TECHNISCHE UNIVERSITÄT DARMSTADT

TK1: Distributed Systems - Programming & Algorithms

2. Programming Assignment
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Shared Fly Hunting Game via JMS (20 P.)

Implement the fly hunting game as described in programming exercise 1. The communication should now be handled following the publish/subscribe paradigm. To implement the solution you have to use the Java Message Service (JMS). Any user of the application acts as producer and consumer to the proper topic.

Tasks:

- The shared fly hunting application implements the same features as in programming exercise 1
- JMS coordination: There is no server anymore. Therefore, each client manages one fly on its own and exchanges the related information with the other clients. (Fly management does not change: once the fly is hit, a new position is generated)
- Add a new feature: When all flies are hunted, a new round starts. Then the new flies are generated.
- Add a new feature: For each round a client should start one more fly for each of his hunted flies. (E.g., in round two, each client created two flies, in round three, four flies are created by each client, etc.)

Notes:

- Think about an intelligent player/fly management
- Use the Model-View-Control pattern
- You don't need the interfaces anymore
- Use Apache ActiveMQ Version **5.9.0** as message broker. (http://activemq.apache.org/download.html).
- We will start an ActiveMQ for your submissions, you don’t need to start it in the ANT script
- Use an ANT-Script to start two clients!

Grading:

- Sending messages between clients using ApacheMQ (5 Points)
- Implemented all features of programming assignment 1 for JMS (10 Points)
- Implemented new feature: more flies once a fly dies (5 Points)