Case Study 1: Java-Based Configuration
Project Title: Online Food Ordering System

Customer.java

```java
package com.example.javaBasedConfiguration;
public class Customer {
        public String name;
        public String contact;
        public String cuisine;


        public Customer(String name, String contact, String cuisine) {
                this.name = name;
                this.contact = contact;
                this.cuisine = cuisine;
        }
        public String getName() {
                return name;
        }
        public String getContact() {
                return contact;
        }
        public String getCuisine() {
                return cuisine;
        }
}
```

Restaurant.java

```java
package com.example.javaBasedConfiguration;
import java.util.List;
public class Restaurant {
        private String name;
        private String location;
        private List<String> availableCuisines;

        public Restaurant(String name, String location, List<String> availableCuisines) {
                this.name = name;
                this.location = location;
                this.availableCuisines = availableCuisines;
        }
        public String getName() {
                return name;
        }
```

```java
        public String getLocation() {
                return location;
        }
        public boolean isCuisineAvailable(String cuisine) {
                return availableCuisines.contains(cuisine);
        }
}
```

FoodOrderService.java
```java
package com.example.javaBasedConfiguration;
public class FoodOrderService {
        private Customer customer;
        private Restaurant restaurant;

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

        public void orderFood() {
                System.out.println("Customer: "+ customer.getName() + ", Contact info: "+ customer.getContact()+ ", requested for: '"+ customer.getCuisine()+"'");

                if(restaurant.isCuisineAvailable(customer.getCuisine())) {
                        System.out.println("Order successfully place at: "+ restaurant.getName()+", Location: "+ restaurant.getLocation());
                }
                else {
                        System.out.println("Your requested cuisine '"+ customer.getCuisine()+"' is not available.");
                }
        }
}
```

AppConfig.java
```java
package com.example.javaBasedConfiguration;
import java.util.Arrays;
import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Configuration;
@Configuration
public class AppConfig {
        @Bean
        public Customer customer() {
```

```java
            return new Customer("Alice", "9999999999", "sdc");
        }
        @Bean
        public Restaurant restaurant() {
            return new Restaurant("Udipi", "Hyderabad", Arrays.asList("Dosa", "Idly",
"Noodles", "Upma"));
        }

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

MainApp.java

```java
package com.example.javaBasedConfiguration;
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 service = context.getBean(FoodOrderService.class);
                service.orderFood();
        }
}
```