app-alltickets',   templateUrl:
'./alltickets.component.html',   styleUrls:
['./alltickets.component.css']
})
export class AllticketsComponent {
tickets:Ticket[] constructor(
private tktservice:TicketService,
private authservice:AuthService,
private dialog:MatDialog
){}
ngOnInit(){
  this.authservice.getCurrentUser().subscribe(x=>{
    this.tktservice.getAllEngineerTickets(x.userid).subscribe(x=>{
this.tickets=x;
    })
  });

}
complaintdetails(tkt:Ticket){
  this.dialog.open(ComplaintdetailsComponent,{width:'40%',data:tkt.ticketId});
}
}
```

Opentickets.component.html

```
<table class="table table-striped table-outlined">
  <thead class="table-dark">
    <tr>
      <th class="text-center">TicketID</th>
      <th class="text-center">Status</th>
      <th class="text-center">Date of creation</th>
      <th class="text-center" >Last Updated</th>
      <th class="text-center">Area Manager</th>
      <th class="text-center">Complaint Details</th>
      <th class="text-center">Assigned Engineer</th>
    </tr>
  </thead>
  <tbody>

    <tr *ngFor="let ticket of tickets">

      <td class="text-center">{{ticket.ticketId}}</td>
      <td [ngStyle]="{'background-color': (ticket.status=='CLOSED')?
'#00db3a':(ticket.status=='RAISED')? '#00b3ff':(ticket.status=='ASSIGNED')?'#f5c105':'#d9d1e3' }"
class="text-center" style="color: white;"> {{ticket.status}} <button
*ngIf="ticket.status!=='CLOSED'" (click)="updatestatus(ticket)" class="btn btn-danger"><i
class="bi bi-pencil-square"></i></button></td>
      <td class="text-center">{{ticket.createdAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
      <td class="text-center">{{ticket.updatedAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
      <td class="text-center">{{(ticket.manager!==null)? ticket.manager.firstName:"Not
Assigned" + "  " }}{{ (ticket.manager!==null)? ticket.manager.lastName : " " }}</td>
      <td class="text-center"><button class="btn btn-warning btn-sm"
(click)="complaintdetails(ticket)"><i class="bi bi-eye-fill"></i></button></td>
```

```
      <td class="text-center">{{(ticket.engineer!==null)?ticket.engineer.firstName:"Not
Assigned" + "  " }}{{ (ticket.engineer!==null)? ticket.engineer.lastName :" " }}</td>

    </tr>

  </tbody>
</table>
```

Opentickets.component.ts

```
import { Component } from '@angular/core'; import {
MatDialog } from '@angular/material/dialog'; import
{ ComplaintdetailsComponent } from
'src/app/manager/complaintdetails/complaintdetails.component';
import { Ticket } from 'src/app/models/Ticket'; import {
AuthService } from 'src/app/services/auth.service'; import {
TicketService } from 'src/app/services/ticket.service';
import { UpdatestatusComponent } from '../updatestatus/updatestatus.component';

@Component({
  selector: 'app-opentickets',   templateUrl:
'./opentickets.component.html',   styleUrls:
['./opentickets.component.css']
})
export class OpenticketsComponent
{   tickets:Ticket[]   constructor(
private tktservice:TicketService,
private authservice:AuthService,
private dialog:MatDialog
  ){}
  ngOnInit(){
    this.authservice.getCurrentUser().subscribe(x=>{
      this.tktservice.getEngineerOpenTickets(x.userid).subscribe(x=>{
this.tickets=x;
      })
    });

  }
  complaintdetails(tkt:Ticket){
    this.dialog.open(ComplaintdetailsComponent,{width:'40%',data:tkt.ticketId});
  }
  updatestatus(tkt:Ticket){
    this.dialog.open(UpdatestatusComponent,{width:'20%',data:tkt});
  }
}
```

Updatestatus.component.html

```
<div class="card mx-3 my-3 px-3 py-3">
    <div class="row">
        <div class="col"><h1 style="float: left;">Update Status</h1></div>
        <div class="col"><button class="btn btn-danger" style="float: right;"
(click)="closedialog()">X</button></div>
</div>
    <label for="status">Select Status</label>
    <select name="status" id="status" class="form-control" [(ngModel)]="tempstatus">
        <option value="WIP">Work In Progress(WIP)</option>
        <option value="ESCALATED">ESCALATED</option>
```

```
        <option value="CLOSED">CLOSED</option>
    </select>
```

```
   <button class="btn btn-primary my-3" (click)="updatestatus()">Update</button>
</div>
```

Updatestatus.component.ts

```
import { Component,Inject } from '@angular/core';
import { MAT_DIALOG_DATA, MatDialogRef } from '@angular/material/dialog';
import { Ticket } from 'src/app/models/Ticket';
import { TicketService } from 'src/app/services/ticket.service';

@Component({
  selector: 'app-updatestatus',   templateUrl:
'./updatestatus.component.html',   styleUrls:
['./updatestatus.component.css']
})
export class UpdatestatusComponent {
  tempstatus:string="";
constructor(
   @Inject(MAT_DIALOG_DATA)private       data:Ticket,
private     ref:MatDialogRef<UpdatestatusComponent>,
private tktservice:TicketService){}

   updatestatus(){
    this.data.status=this.tempstatus;
    this.tktservice.updateStatus(this.data).subscribe(x=>{
if(x.status==1){
      alert("Status updated!!");
     }
});
    this.closedialog();
   }

   closedialog(){
    this.ref.close();
   }
}
```

Engineer.component.html

```
<div class="card" >
   <h1 >Engineer Dashboard</h1>
   <div class="row">
   <button class="btn btn-primary mx-3" style="width:10%;float:left;display: inline;"
routerLink="alltickets">View All Tickets</button>
   <button class="btn btn-primary mx-3" style="width:10%;float:left;display:
inline;" routerLink="opentickets">View Open Tickets</button> </div>
</div>
<div class="card my-4">
   <router-outlet></router-outlet>
</div>
```

Engineer.component.ts

```
import { Component } from '@angular/core';

@Component({
  selector: 'app-engineer',
  templateUrl: './engineer.component.html',
```

```
  styleUrls: ['./engineer.component.css']
})
export class EngineerComponent {

}
```

Login.gaurd.ts import { CanActivateFn, Router } from

```
'@angular/router'; import { AuthService } from
'../services/auth.service'; import { inject } from
'@angular/core';

export const loginGuard: CanActivateFn = (route, state) =>
{  const authservice = inject(AuthService);  const router =
inject(Router);  if(authservice.currentUser.authentication){
console.log("Login status checking.......true");   return true;
 }else{
  console.log("Login status checking.......false");
router.navigateByUrl("login");
  return false;
 }
};
```

Landing.component.html

```
<app-navbar></app-navbar>
<router-outlet></router-outlet>
```

Landing.component.ts

```
import { Component } from '@angular/core'; import
{ AuthService } from '../services/auth.service';
import { user } from '../models/user'; import { Router
} from '@angular/router';

@Component({
  selector: 'app-landing',   templateUrl:
'./landing.component.html',   styleUrls:
['./landing.component.css']
})
export class LandingComponent
{   usr:any= {
authentication:false,
    username:"guest",
    roles:[]
  };
  constructor(private auth:AuthService,
    private router:Router){}
ngOnInit(){
    this.usr = this.auth.currentUser;
if(this.usr.roles.includes("MANAGER")){
this.router.navigateByUrl('manager');
  }else
if(this.usr.roles.includes("CUSTOMER")){
this.router.navigateByUrl('customer');   }else
if(this.usr.roles.includes("ENGINEER")){
this.router.navigateByUrl('engineer');   }else
if(this.usr.roles.includes("ADMIN")){
this.router.navigateByUrl('adminpanel');
  }
```

```

  }
}
```

Login.component.html

```
<app-navbar></app-navbar>

    <div class="container">
     <h1 class="mt-4 text-center"><b>COMPLAINT REDRESSAL SYSTEM</b></h1>
<div class="row">
       <div class="col-md-6 offset-md-3">
     <form class="" #userform="ngForm">

       <h2 >Log in</h2>
       <p>
         <label for="username" class="">Username</label>
         <input type="text" id="username" name="username" class="form-control"
placeholder="Username" required autofocus [(ngModel)]="loginreq.username">
       </p>
<p>
         <label for="password" class="">Password</label>
         <input type="password" id="password" name="password" class="form-control"
placeholder="Password" required [(ngModel)]="loginreq.password">
       </p>
       <button class="btn btn-lg btn-primary btn-block" type="submit"
[disabled]="userform.invalid" (click)="signin()">Sign in</button>
</form>
   </div>
   </div>
</div>
```

Login.component.ts

```
import { Component } from '@angular/core'; import
{ request } from '../models/loginRequestDto'; import
{ AuthService } from '../services/auth.service';
import { MatSnackBar, MatSnackBarHorizontalPosition, MatSnackBarVerticalPosition } from
'@angular/material/snack-bar';
import { Router } from '@angular/router';



@Component({
  selector: 'app-login',   templateUrl:
'./login.component.html',   styleUrls:
['./login.component.css']
})
export class LoginComponent {
loginreq:request = new request();
  horizontalPosition: MatSnackBarHorizontalPosition =
'end';   verticalPosition: MatSnackBarVerticalPosition =
'top';   constructor(     private authservice:AuthService,
private snackbar:MatSnackBar,
    private router: Router

    ){}

  signin(){
    this.authservice.login(this.loginreq).subscribe(res=>{
const rolesString = res.roles.replace(/[\[\]"]+/g, '');
      const rolesArray = rolesString.split(',').map((role: string) => role.trim());
      this.authservice.currentUser.authentication=true;
this.authservice.currentUser.username=res.authentication;
this.authservice.currentUser.roles=rolesArray;       this.snackbar.open("Authentication
Successful!",
"Dismiss",{duration:3000,horizontalPosition:this.horizontalPosition,
verticalPosition: this.verticalPosition,})       this.loginreq = new
request();       this.router.navigate(['/']);
    },
    (err)=>{       this.snackbar.open("Authentication Failure!",
"Dismiss",{duration:3000,horizontalPosition: this.horizontalPosition,
        verticalPosition: this.verticalPosition,})
this.loginreq = new request();
    }
    );

  }

}
```

Complaintdetails.component.html

```
<div class="card px-3 py-3 mx-3 my-3">
  <div class="row">
    <div class="col"><h1 style="float: left;display: inline;">Complaint Details</h1></div>
    <div class="col"><button class="btn btn-warning" style="float: right;"
(click)="closedialog()">X</button></div>
  </div>
  <table class="table table-bordered">
    <tbody>
      <tr>
        <th>Complaint Reference Number</th>
        <th>ABCCR000{{complaint.complaintId}}</th>
      </tr>
      <tr>
        <th>Customer Name</th>
        <td>{{complaint.name}}</td>
      </tr>
      <tr>
        <th>Customer Address</th>
        <td>{{complaint.address}}</td>
      </tr>
      <tr>
        <th>Pincode</th>
        <td>{{complaint.pin.pin}}</td>
      </tr>
      <tr>
        <th>Customer Contact Number</th>
        <td>{{complaint.contactNo}}</td>
      </tr>
      <br>
      <tr>
        <th>Complaint Subject</th>
```

```
        <td>{{complaint.subject}}</td>
      </tr>
      <tr>
        <th>Complaint Details</th>
        <td>{{complaint.details}}</td>
      </tr>
      <tr>
        <th>Complaint Feedback</th>
        <td>{{complaint.feedback==null?'Not Given':complaint.feedback}}</td>
      </tr>
      <tr>
        <th>Complaint raised date</th>
        <td>{{complaint.createdAt | date:"dd-MMM-yy hh:mm"}}</td>
      </tr>
    </tbody>
  </table>
</div>
```

Complaintdetails.component.ts

```
import { Component, Inject } from '@angular/core';
import { MAT_DIALOG_DATA, MatDialogRef } from
'@angular/material/dialog'; import { complaint } from
'src/app/models/Complaint'; import { TicketService } from
'src/app/services/ticket.service';

@Component({
  selector: 'app-complaintdetails',   templateUrl:
'./complaintdetails.component.html',   styleUrls:
['./complaintdetails.component.css']
})
export class ComplaintdetailsComponent
{   complaint:complaint; constructor(
  @Inject(MAT_DIALOG_DATA) private data:any,   private
ref:MatDialogRef<ComplaintdetailsComponent>,
private ticketservice:TicketService   ){console.log('passed
data',data)} ngOnInit(){
  this.ticketservice.getComplaintdataByTicketid(this.data).subscribe(x=>this.complaint=x);
}
closedialog(){
  this.ref.close();
}
}
```

Manager.component.html

```
<div class="card" >
   <h1 >Manager Dashboard</h1>
   <div class="row">
   <button class="btn btn-primary mx-3" style="width:10%;float:left;display: inline;"
routerLink="managerall">View All Tickets</button>
   <button class="btn btn-primary mx-3" style="width:10%;float:left;display:
inline;" routerLink="manageropen">View Open Tickets</button> </div>
</div>
<div class="card my-4">
   <router-outlet></router-outlet> </div>
```

Manager.component.ts import { Component

```
} from '@angular/core'; import { Engineer }
from '../models/Engineer'; import { Ticket }
from '../models/Ticket';
import { TicketService } from '../services/ticket.service';

@Component({
  selector: 'app-manager',   templateUrl:
'./manager.component.html',   styleUrls:
['./manager.component.css']
})
export class ManagerComponent {

}
```

Manageralltickets.component.html

```
<table class="table table-striped table-outlined">
  <thead class="table-dark">
    <tr>
      <th class="text-center">TicketID</th>
      <th class="text-center">Status</th>
      <th class="text-center">Date of creation</th>
      <th class="text-center" >Last Updated</th>
      <th class="text-center">Area Manager</th>
      <th class="text-center">Complaint Details</th>
      <th class="text-center">Assigned Engineer</th>
    </tr>
  </thead>
  <tbody>

    <tr *ngFor="let ticket of tickets">

      <td class="text-center">{{ticket.ticketId}}</td>
      <td [ngStyle]="{'background-color': (ticket.status=='CLOSED')?
'#00db3a':(ticket.status=='RAISED')? '#00b3ff':(ticket.status=='ASSIGNED')?'#f5c105':'#d9d1e3' }"
class="text-center" style="color: white;"> {{ticket.status}} </td>
      <td class="text-center">{{ticket.createdAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
      <td class="text-center">{{ticket.updatedAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
      <td class="text-center">{{(ticket.manager!==null)? ticket.manager.firstName:"Not
Assigned" + "  " }}{{ (ticket.manager!==null)? ticket.manager.lastName : " " }}</td>
      <td class="text-center"><button class="btn btn-warning btn-sm"
(click)="complaintdetails(ticket)"><i class="bi bi-eye-fill"></i></button></td>
      <td class="text-center">{{(ticket.engineer!==null)?ticket.engineer.firstName:"Not
Assigned" + "  " }}{{ (ticket.engineer!==null)? ticket.engineer.lastName :" " }}</td>

    </tr>

  </tbody>
</table>
```

Manageralltickets.component.ts import { Component

```
} from '@angular/core'; import { Ticket } from
'../models/Ticket'; import { TicketService } from
'../services/ticket.service'; import { MatDialog } from
'@angular/material/dialog'; import {
ComplaintdetailsComponent } from
'../manager/complaintdetails/complaintdetails.component';
```

```
@Component({
  selector: 'app-manageralltickets',   templateUrl:
'./manageralltickets.component.html',   styleUrls:
['./manageralltickets.component.css']
})
export class ManagerallticketsComponent
{   tickets:Ticket[];   constructor(
    private tktService:TicketService,
private dialog:MatDialog
    ){

}
  ngOnInit(){
    this.tktService.getAllTickets().subscribe(x=>{this.tickets=x;});

  }
  complaintdetails(tkt:Ticket){
    this.dialog.open(ComplaintdetailsComponent,{width:'40%',data:tkt.ticketId});
  }
}
```

Manageropentickets.component.html

```
<table class="table table-striped table-outlined">
  <thead class="table-dark">
    <tr>
      <th class="text-center">TicketID</th>
      <th class="text-center">Status</th>
      <th class="text-center">Date of creation</th>
      <th class="text-center" >Last Updated</th>
      <th class="text-center">Area Manager</th>
      <th class="text-center">Complaint Details</th>
      <th class="text-center">Assigned Engineer</th>
    </tr>
  </thead>
  <tbody>

    <tr *ngFor="let ticket of tickets">

      <td class="text-center">{{ticket.ticketId}}</td>
      <td [ngStyle]="{'background-color': (ticket.status=='CLOSED')?
'#00db3a':(ticket.status=='RAISED')? '#00b3ff':(ticket.status=='ASSIGNED')?'#f5c105':'#d9d1e3' }"
class="text-center" style="color: white;"> {{ticket.status}} </td>
      <td class="text-center">{{ticket.createdAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
      <td class="text-center">{{ticket.updatedAt | date :"dd-MMM-yyyy,hh:mm:ss"}}</td>
      <td class="text-center">{{(ticket.manager!==null)? ticket.manager.firstName:"Not
Assigned" + "  " }}{{ (ticket.manager!==null)? ticket.manager.lastName : " " }}</td>
      <td class="text-center"><button class="btn btn-warning btn-sm"
(click)="complaintdetails(ticket)"><i class="bi bi-eye-fill"></i></button></td>
      <td class="text-center"><button *ngIf="ticket.engineer==null" class='btn btn-warning'
(click)='assignengineer(ticket)'>Assign
Engineer</button>{{(ticket.engineer!==null)?ticket.engineer.firstName:"" + "  " }}{{
(ticket.engineer!==null)? ticket.engineer.lastName :" " }}</td>

    </tr>
```

```

  </tbody>
</table>
```

<u>Manageropentickets.component.ts</u>
```
import {
Component } from '@angular/core'; import {
AuthService } from '../services/auth.service'; import {
TicketService } from '../services/ticket.service'; import
{ Ticket } from '../models/Ticket'; import { user } from
'../models/user'; import { Manager } from
'../models/Manager'; import { MatDialog } from
'@angular/material/dialog'; import {
ComplaintdetailsComponent } from
'../manager/complaintdetails/complaintdetails.component';
import { AssignengineerComponent } from '../assignengineer/assignengineer.component';

@Component({
  selector: 'app-manageropentickets',   templateUrl:
'./manageropentickets.component.html',   styleUrls:
['./manageropentickets.component.css']
})
export class ManageropenticketsComponent
{   usr:user;   tickets:Ticket[];
  constructor(private authservice:AuthService,
private tktservice:TicketService,              private
dialog:MatDialog){

  }
  ngOnInit(){
    this.authservice.getCurrentUser().subscribe(d=>{
this.usr=d;
      this.tktservice.getManagerOpenTickets(this.usr.userid).subscribe(x=>this.tickets=x);
    });

  }
  complaintdetails(tkt:Ticket){
    this.dialog.open(ComplaintdetailsComponent,{width:'40%',data:tkt.ticketId});
  }
  assignengineer(tkt:Ticket){
    this.dialog.open(AssignengineerComponent,{width:'40%',data:tkt});
  }
}
```

<u>Complaint.ts</u>
```
import { Customer } from "./Customer";
import { Ticket } from "./Ticket";
import { pin } from "./pin";

export class complaint{
complaintId:number;
    name:string;
address:string;
    pin:pin;
    contactNo:number;
customer:Customer;     subject:string;
```

```
   details:string;
feedback:string;
ticket:Ticket[];
createdAt:Date;
   lastUpdated:Date;
}
```

Customer.ts

```
import { pin } from "./pin";
import { user } from "./user";

export class Customer extends user {
   address:string;
   pin:pin;
   contactNo:number;
constructor(usr:user){
      super(usr);
   }
}
```

Engineer.ts import { pin }

```
from "./pin";
import { user } from "./user";

export class Engineer extends user{
   locations:pin[];
contactNo:number;
constructor(usr:user){
      super(usr);
   }
}
```

loginrequestDto.ts

```
export class request{
username:string;
   password:string;
}
```

Manager.ts

```
import { pin } from "./pin";
import { user } from "./user";

export class Manager extends user{
pin:pin;
   contactNo:number;
constructor(usr:user){
      super(usr);
   }
}
```

Pin.ts
```
export class pin{
pin:number;
   constructor(pin:number){
this.pin=pin;
   }
}
```

Status.ts
```
export class status{
   status:number;
}
```

Ticket.ts import { complaint } from "./Complaint"; import { Engineer } from "./Engineer"; import { Manager } from "./Manager";

```
export class Ticket{
ticketId:number;     status:string;
complaint:complaint;
manager:Manager;
engineer:Engineer;
comment:string;
createdAt:Date;
   updatedAt:Date;
}
```

User.ts export class user {
```
userid:number;
firstName:string;
lastName:string;
username:string;
password:string;
email:string;
   roles:string;
   accountStatus:boolean;
constructor(usr:user){
this.userid=usr.userid;
this.firstName=usr.firstName;
this.lastName=usr.lastName;
this.username=usr.username;
this.password=usr.password;
      this.email=usr.email;
this.roles=usr.roles;
      this.accountStatus=usr.accountStatus;
   }
}
```

Navbar.component.html

```
<nav class="navbar navbar-light bg-light justify-content-between">
   <a class="navbar-brand" routerLink="">ABC Telecom Ltd.</a>

   <form class="form-inline">
      <span>
        Welcome {{currentUser.username}}!!
       </span>

<button class="btn btn-warning my-2 my-sm-0" *ngIf="!currentUser.authentication"
routerLink="login">Login</button>
   <button class="btn btn-warning my-2 my-sm-0" *ngIf="currentUser.authentication"
(click)="logout()">Log out</button>
   </form>
</nav>
```

Navbar.component.ts

```
import { Component } from '@angular/core'; import
{ AuthService } from '../services/auth.service';
import { Router } from '@angular/router';

@Component({
  selector: 'app-navbar',   templateUrl:
'./navbar.component.html',   styleUrls:
['./navbar.component.css']
})
export class NavbarComponent {
  currentUser:{
    authentication:boolean,
username:string,
roles:string[]
  }= {
    authentication:false,
    username:"guest",
    roles:[]
  };
constructor(
  private authservice:AuthService,
private router:Router){
 }
ngOnInit(){
if(this.authservice.currentUser.username!='guest'){
this.currentUser = this.authservice.currentUser;

  }
}
logout(){
this.authservice.logout();
this.currentUser = this.authservice.currentUser;
this.router.navigateByUrl("/");
}
}
```

Auth.service.ts

```
import { HttpClient, HttpHeaders } from
'@angular/common/http'; import { Injectable } from
'@angular/core'; import { request } from
'../models/loginRequestDto'; import { Observable } from 'rxjs';
import { MatSnackBar, MatSnackBarHorizontalPosition, MatSnackBarVerticalPosition } from
'@angular/material/snack-bar';
import { user } from '../models/user';

@Injectable({
  providedIn: 'root'
})
export class AuthService {
  private baseUrl:string = "http://localhost:8080/"
horizontalPosition: MatSnackBarHorizontalPosition = 'end';
verticalPosition: MatSnackBarVerticalPosition = 'top';   currentUser:{
   authentication:boolean,
    username:string,
roles:string[]
  } = {
    authentication:false,
    username:"guest",
    roles:[]
  }

  constructor(private http:HttpClient,
private snackbar:MatSnackBar,) { }

  login(req:request):Observable<any>{
const body = new FormData();
body.append('username', req.username);
body.append('password', req.password);
const headers = new HttpHeaders();
    headers.append('Content-Type', 'multipart/form-data');
    return this.http.post(this.baseUrl+"auth",body,{headers,withCredentials: true});
  }

  logout():Observable<any>{
this.currentUser = {
authentication:false,
    username:"guest",
    roles:[]
    }
    this.snackbar.open("Logged Out!",
"Dismiss",{duration:3000,horizontalPosition:this.horizontalPosition,
verticalPosition: this.verticalPosition,})     return
this.http.get(this.baseUrl+"logout");
  }

  hasRole(role: string): boolean {
    return this.currentUser.roles.includes(role);
  }

  hasAnyRole(roles: string[]): boolean {
    return this.currentUser.roles.some(r => roles.includes(r));
  }
  isLoggedIn():boolean{
    return this.currentUser.authentication;
  }
  getCurrentUser():Observable<user>{
return
this.http.get<user>("http://localhost:8080/api/ticket/"+'getcurrentuser',{withCredentials:true});
  }
}
```

Complaint.service.ts

```
import { HttpClient, HttpParams } from '@angular/common/http';
import { Injectable } from '@angular/core'; import { complaint }
from '../models/Complaint'; import { Observable } from 'rxjs';
import { status } from '../models/status'; import { pin } from
'../models/pin';
import { Manager } from '../models/Manager';
```

```
@Injectable({
  providedIn: 'root'
})
export class ComplaintService {
  baseUrl:string = 'http://localhost:8080/api/complaint/'
constructor(private http:HttpClient) { }
  raiseComplaint(cmp:complaint):Observable<any>{
    return this.http.post<any>(this.baseUrl+'raise',cmp,{withCredentials:true});
  }
  getAllComplaints():Observable<complaint[]>{
    return this.http.get<complaint[]>(this.baseUrl+'all',{withCredentials:true});
  }
  getCustomerComplaints(custId:number):Observable<complaint[]>{
let params:HttpParams = new HttpParams().set("cid",custId);
return
this.http.get<complaint[]>(this.baseUrl+'cuscomplaints',{params:params,withCredentials:true});
  }
  ticketReRaise(cmp:complaint):Observable<any>{
    return this.http.post<any>(this.baseUrl+'ticketreraise',cmp,{withCredentials:true});
  }
  postFeedback(cmp:complaint):Observable<status>{
    return this.http.post<status>(this.baseUrl+'addfeedback',cmp,{withCredentials:true});
  }
  getAllPin():Observable<pin[]>{
    return this.http.get<pin[]>(this.baseUrl+"allpin",{withCredentials:true});
  }
  addPin(p:pin):Observable<status>{
    return this.http.post<status>(this.baseUrl+"addpin",p,{withCredentials:true});
  }

getManagerForPin(pin:number):Observable<Manager>{
let params = new HttpParams().set("pin",pin);     return
this.http.get<Manager>(this.baseUrl+'managerforpin',{params:params,withCredentials:true})
  }
}
```

Ticket.service.ts

```
import { HttpClient, HttpParams } from
'@angular/common/http'; import { Injectable } from
'@angular/core'; import { Observable } from 'rxjs'; import { Ticket
} from '../models/Ticket'; import { complaint } from
'../models/Complaint'; import { status } from '../models/status';
import { Engineer } from '../models/Engineer'; import { user }
from '../models/user';

@Injectable({
  providedIn: 'root'
})
export class TicketService {
  baseUrl: string = 'http://localhost:8080/api/ticket/'
constructor(private http: HttpClient) { }

  getAllTickets(): Observable<Ticket[]> {
    return this.http.get<Ticket[]>(this.baseUrl + 'all', { withCredentials: true });
  }
  getTicketById(ticketId: number): Observable<Ticket> {
    let param: HttpParams = new HttpParams().set("ticketId", ticketId);
return this.http.get<Ticket>(this.baseUrl + 'ticketdata', { params: param });
  }
  getComplaintdataByTicketid(ticketId: number): Observable<complaint> {
let param: HttpParams = new HttpParams().set("ticketId", ticketId);
    return this.http.get<complaint>(this.baseUrl + 'complaintdata', { params: param,
withCredentials: true });
  }
  updateStatus(tkt: Ticket): Observable<status> {
    return this.http.patch<status>(this.baseUrl + 'updatestatus', tkt,{withCredentials:true});
  }
  updateComment(tkt: Ticket): Observable<status> {
    return this.http.patch<status>(this.baseUrl + 'updatecomment', tkt);
  }
  assignEngineer(tkt: Ticket): Observable<status> {
    return this.http.patch<status>(this.baseUrl + 'assignEngineer', tkt,{withCredentials:true});
  }
  getAllEngineerTickets(engineerID: number): Observable<Ticket[]> {     let param:
HttpParams = new HttpParams().set("engineerid", engineerID);     return
this.http.get<Ticket[]>(this.baseUrl + 'engineeralltickets', { params: param
,withCredentials:true});
  }
  getEngineerOpenTickets(engId: number): Observable<Ticket[]> {
let param: HttpParams = new HttpParams().set("engineerid", engId);
    return this.http.get<Ticket[]>(this.baseUrl + 'engineeropentickets', { params: param
,withCredentials:true});
  }
  getManagerOpenTickets(mgrId: number): Observable<Ticket[]> {
let param: HttpParams = new HttpParams().set("managerid", mgrId);
    return this.http.get<Ticket[]>(this.baseUrl + 'manageropentickets', { params: param,
withCredentials: true });
  }
  getAllManagerTickets(mgrId: number): Observable<Ticket[]> {     let
param: HttpParams = new HttpParams().set("managerid", mgrId);
    return this.http.get<Ticket[]>(this.baseUrl + 'manageralltickets', { params: param });
  }
  getEngineerForPin(pincode: number): Observable<Engineer[]> {     let
param: HttpParams = new HttpParams().set("pin", pincode);     return
this.http.get<Engineer[]>(this.baseUrl + 'engineerforpin', { params:
param,withCredentials:true });
  }
  assignmanager(t: Ticket): Observable<status> {
    return this.http.patch<status>(this.baseUrl + 'assignmanager', t, { withCredentials: true });
  }
}
```

User.service.ts

```
import { HttpClient, HttpClientModule, HttpParams } from
'@angular/common/http'; import { Injectable } from '@angular/core'; import { user }
from '../models/user'; import { Observable } from 'rxjs'; import { status } from
'../models/status'; import { Manager } from '../models/Manager'; import { Engineer }
from '../models/Engineer';
```

```
import { Customer } from '../models/Customer';

@Injectable({
  providedIn: 'root'
})
export class UserService {
  baseUrl:string='http://localhost:8080/api/user/'
constructor(private http:HttpClient) { }

  getAllUsers():Observable<user[]>{
    return this.http.get<user[]>(this.baseUrl +'all', {withCredentials:true});
  }

  adduser(usr:user):Observable<status>{
    return this.http.post<status>(this.baseUrl+'adduser',usr);
  }
  deleteuser(usrid:number):Observable<status>{
    let params:HttpParams = new HttpParams().set("userid",usrid)
    return this.http.delete<status>(this.baseUrl+'deleteuser', {params:params});
  }
  addManager(mgr:Manager):Observable<status>{
    return this.http.post<status>(this.baseUrl+'addmanager',mgr,{withCredentials:true});
  }
  addEngineer(egr:Engineer):Observable<status>{
console.log("Service Method called !!");
    return this.http.post<status>(this.baseUrl+'addengineer',egr,{withCredentials:true});
  }
  addCustomer(cus:Customer){
    return this.http.post<status>(this.baseUrl+'addcustomer',cus,{withCredentials:true});
  }
  getAllManagers():Observable<Manager[]>{
    return this.http.get<Manager[]>(this.baseUrl+'allmanagers',{withCredentials:true});
  }
  getAllEngineers():Observable<Engineer[]>{
    return this.http.get<Engineer[]>(this.baseUrl+'allengineers',{withCredentials:true});
  }
  getAllCustomers():Observable<Customer[]>{
    return this.http.get<Customer[]>(this.baseUrl+'allcustomers');
  }
}
```

App-routing.module.ts

```
import { NgModule } from '@angular/core';
import { RouterModule, Routes } from '@angular/router'; import {
LoginComponent } from './login/login.component'; import {
LandingComponent } from './landing/landing.component';
import { loginGuard } from './gaurds/login.guard';
import { ManageralltticketsComponent } from './manageralltickets/manageralltickets.component';
import { ManageropenticketsComponent } from
'./manageropentickets/manageropentickets.component'; import {
ManagerComponent } from './manager/manager.component'; import {
CustomerComponent } from './customer/customer.component'; import {
AdminpanelComponent } from './adminpanel/adminpanel.component'; import {
EngineerComponent } from './engineer/engineer.component'; import {
AllusersComponent } from './adminpanel/allusers/allusers.component';
```

```
import { CreatecomplaintComponent } from
'./customer/createcomplaint/createcomplaint.component';
import { AllcomplaintComponent } from './customer/allcomplaint/allcomplaint.component';
import { AdminallcomplaintsComponent } from
'./adminpanel/adminallcomplaints/adminallcomplaints.component';
import { AdminallticketsComponent } from
'./adminpanel/adminalltickets/adminalltickets.component';
import { PincodedetailsComponent } from
'./adminpanel/pincodedetails/pincodedetails.component';
import { AllticketsComponent } from './engineer/alltickets/alltickets.component';
import { OpenticketsComponent } from './engineer/opentickets/opentickets.component';

const routes: Routes = [
  {path:'login',component:LoginComponent},
  {path:'',component:LandingComponent,canActivate:[loginGuard],children:[
    {path:'manager',component:ManagerComponent,children:[
    {path:'managerall', component:ManageralltIcketsComponent},
    {path:'manageropen', component:ManageropenticketsComponent}
  ]},
  {path:'customer',component:CustomerComponent,children:[
     {path:'allcomplaints',component:AllcomplaintComponent},
     {path:'**',redirectTo:'allcomplaints',pathMatch:'full'}
  ]},
  {path:'engineer',component:EngineerComponent,children:[
    {path:'alltickets',component:AllticketsComponent},
    {path:'opentickets',component:OpenticketsComponent}
  ]},
  {path:'adminpanel', component:AdminpanelComponent,children:[
    {path:'viewall', component:AllusersComponent},
    {path:'allcomplaints',component:AdminallcomplaintsComponent},
    {path:'alltickets',component:AdminallticketsComponent},
    {path:'pincodedetails',component:PincodedetailsComponent}
  ]}
  ]},
  {path:'**',redirectTo:'',pathMatch:'full'}

];

@NgModule({
  imports: [RouterModule.forRoot(routes)],
exports: [RouterModule]
})
export class AppRoutingModule { }
```

App.component.html

```
<div class="container">
   <router-outlet></router-outlet> </div>
```

App.component.ts

```
import { Component } from '@angular/core';

@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
styleUrls: ['./app.component.css']
})
```

```
export class AppComponent {
  title = 'ComplaintRedressalSystem-ui';
}
```

App.module.ts

```
import { NgModule } from '@angular/core'; import {
BrowserModule } from '@angular/platform-browser'; import
{HttpClientModule} from '@angular/common/http'; import {
AppRoutingModule } from './app-routing.module'; import {
AppComponent } from './app.component'; import {
LoginComponent } from './login/login.component'; import {
NavbarComponent } from './navbar/navbar.component'; import
{ FormsModule } from '@angular/forms';
import {MatSnackBarModule} from '@angular/material/snack-bar';
import {BrowserAnimationsModule} from '@angular/platform-
browser/animations'; import { CookieService } from 'ngx-cookie-service'; import {
LandingComponent } from './landing/landing.component'; import {
CustomerComponent } from './customer/customer.component'; import {
ManagerComponent } from './manager/manager.component'; import {
EngineerComponent } from './engineer/engineer.component'; import {
AdminpanelComponent } from './adminpanel/adminpanel.component';
import { ManageralltticketsComponent } from './manageralltickets/manageralltickets.component';
import { ManageropenticketsComponent } from
'./manageropentickets/manageropentickets.component'; import {
AllusersComponent } from './adminpanel/allusers/allusers.component'; import {
AdduserComponent } from './adminpanel/adduser/adduser.component'; import
{MatDialogModule}from '@angular/material/dialog'; import {MatRadioModule}
from '@angular/material/radio'; import { CreatecomplaintComponent } from
'./customer/createcomplaint/createcomplaint.component'; import {
AllcomplaintComponent } from './customer/allcomplaint/allcomplaint.component'; import {
ViewticketComponent } from './customer/viewticket/viewticket.component'; import {
ComplaintidComponent } from './customer/complaintid/complaintid.component'; import {
ComplaintdetailsComponent } from
'./manager/complaintdetails/complaintdetails.component';
import { AdminallcomplaintsComponent } from
'./adminpanel/adminallcomplaints/adminallcomplaints.component';
import { AdminallticketsComponent } from
'./adminpanel/adminalltickets/adminalltickets.component';
import { AssignmanagerComponent } from
'./adminpanel/assignmanager/assignmanager.component';
import { AssignengineerComponent } from './assignengineer/assignengineer.component'; import
{ PincodedetailsComponent } from
'./adminpanel/pincodedetails/pincodedetails.component';
import { AddpinComponent } from './adminpanel/addpin/addpin.component'; import {
AllticketsComponent } from './engineer/alltickets/alltickets.component'; import {
OpenticketsComponent } from './engineer/opentickets/opentickets.component'; import {
UpdatestatusComponent } from './engineer/updatestatus/updatestatus.component'; import
{ FeedbackComponent } from './customer/feedback/feedback.component'; import {
TicketraiseComponent } from './customer/ticketraise/ticketraise.component';


@NgModule({
  declarations: [
    AppComponent,
    LoginComponent,
    NavbarComponent,
    LandingComponent,
    CustomerComponent,
    ManagerComponent,
    EngineerComponent,
    AdminpanelComponent,
    ManagerallticketsComponent,
    ManageropenticketsComponent,
    AllusersComponent,
    AdduserComponent,
    CreatecomplaintComponent,
    AllcomplaintComponent,
    ViewticketComponent,
    ComplaintidComponent,
    ComplaintdetailsComponent,
    AdminallcomplaintsComponent,
    AdminallticketsComponent,
    AssignmanagerComponent,
AssignengineerComponent,
    PincodedetailsComponent,
    AddpinComponent,
    AllticketsComponent,
    OpenticketsComponent,
    UpdatestatusComponent,
    FeedbackComponent,
    TicketraiseComponent


],
  imports: [
    BrowserModule,
    AppRoutingModule,
    HttpClientModule,
    FormsModule,
    MatSnackBarModule,
    BrowserAnimationsModule,
    MatDialogModule,
    MatRadioModule
  ],
  providers: [CookieService],
  bootstrap: [AppComponent]
})
export class AppModule { }
```