

ASSIGNMENT – 6

CL-9
BE-9 P9
Roll No. 43104

//Code

Publisher.java

```
package pubsub;

import javax.jms.*;
import org.apache.activemq.ActiveMQConnection;
import org.apache.activemq.ActiveMQConnectionFactory;

public class Publisher {
    private static String url = ActiveMQConnection.DEFAULT_BROKER_URL;

    public static void main(String args[]) throws JMSEException, InterruptedException{

        ConnectionFactory conFact = new ActiveMQConnectionFactory(url);
        Connection con = conFact.createConnection();
        con.start();

        Session session = con.createSession(false, Session.AUTO_ACKNOWLEDGE);

        Topic topic = session.createTopic("PubSubMessage");

        MessageProducer producer = session.createProducer(topic);

        TextMessage message = session.createTextMessage();

        int runs = 0, wickets = 0;
        for(int i = 0; i < 120; i++) {
            Thread.sleep(5000);
            if(wickets == 10) break;
            int[] score= {1,2,3,4,6,-1,0};
            int index = (int)(Math.random()*6);
            int ball = score[index];
            if(ball == -1)
            {
                wickets++;
            }
            else
            {
                runs+=ball;
            }
            message.setText(runs+"/"+wickets);
            producer.send(message);
            System.out.println("Match score: " + message.getText());
        }
    }
}
```

```

    }
    con.close();

}

}

Subscriber.java

package pubsub;

import javax.jms.*;
import org.apache.activemq.ActiveMQConnection;
import org.apache.activemq.ActiveMQConnectionFactory;

public class Subscriber {
    private static String url = ActiveMQConnection.DEFAULT_BROKER_URL;

    public static void main(String args[]) throws JMSEException, InterruptedException{
        ConnectionFactory conFact = new ActiveMQConnectionFactory(url);
        Connection con = conFact.createConnection();
        con.start();

        Session session = con.createSession(false, Session.AUTO_ACKNOWLEDGE);

        Topic topic = session.createTopic("PubSubMessage");

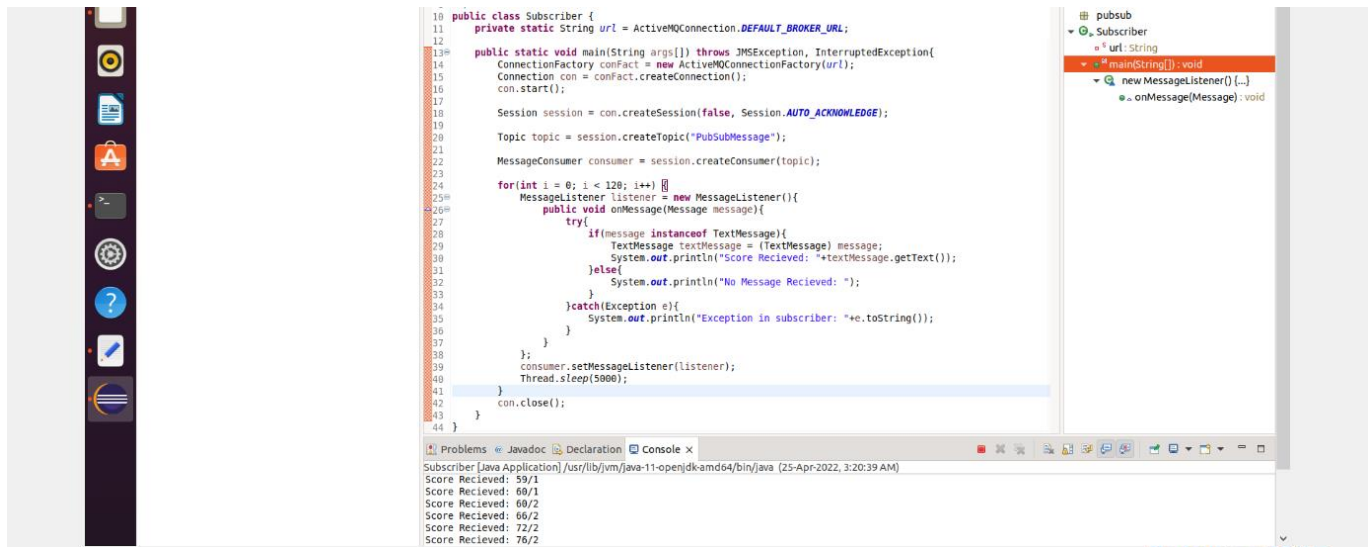
        MessageConsumer consumer = session.createConsumer(topic);

        for(int i = 0; i < 120; i++) {
            MessageListener listener = new MessageListener(){
                public void onMessage(Message message){
                    try{
                        if(message instanceof TextMessage){
                            TextMessage textMessage = (TextMessage) message;
                            System.out.println("Score Recieved:
"+textMessage.getText());
                        }else{
                            System.out.println("No Message Recieved: ");
                        }
                    }catch(Exception e){
                        System.out.println("Exception in subscriber: "+e.toString());
                    }
                }
            };
            consumer.setMessageListener(listener);
            Thread.sleep(5000);
        }
        con.close();
    }
}

```

OUTPUT-

Subscriber:



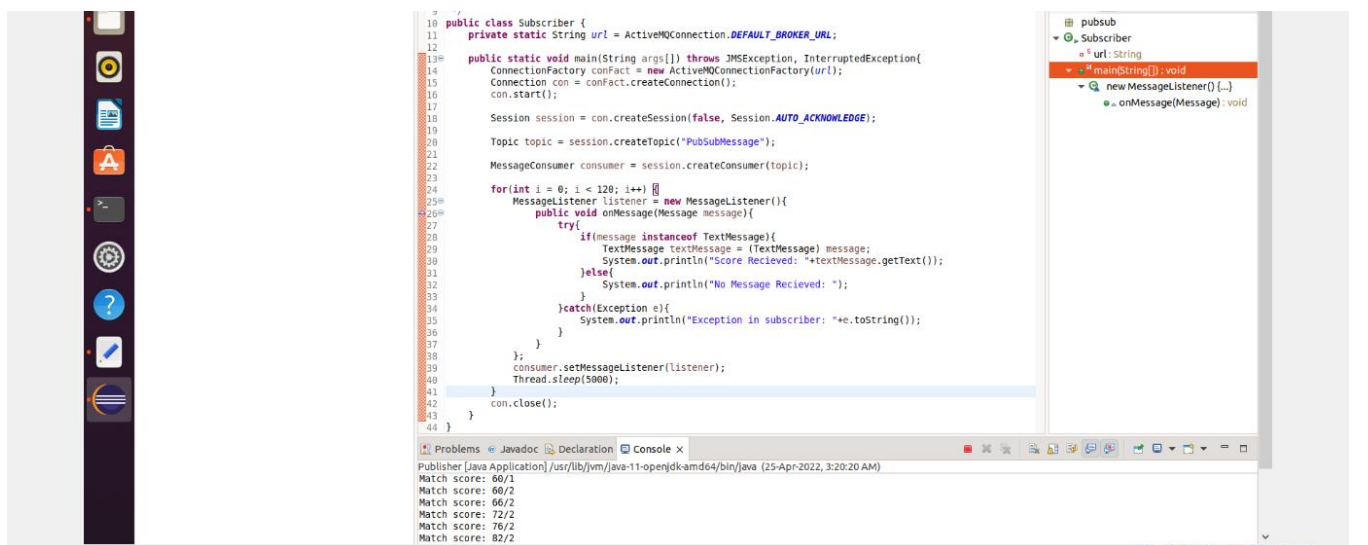
The screenshot displays an IDE with the following components:

- Left Panel:** A vertical sidebar with icons for file explorer, search, and other IDE functions.
- Editor:** Shows the code for `Subscriber.java`. The code is as follows:

```
10 public class Subscriber {
11     private static String url = ActiveMQConnection.DEFAULT_BROKER_URL;
12
13     public static void main(String args[]) throws JMSException, InterruptedException{
14         ConnectionFactory conFact = new ActiveMQConnectionFactory(url);
15         Connection con = conFact.createConnection();
16         con.start();
17
18         Session session = con.createSession(false, Session.AUTO_ACKNOWLEDGE);
19
20         Topic topic = session.createTopic("PubSubMessage");
21
22         MessageConsumer consumer = session.createConsumer(topic);
23
24         for(int i = 0; i < 120; i++) {
25             MessageListener listener = new MessageListener(){
26                 public void onMessage(Message message){
27                     try{
28                         if(message instanceof TextMessage){
29                             TextMessage textMessage = (TextMessage) message;
30                             System.out.println("Score Recieved: "+textMessage.getText());
31                         }else{
32                             System.out.println("No Message Recieved: ");
33                         }
34                     }catch(Exception e){
35                         System.out.println("Exception in subscriber: "+e.toString());
36                     }
37                 }
38             };
39             consumer.setMessageListener(listener);
40             Thread.sleep(5000);
41         }
42         con.close();
43     }
44 }
```
- Right Panel:** A project explorer showing a package named `pubsub` containing a class `Subscriber`. The class has a `main(String[])` method and a `new MessageListener()` method.
- Bottom Panel:** A console window showing the output of the application:

```
Subscriber [Java Application] /usr/lib/jvm/java-11-openjdk-amd64/bin/java (25-Apr-2022, 3:20:39 AM)
Score Recieved: 59/1
Score Recieved: 60/1
Score Recieved: 60/2
Score Recieved: 66/2
Score Recieved: 72/2
Score Recieved: 76/2
```

Publisher:



The screenshot displays an IDE with the following components:

- Left Panel:** A vertical sidebar with icons for file explorer, search, and other IDE functions.
- Editor:** Shows the code for `Subscriber.java`. The code is as follows:

```
10 public class Subscriber {
11     private static String url = ActiveMQConnection.DEFAULT_BROKER_URL;
12
13     public static void main(String args[]) throws JMSException, InterruptedException{
14         ConnectionFactory conFact = new ActiveMQConnectionFactory(url);
15         Connection con = conFact.createConnection();
16         con.start();
17
18         Session session = con.createSession(false, Session.AUTO_ACKNOWLEDGE);
19
20         Topic topic = session.createTopic("PubSubMessage");
21
22         MessageConsumer consumer = session.createConsumer(topic);
23
24         for(int i = 0; i < 120; i++) {
25             MessageListener listener = new MessageListener(){
26                 public void onMessage(Message message){
27                     try{
28                         if(message instanceof TextMessage){
29                             TextMessage textMessage = (TextMessage) message;
30                             System.out.println("Score Recieved: "+textMessage.getText());
31                         }else{
32                             System.out.println("No Message Recieved: ");
33                         }
34                     }catch(Exception e){
35                         System.out.println("Exception in subscriber: "+e.toString());
36                     }
37                 }
38             };
39             consumer.setMessageListener(listener);
40             Thread.sleep(5000);
41         }
42         con.close();
43     }
44 }
```
- Right Panel:** A project explorer showing a package named `pubsub` containing a class `Subscriber`. The class has a `main(String[])` method and a `new MessageListener()` method.
- Bottom Panel:** A console window showing the output of the application:

```
Publisher [Java Application] /usr/lib/jvm/java-11-openjdk-amd64/bin/java (25-Apr-2022, 3:20:20 AM)
Match score: 60/1
Match score: 60/2
Match score: 66/2
Match score: 72/2
Match score: 76/2
Match score: 82/2
```