CORPORATE CLASSIFIEDS

MFPE Project

Team

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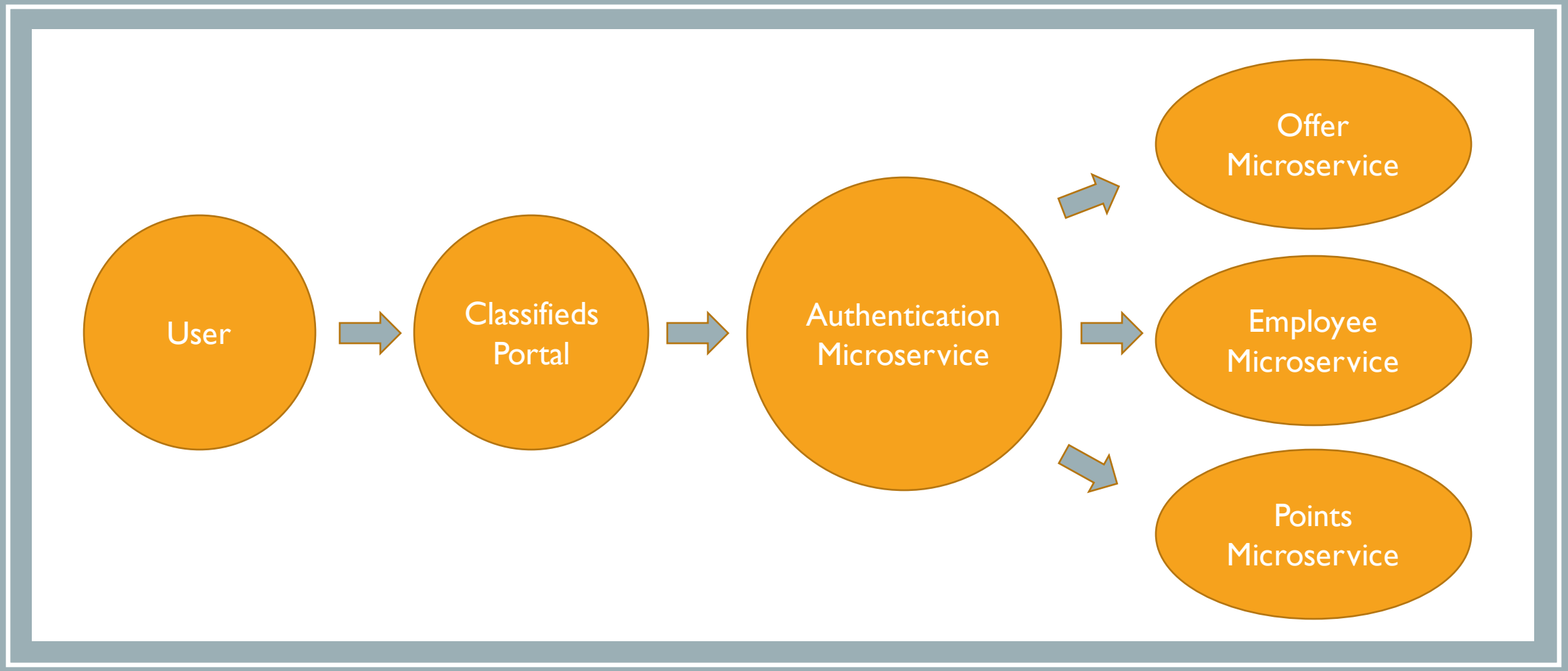
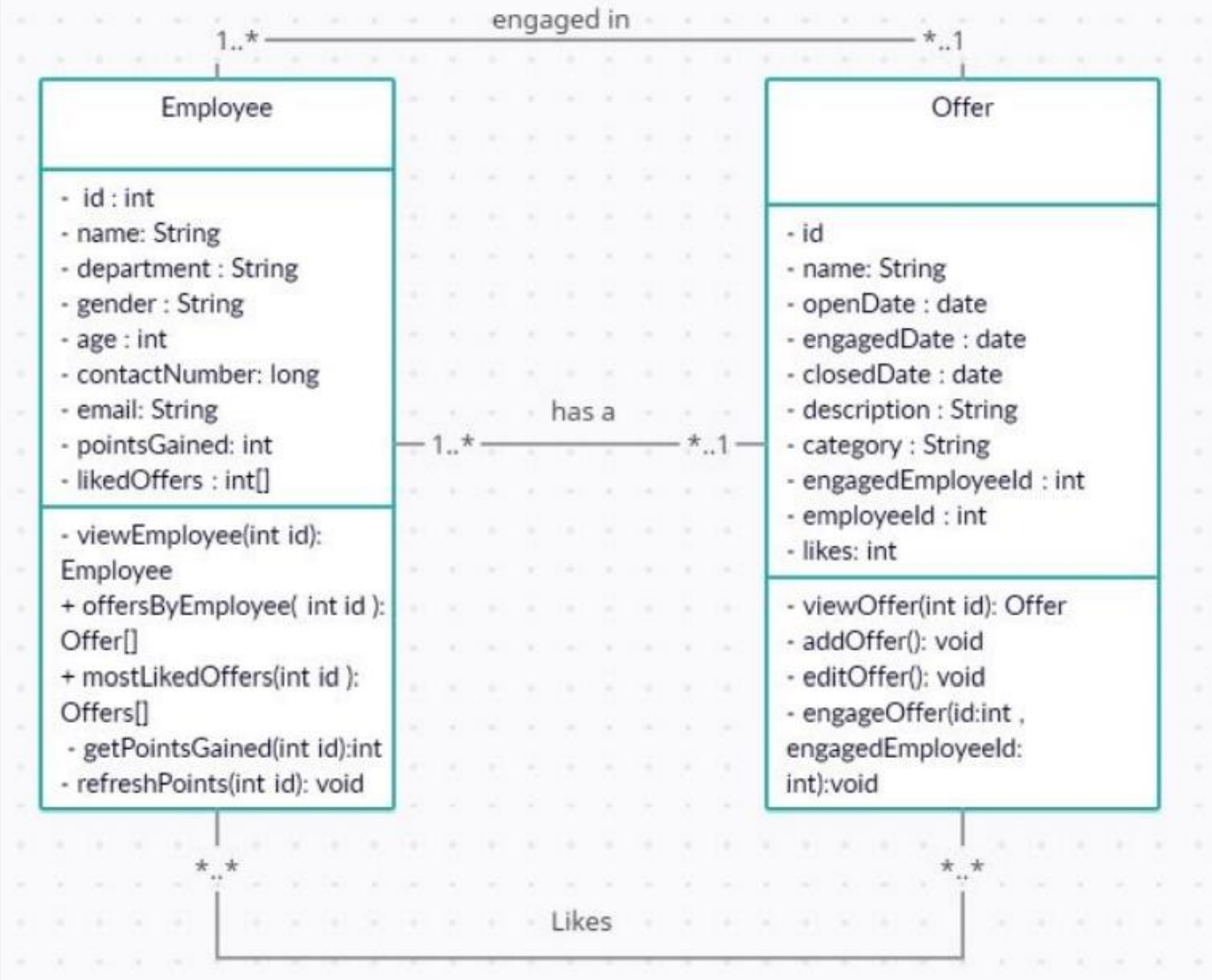


Outline of the Project

REQUIREMENT ANALYSIS

CLASS DIAGRAM



SQL TABLES

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
name	varchar(50)	NO		NULL	
department	varchar(50)	YES		NULL	
gender	varchar(6)	NO		NULL	
age	int	NO		NULL	
contact_number	bigint	YES		NULL	
email	varchar(100)	YES	UNI	NULL	
points_gained	int	YES		0	

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
name	varchar(50)	NO		NULL	
description	varchar(100)	YES		NULL	
category	varchar(50)	NO		NULL	
open_date	timestamp	YES		CURRENT_TIMESTAMP	DEFAULT_GENERATED
closed_date	timestamp	YES		NULL	
engaged_date	timestamp	YES		NULL	
engaged_emp_id	int	YES	MUL	NULL	
emp_id	int	NO	MUL	NULL	
likes	int	YES		0	

Field	Type	Null	Key	Default	Extra
emp_id	int	NO	PRI	NULL	
offer_id	int	NO	PRI	NULL	
liked_on	timestamp	YES		CURRENT_TIMESTAMP	DEFAULT_GENERATED

DESIGN & DEVELOPMENT

MICROSERVICES

Auth Microservice: To handle authentication of the employee.

Employee Microservice: To handle employee-related services.

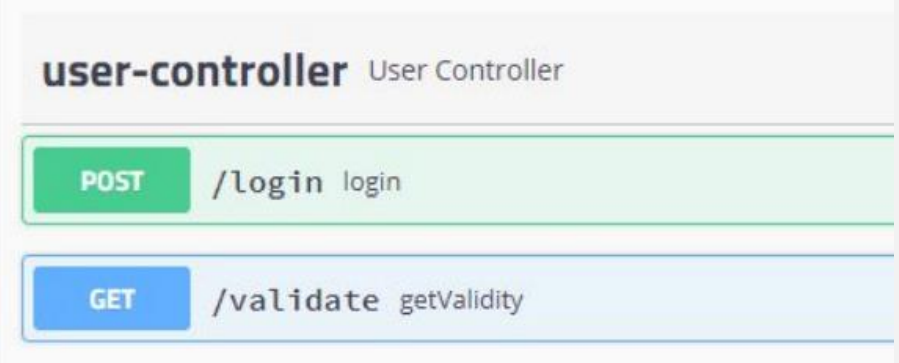
Offer Microservice: To handle offer-related services.

Points Microservice: To refresh points gained by the employee.

AUTH MICROSERVICE

REST Endpoints

- **/login :** to log in the employee and generate JWT token.
- **/validate :** to validate the JWT token.



A look at swagger.html for Auth Microservice

REST Controller

- Rest controller calls the UserServiceImpl.java where all the necessary details are implemented.

```
@PostMapping("/login")
public ResponseEntity<UserToken> login(@RequestBody UserModel user) {
    log.info("Inside Login : ");
    return new ResponseEntity<UserToken>(userServiceImpl.login(user), HttpStatus.OK);
}
```

One of the Post mappings of the rest controller (to login the user)

AUTH SERVICE

```java
// validates the JWT token
public AuthResponse getValidity(String token) {
    // retrieving the token ( removing the Bearer from the header)
    String token1 = token.substring(7);
    AuthResponse authResponse = new AuthResponse();
    // if valid
    if (jwtUtil.validateToken(token1)) {
        log.info("Token is valid");

        // extract the user name
        String username = jwtUtil.extractUsername(token1);

        // set the values for the response
        authResponse.setUsername(username);
        authResponse.setValid(true);
        authResponse.setEmpid(userRepository.findByEmpUsername(username).getEmpid());
    } else {
        authResponse.setValid(false);
        log.error("Token is invalid or expired...");
    }

    return authResponse;
}
```

One of the Post mappings of the rest controller (to login the user)

Exception Handling

- **Rest Exception Handler :** To handle all the exceptions that occurs in the microservice with proper status code.
- **UnauthorizedException :** Thrown when the user is invalid.

EMPLOYEE MICROSERVICE

REST Endpoints

- **/employee/viewProfile/{id} -** to view employee details by id parameter
- **/employee/viewEmployeeOffers/{id} -** to view all the offers posted by the employee through id parameter
- **/employee/viewMostLiked/{id} -** to view top 3 most liked offers of the employee by id parameter

A look at swagger.html for Auth Microservice

REST Controller

- **Rest controller calls the employeeServiceImpl.java where all the necessary details are implemented.**

```
@CrossOrigin(origins = "http://localhost:4200")
@GetMapping("/viewEmployeeOffers/{id}")
public ResponseEntity<?> viewEmployeeOffers(@RequestHeader(name = "Authorization", required = true)
        @PathVariable("id") int employeeId) throws InvalidUserException, MicroserviceException {
    log.info("Inside view employee offers");
    return new ResponseEntity<>(employeeService.viewEmpOffers(token, employeeId), HttpStatus.OK);
}
```

One of the Get mappings of the rest controller (to view the profile of the user)

EMPLOYEE SERVICE

```java
@Override
public List<EmployeeOffers> viewEmpOffers(String token, int id) throws MicroserviceException, InvalidUserException {
    log.info("Inside view employee offers");

    AuthResponse authResponse;
    List<EmployeeOffers> empOffers;

    // validate the user
    try {
        authResponse = authClient.getValidity(token).getBody();
    } catch (Exception e) {
        throw new MicroserviceException(e.getMessage());
    }

    // if token is valid
    if (authResponse.isValid()) {
        // verify the user id with the token id
        if (authResponse.getEmpid() != id) {
            throw new InvalidUserException("invalid token for the user");
        }
        try {
            empOffers = offerClient.getOffersById(token, id);
        } catch (Exception e) {
            throw new MicroserviceException(e.getMessage());
        }
        return empOffers;
    } else {
        log.error("Token invalid");
        throw new InvalidUserException("Invalid User");
    }
}
```

Exception Handling

- **Employee Exception handler :** to handle all the exceptions that occurs in the microservice with proper status code
- **InvalidUserException :** thrown when the user is unauthorized
- **MicroserviceException :** thrown when there is an error in the communicated microservice.

Feign Clients

- **Auth client :** to communicate with the authentication microservice
- **Offer client :** to communicate with the offer microservice

```
//to connect to authentication service
@FeignClient(url = "${auth.feign.client}", name = "${auth.feign.name}")
public interface AuthClient {

    // checks the validity of the jwt token
    @RequestMapping(path = "/validate", method = RequestMethod.GET)
    public ResponseEntity<AuthResponse> getValidity(
            @RequestHeader(name = "Authorization", required = true) String token);
}
```

OFFER MICROSERVICE

REST Endpoints

- **/offer/addOffer -** to post a new offer.
- **/offer/editOffer -** to edit an existing offer.
- **/offer/engageOffer -** to engage an offer.
- **/offer/getOfferByCategory -** to filter offers by category
- **/offer/getOfferByPostedDate -** to filter offers by posted date.
- **/offer/getOfferByTopLikes -** to retrieve top 3 most liked offers.
- **/offer/getOfferDetails/{id} -** to retrieve offer by id parameter.

REST Controller

- **Rest controller calls the offerService.java where all the necessary details are implemented**

```
@CrossOrigin(origins = "http://localhost:4200")
@GetMapping("/getOfferDetails/{offerId}")
public Offer getOfferDetails(@RequestHeader("Authorization") String token, @PathVariable("offerId") int offerId)
        throws OfferNotFoundException, InvalidTokenException, MicroserviceException {

    log.debug("inside getOfferDetails method of offer microservice");
    Offer offer = offerService.getOfferDetails(token, offerId);
    return offer;
}
```

One of the Get mappings of the rest controller (to get the details of an offer, by offer id)

OFFER SERVICE

```java
public Offer getOfferDetails(String token, int offerId)
        throws OfferNotFoundException, InvalidTokenException, MicroserviceException {
    // authenticate the user
    ResponseEntity<AuthResponse> response;
    try {
        response = authClient.verifyToken(token);
    } catch (Exception e) {
        log.info("some error in auth microservice");
        throw new MicroserviceException(e.getMessage());
    }
    // check if token is valid
    if (response.getBody().isValid()) {
        Optional<Offer> offer = offerRepository.findById(offerId);
        // if offer is not found
        if (!offer.isPresent())
            throw new OfferNotFoundException("No offer found");

        return offer.get();
    }
    // if token is invalid
    else {
        throw new InvalidTokenException("token is invalid");
    }
}
```

Exception Handling

- **Global Exception handler -** to handle all the exceptions that occurs in the microservice with proper status code.
- **EmployeeNotFoundException -** thrown when no employee is found.
- **ImproperDateException -** thrown when improper date is passed.
- **InvalidTokenException -** thrown when the jwt token is invalid.
- **MicroserviceException -** thrown when the communicated microservice is not working.
- **OfferNotFoundException -** thrown when no offers are found.

Feign Clients

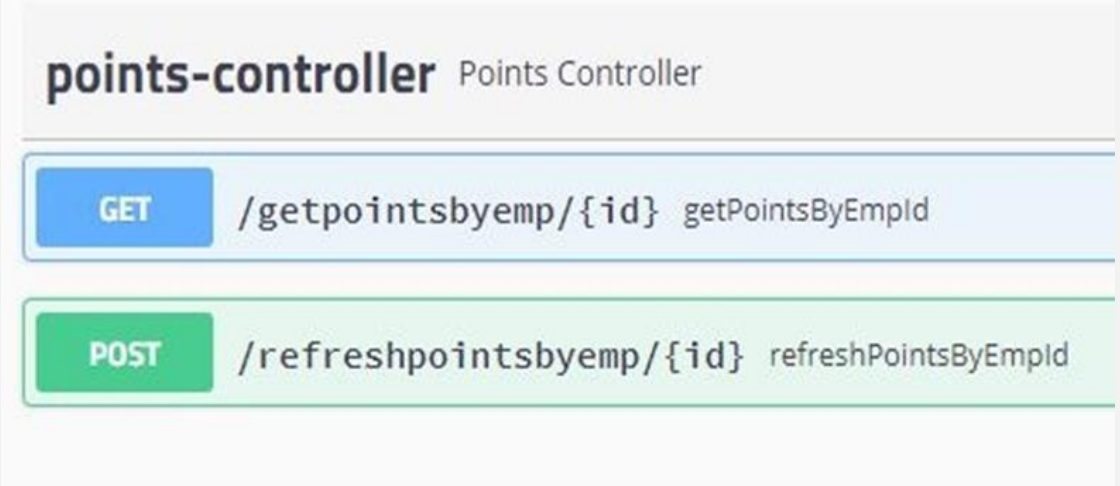
- **Auth client -** to communicate with the authentication microservice.
- **Employee client -** to communicate with the employee microservice.

```
//to connect to authentication service
@FeignClient(url = "${auth.feign.client}", name = "${auth.feign.name}")
public interface AuthClient {

    // checks the validity of the jwt token
    @RequestMapping(path = "/validate", method = RequestMethod.GET)
    public ResponseEntity<AuthResponse> getValidity(
            @RequestHeader(name = "Authorization", required = true) String token);
}
```

POINTS MICROSERVICE

REST Endpoints

- **/getpointsbyemp/{id}** - to get points gained by the employee.
- **/refreshpointsbyemp/{id}** - to refresh the points of the employee.



A look at swagger (for points controller)

REST Controller

- **RESR controller calls the pointsServiceImpl.java where all the necessary details are implemented.**

```
@GetMapping("/getpointsbyemp/{id}")
public ResponseEntity<Integer> getPointsByEmpId(@RequestHeader(name = "Authorization") String token,
        @PathVariable("id") int id) throws MicroserviceException {
    log.info("Inside getpointsbyemployeeid of points microservice");
    return new ResponseEntity<>(pointsService.getPoints(token, id), HttpStatus.OK);
}
```

One of the Get mappings of the REST controller (to get the points gained by the employee)

POINTS SERVICE

```java
public Integer getPoints(String token, int id) throws MicroserviceException, InvalidUserException {
    log.info("Inside getpoints");
    AuthResponse authResponse;
    // verify the token
    try {
        authResponse = authClient.verifyToken(token).getBody();
    } catch (Exception e) {
        throw new MicroserviceException(e.getMessage());
    }
    // validate the user
    if (authResponse.isValid()) {
        Integer points;
        // retrieve the points
        try {
            points = offerClient.getPointsById(token, id);
        } catch (Exception e) {
            throw new MicroserviceException(e.getMessage());
        }
        return points;
    } else {
        log.error("Token invalid");
        throw new InvalidUserException("Invalid User");
    }
}
```

EXCEPTION HANDLING

- **InvalidUserException -** thrown when the jwt token is invalid
- **MicroserviceException -** thrown when the communicated microservice is not working
- **PointsExceptionHandler -** to handle all the exceptions thrown by the rest controller

FEIGN CLIENTS

- **Auth client -** to communicate with the authentication microservice
- **Employee client -** to communicate with the employee microservice
- **Offer client -** to communicate with the offer microservice

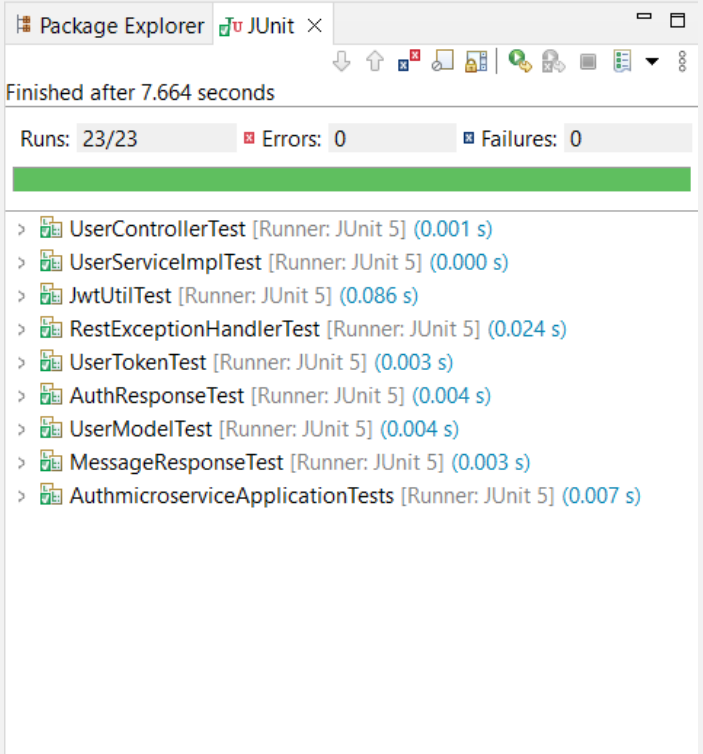
```
@FeignClient(url = "${offer.feign.client}", name = "${offer.feign.name}")
public interface OfferClient {

    @GetMapping("/getOffers/{emp_id}")
    public List<Offer> getOfferByEmpId(@RequestHeader(name = "Authorization")
            String token,
            @PathVariable("emp_id") int id);

    @GetMapping("/getPoints/{emp_id}")
    public int getPointsById(@RequestHeader("Authorization")
            String token,
            @PathVariable("emp_id") int id);
}
```

TESTING

AUTH MICROSERVICE

- UserControllerTest
- AuthMicroserviceApplicationTests
- RestExceptionHandlerTest
- JwtUtilTest
- ModelTests
- UserServiceImplTest

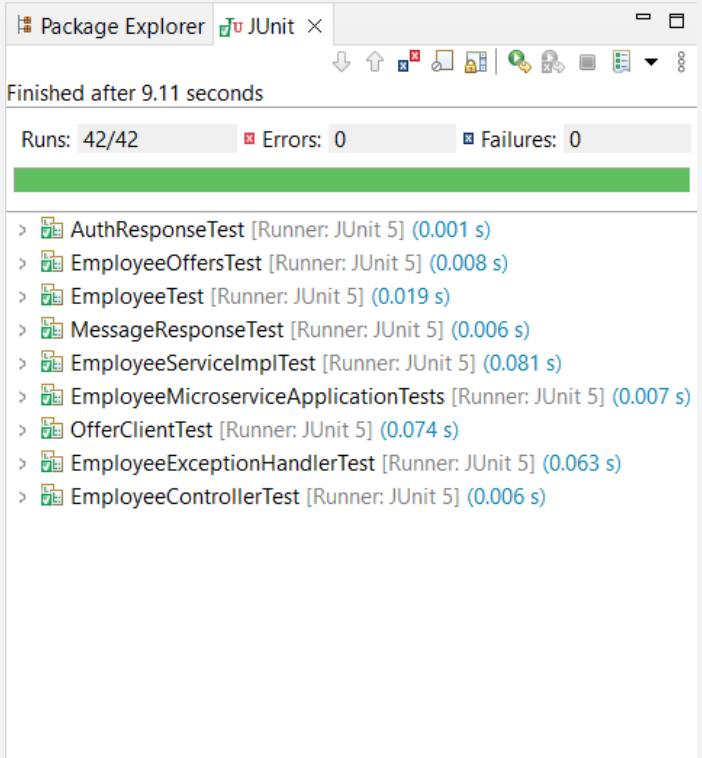
There are 23 test cases and all of them passed successfully.



EMPLOYEE MICROSERVICE

- EmployeeMicroserviceApplicationTests
- OfferClientTest
- EmployeeControllerTest
- EmployeeExceptionHandlerTest
- ModelTests
- EmployeeServiceImplTest

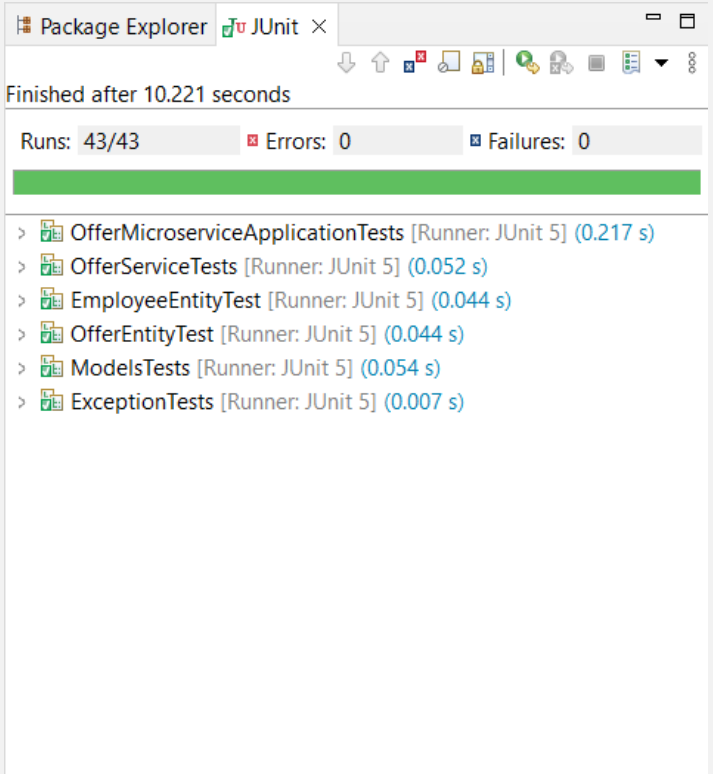
There are 42 test cases and all of them passed successfully.



OFFER MICROSERVICE

- -EmployeeEntityTests
- -ExceptionTests
- -OfferEntityTests
- -OfferServiceTests
- -ModelTests

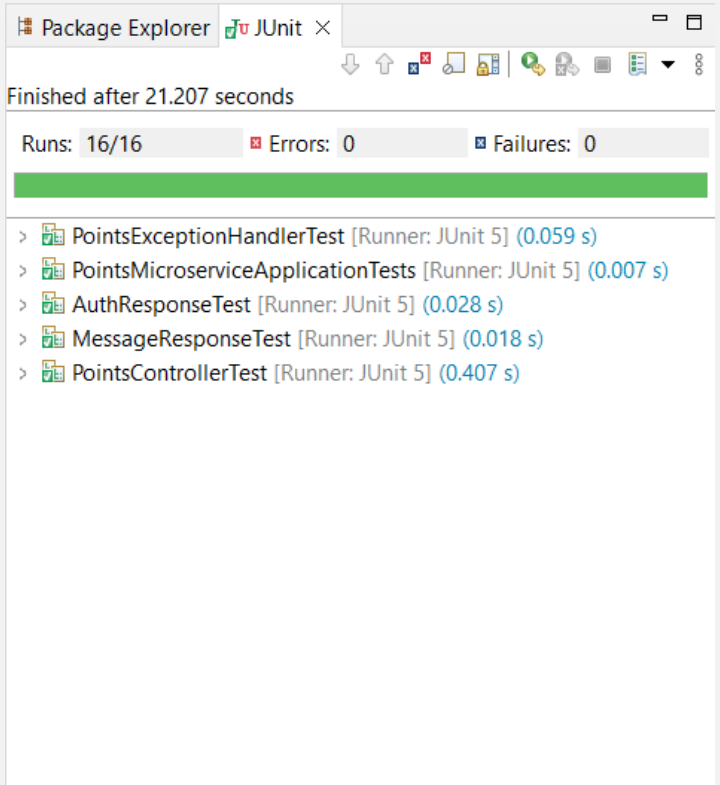
There are 43 test cases and all of them passed successfully.



POINTS MICROSERVICE

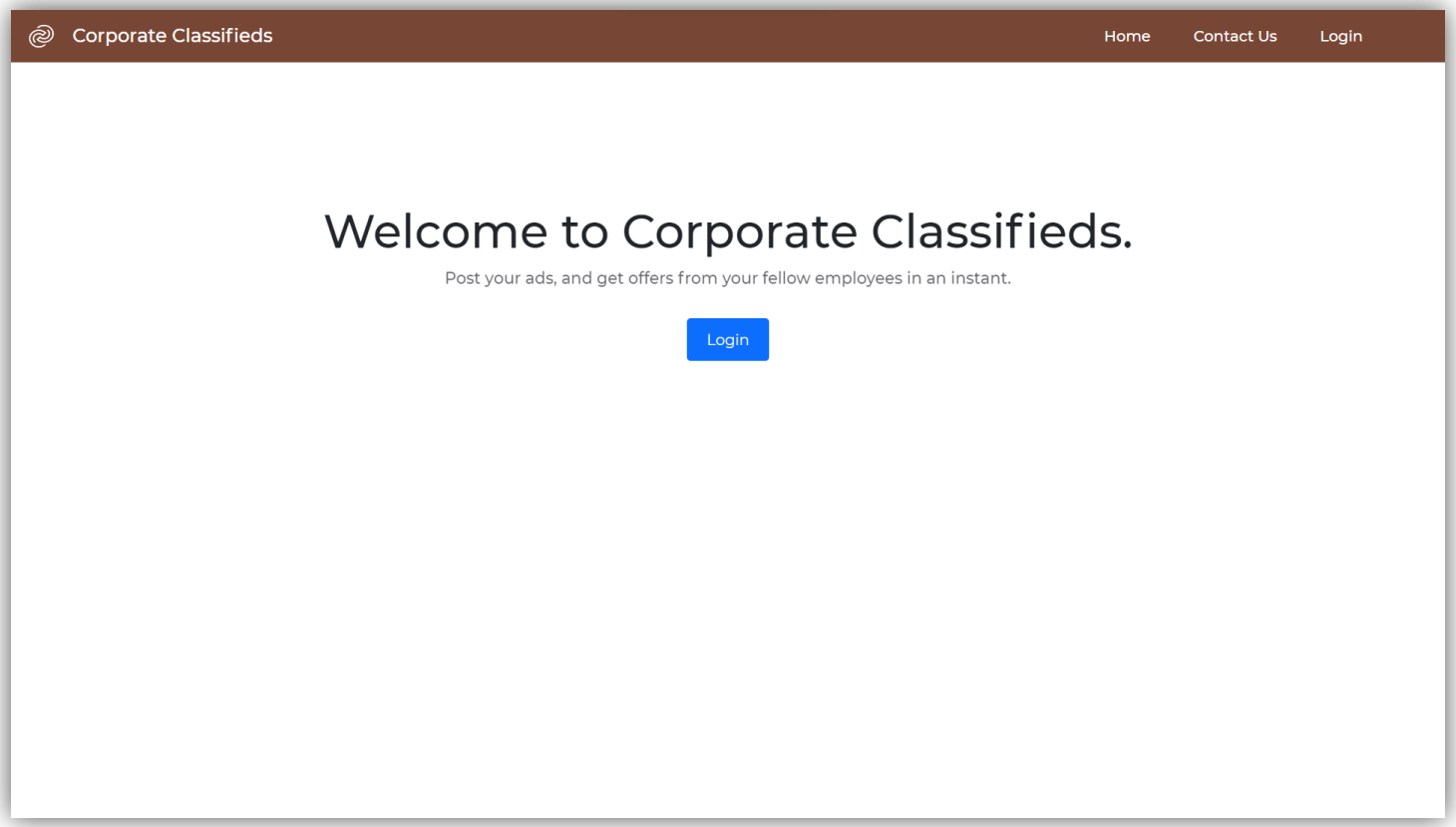
- PointsMicroserviceApplicationTest
- PointsControllerTests
- PointsExceptionHandlerTests
- ModelTests

There are 16 test cases and all of them passed successfully.

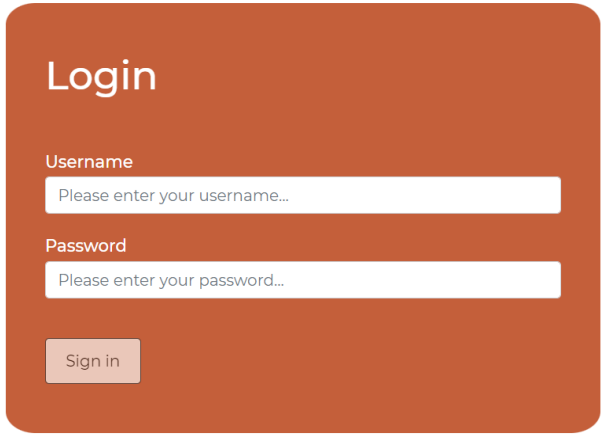


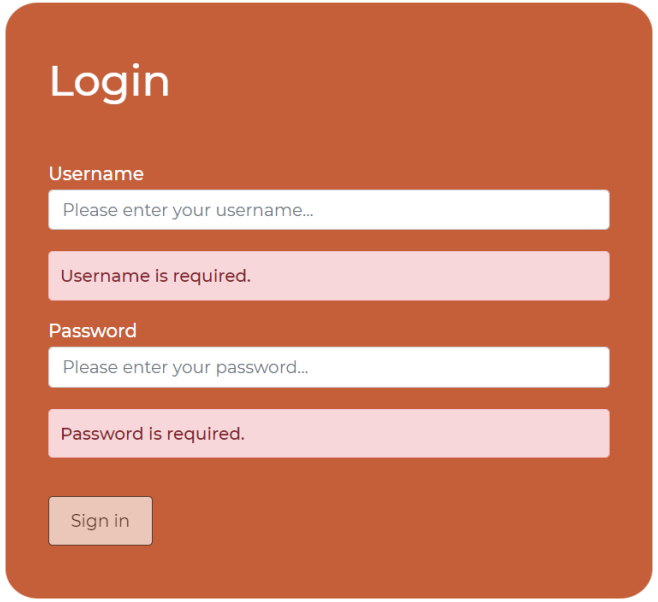
USER INTERFACE

LANDING PAGE



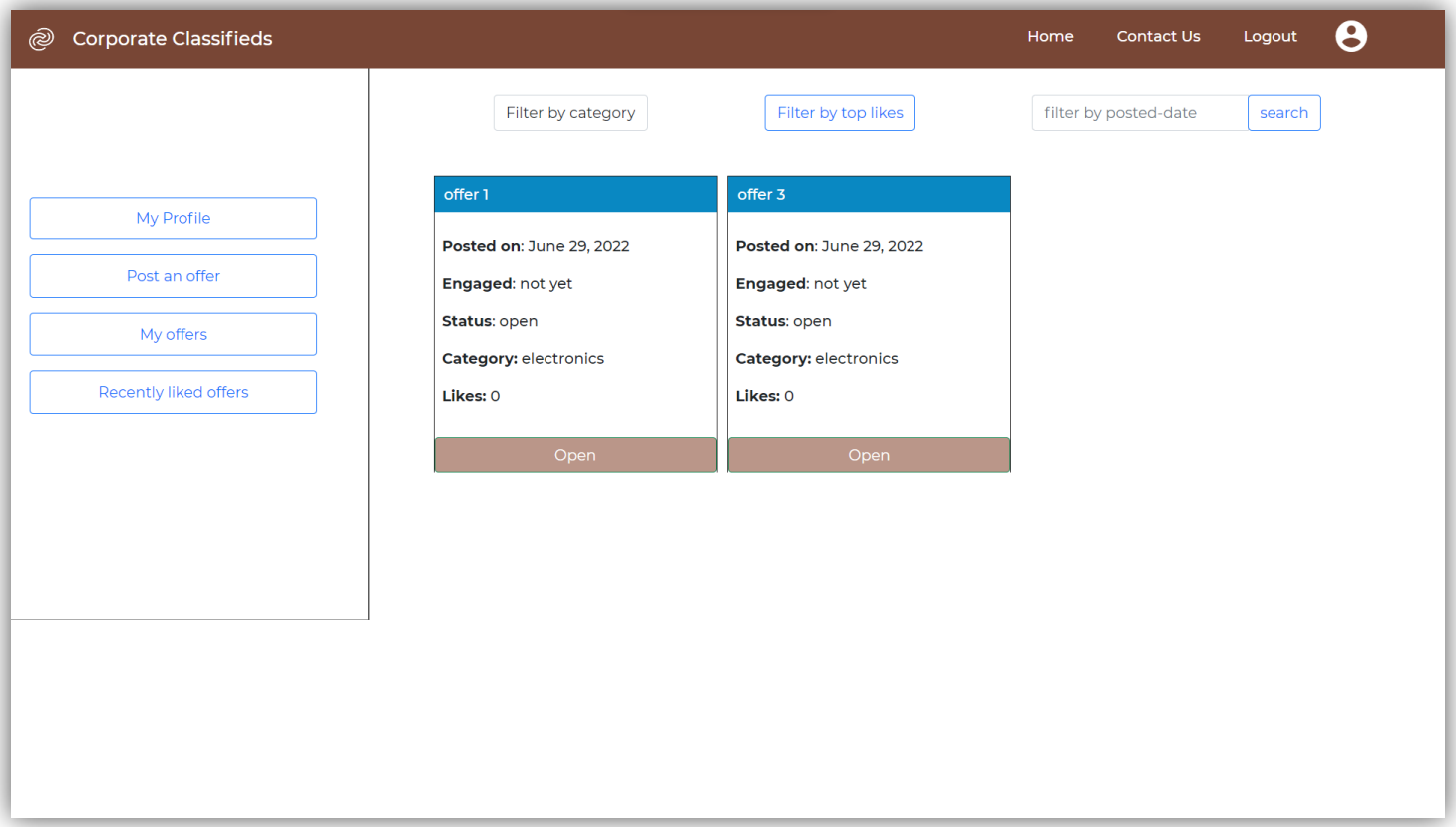
LOGIN PAGE





Proper validation for each field

MAIN PAGE


Corporate Classifieds
Home
Contact Us
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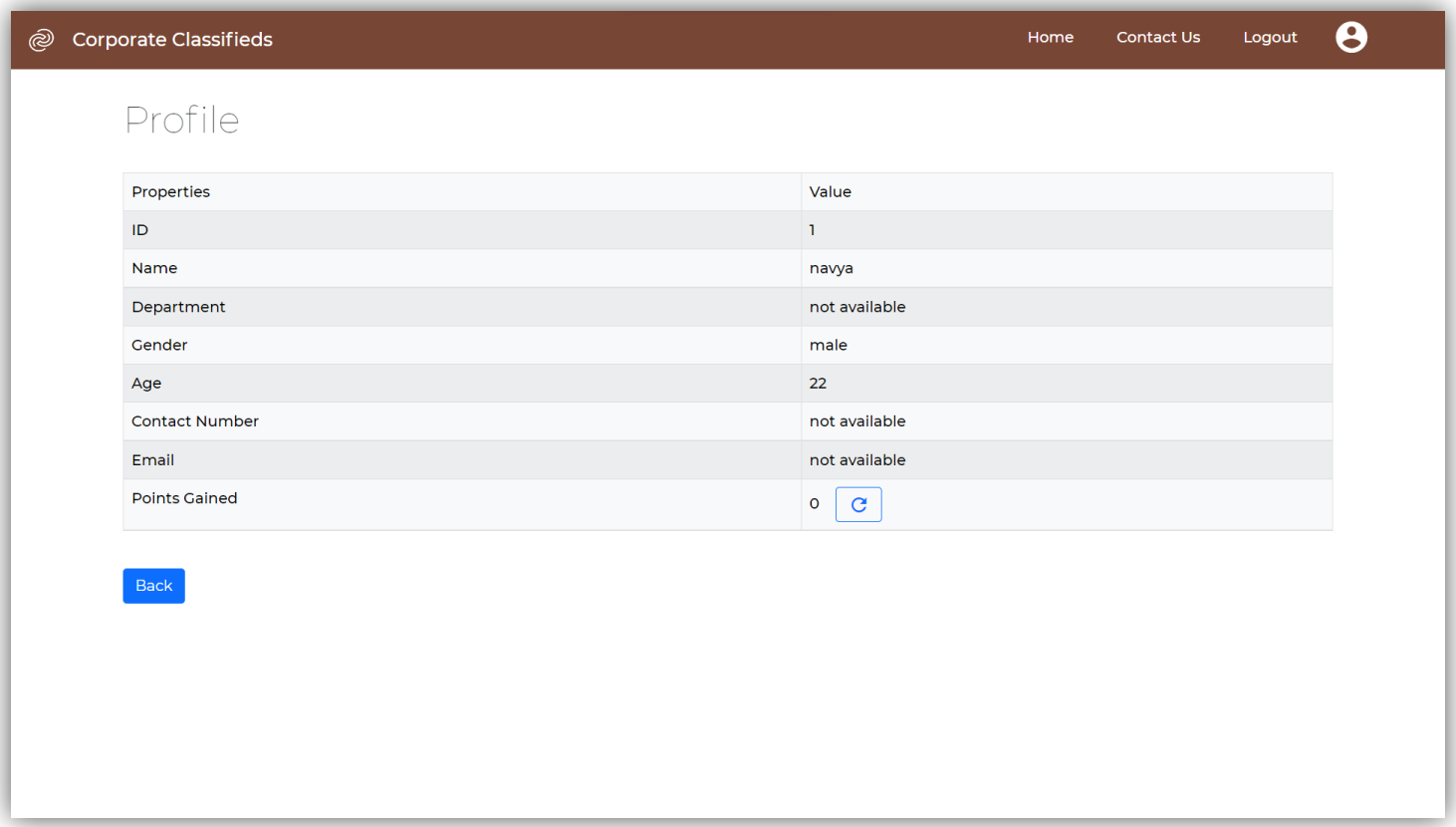
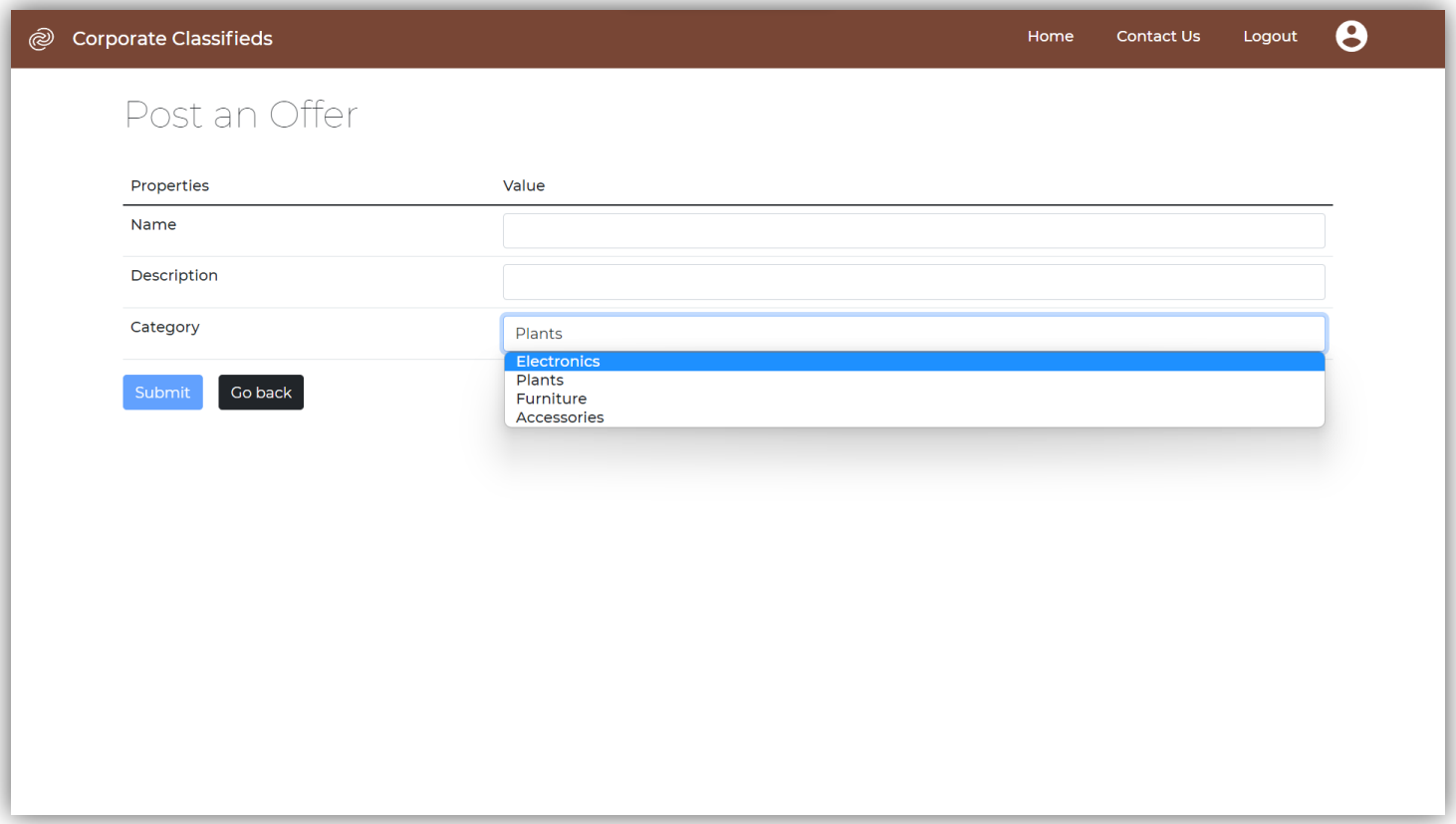
Filter by category
Filter by top likes
filter by posted-date
search
My Profile
Post an offer
My offers
Recently liked offers
offer 1
Posted on: June 29, 2022
Engaged: not yet
Status: open
Category: electronics
Likes: 0
Open
offer 3
Posted on: June 29, 2022
Engaged: not yet
Status: open
Category: electronics
Likes: 0
Open

PROFILE PAGE

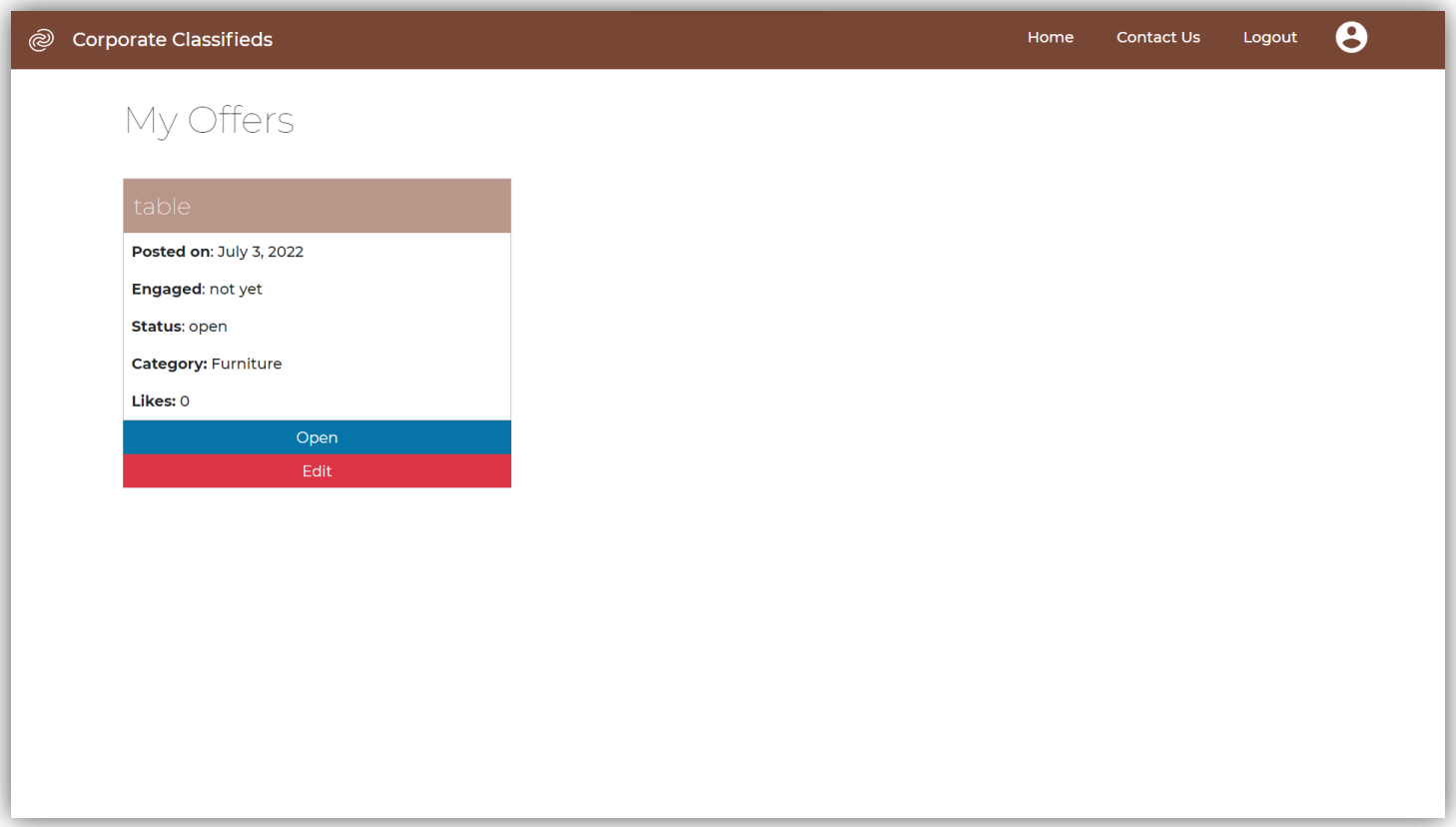


Properties	Value
ID	1
Name	navya
Department	not available
Gender	male
Age	22
Contact Number	not available
Email	not available
Points Gained	0

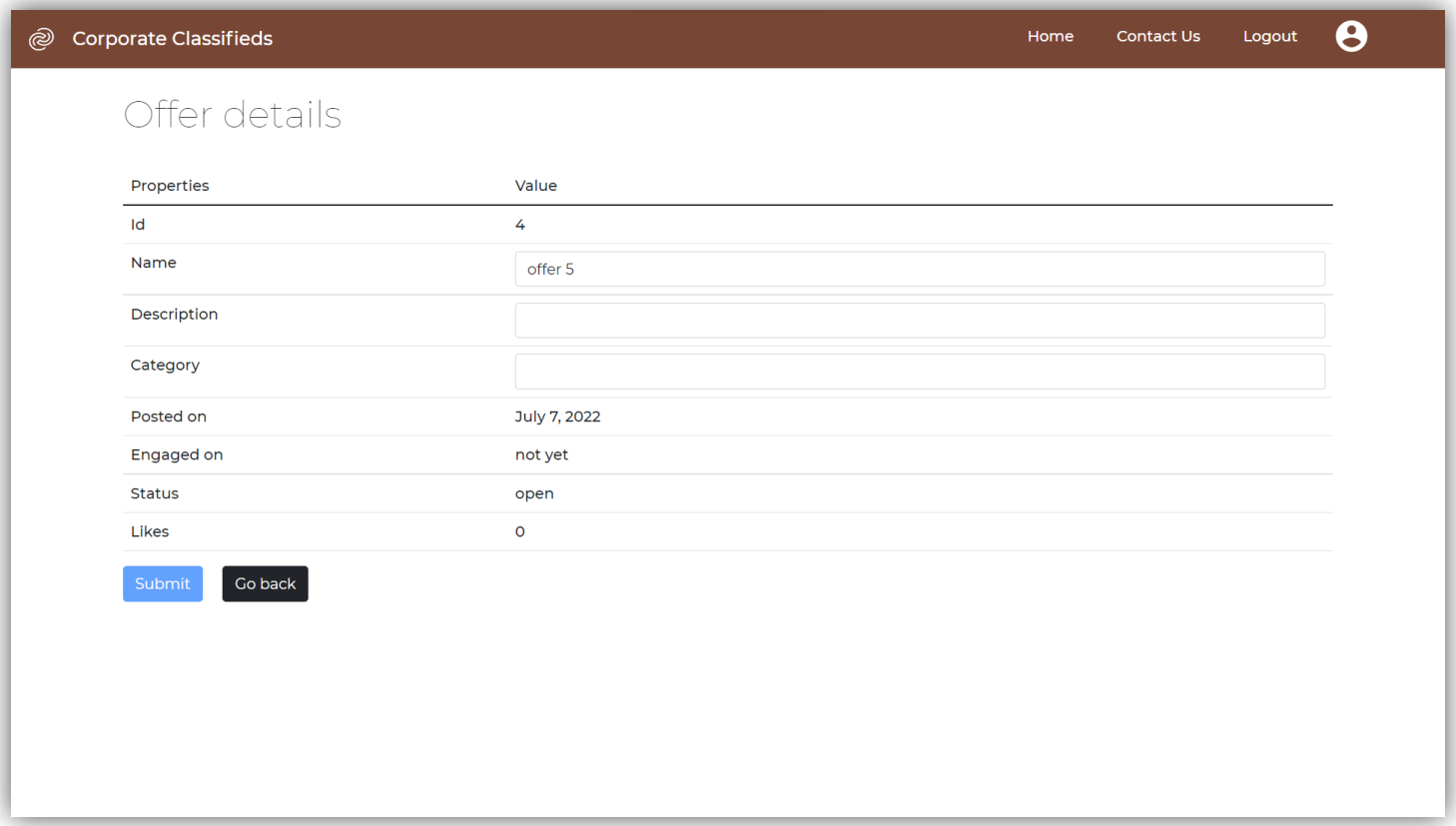
POST OFFER PAGE



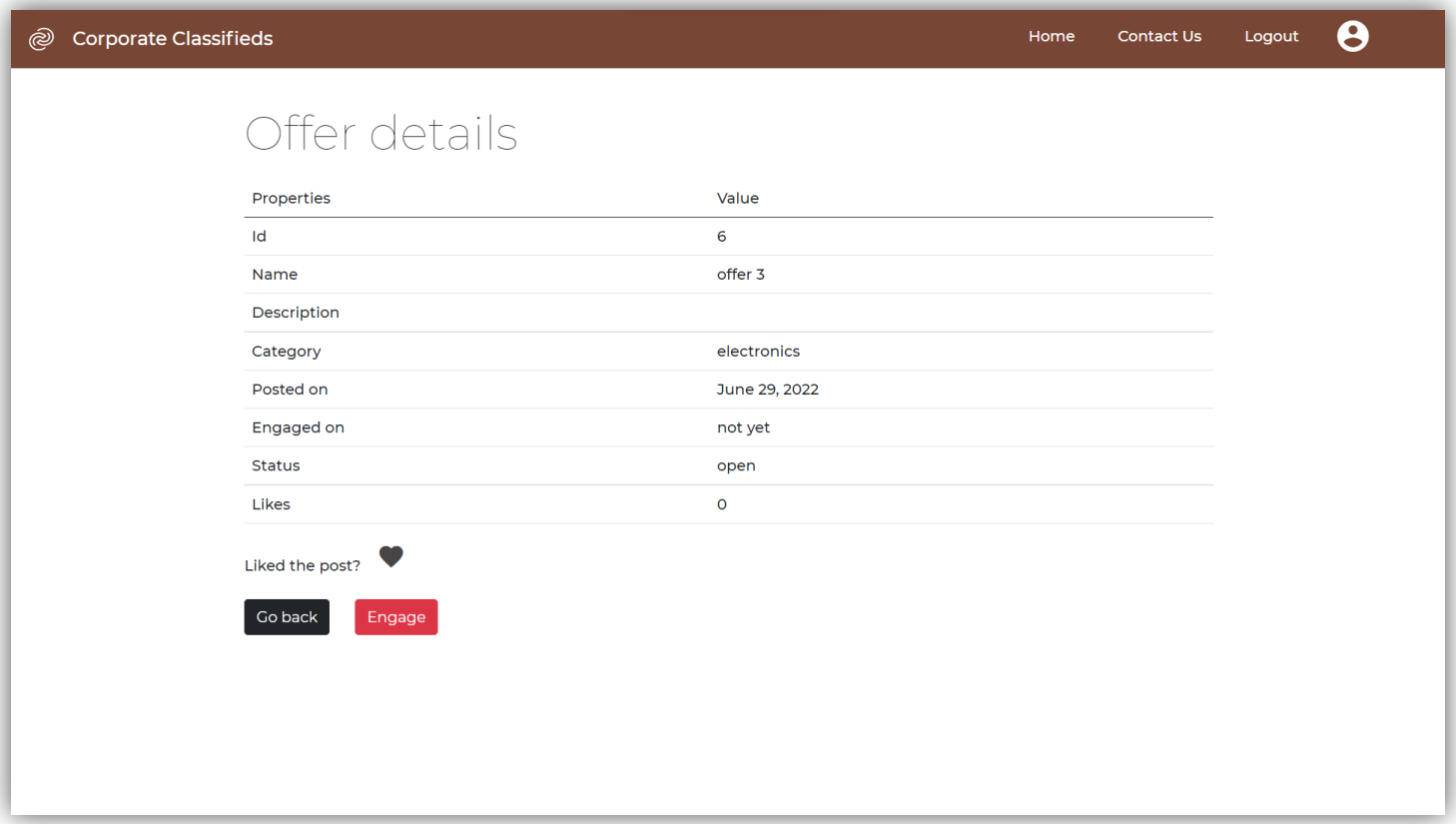
MY OFFERS PAGE



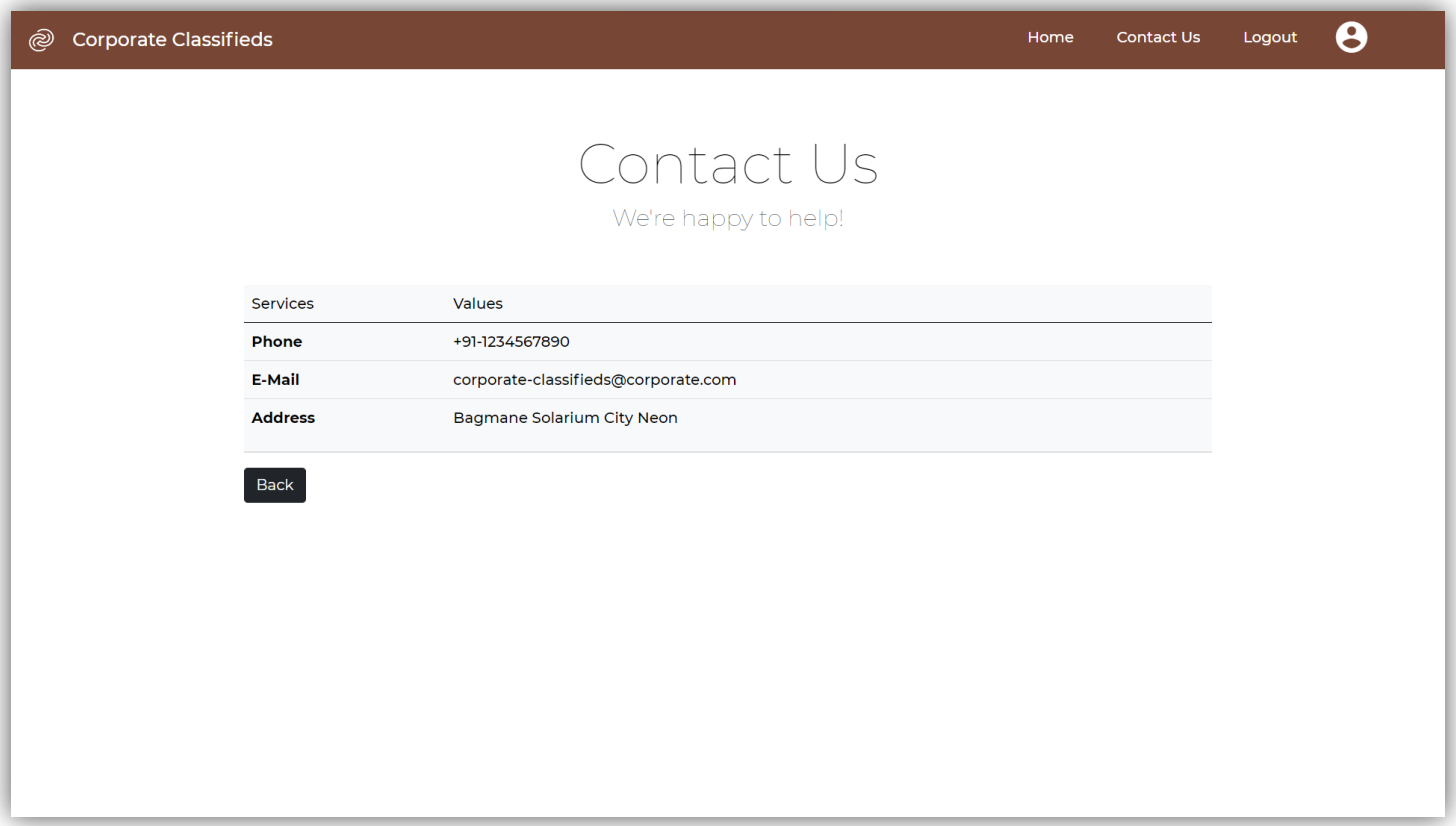
EDIT OFFER PAGE



OFFER DETAILS PAGE



CONTACT US PAGE



THANK YOU