Case Study 1: Java-Based Configuration

Project Title: Online Food Ordering System

Customer.java

```java
package com.example.foodorder;

public class Customer {
  private String name;
  private String contactInfo;
  private String preferredCuisine;

  public Customer(String name, String contactInfo, String preferredCuisine) {
    this.name = name;
    this.contactInfo = contactInfo;
    this.preferredCuisine = preferredCuisine;
  }

  public String getName() { return name; }
  public String getContactInfo() { return contactInfo; }
  public String getPreferredCuisine() { return preferredCuisine; }

  @Override
  public String toString() {
    return "Customer [Name=" + name + ", Contact=" + contactInfo + ", Preferred Cuisine="
+ preferredCuisine + "]";
  }
}
```

Restaurant.java

```java
package com.example.foodorder;

public class Restaurant {
  private String name;
  private String location;
  private String availableCuisine;

  public Restaurant(String name, String location, String availableCuisine) {
    this.name = name;
    this.location = location;
```

```java
    this.availableCuisine = availableCuisine;
  }

  public String getName() { return name; }
  public String getLocation() { return location; }
  public String getAvailableCuisine() { return availableCuisine; }

  @Override
  public String toString() {
    return "Restaurant [Name=" + name + ", Location=" + location + ", Available Cuisine=" +
availableCuisine + "]";
  }
}
```

FoodOrderService.java

```java
package com.example.foodorder;

public class FoodOrderService {
  private Customer customer;
  private Restaurant restaurant;

  public FoodOrderService(Customer customer, Restaurant restaurant) {
    this.customer = customer;
    this.restaurant = restaurant;
  }

  public void processOrder() {
    if
(customer.getPreferredCuisine().equalsIgnoreCase(restaurant.getAvailableCuisine())) {
      System.out.println("Order placed successfully!");
      System.out.println("Customer: " + customer);
      System.out.println("Restaurant: " + restaurant);
    } else {
      System.out.println("No restaurant available for the preferred cuisine: " +
customer.getPreferredCuisine());
    }
  }
}
```

AppConfig.java

```java
package com.example.foodorder;

import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Configuration;

@Configuration
public class AppConfig {

    @Bean
    public Customer customer() {
        return new Customer("Nikhitha", "nikhitha@example.com", "Pasta");
    }

    @Bean
    public Restaurant restaurant() {
        return new Restaurant("Nicoli Cafe", "Vijayawada", "Pasta");
    }

    @Bean
    public FoodOrderService foodOrderService() {
        return new FoodOrderService(customer(), restaurant());
    }
}
```

MainApp.java

```java
package com.example.foodorder;

import org.springframework.context.ApplicationContext;
import org.springframework.context.annotation.AnnotationConfigApplicationContext;

public class MainApp {
    public static void main(String[] args) {
        ApplicationContext context = new
AnnotationConfigApplicationContext(AppConfig.class);
        FoodOrderService orderService = context.getBean(FoodOrderService.class);
        orderService.processOrder();
    }
}
```