

Advertisement.java

```
package com.example;

import java.rmi.Remote;
import java.rmi.RemoteException;

// Class representing the advertisement data
public class Advertisement implements java.io.Serializable {
    private static final long serialVersionUID = 1L;
    private String content;
    private String advertiserName;
    private String publicationDate;
    // Additional advertisement attributes and methods can be added here

    public Advertisement(String content, String advertiserName, String publicationDate) {

        this.content = content;
        this.advertiserName = advertiserName;
        this.publicationDate = publicationDate;
    }

    // Getter and setter methods for advertisement attributes
}
```

AdvertisementProducer.java

```
import org.apache.kafka.clients.producer.KafkaProducer;
import org.apache.kafka.clients.producer.ProducerRecord;
import java.util.Properties;

public class AdvertisementProducer {
    private static final String TOPIC_NAME = "advertisement-topic";

    public static void main(String[] args) {
```

```

// Set Kafka producer properties
Properties props = new Properties();
props.put("bootstrap.servers", "localhost:9092");
props.put("key.serializer", "org.apache.kafka.common.serialization.StringSerializer");
props.put("value.serializer", "org.apache.kafka.common.serialization.StringSerializer");

try (KafkaProducer<String, String> producer = new KafkaProducer<>(props)) {
    // Create and send advertisement messages to the Kafka topic
    for (int i = 0; i < 10; i++) {
        String advertisementContent = "Advertisement " + i + " Content";
        String advertiserName = "Advertiser X";
        String publicationDate = "2024-04-25";

        ProducerRecord<String, String> record = new ProducerRecord<>(TOPIC_NAME,
advertisementContent);
        producer.send(record);
        System.out.println("Sent advertisement: " + advertisementContent);
    }
} catch (Exception e) {
    e.printStackTrace();
}
}

```

AdvertisementsInterface.java

```

package com.example;

import java.rmi.Remote;
import java.rmi.RemoteException;

// Remote interface for handling advertisements
public interface AdvertisementsInterface extends Remote {

```

```
void receiveAdvertisement(Advertisement advertisement) throws RemoteException;  
}
```

MarketingDepartmentClient.java

```
package com.example;  
  
import java.rmi.Naming;  
import java.rmi.RemoteException;  
import com.example.Advertisement;  
import com.example.AdvertisementsInterface;  
  
public class MarketingDepartmentClient {  
    public static void main(String[] args) {  
        try {  
            // Lookup the remote object from the RMI registry  
            AdvertisementsInterface server = (AdvertisementsInterface)  
Naming.lookup("//localhost/PublishingCenter");  
  
            // Create and send an advertisement to the Publishing Center  
            Advertisement advertisement = new Advertisement("Advertisement Content", "Advertiser  
X", "2024-04-25");  
            server.receiveAdvertisement(advertisement);  
  
            System.out.println("Advertisement sent successfully.");  
        } catch (Exception e) {  
            System.err.println("Client exception: " + e.toString());  
            e.printStackTrace();  
        }  
    }  
}
```

