**PUBLISH-SUBSCRIBE (PUB/SUB) SYSTEM**

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1. COMPILATION AND EXECUTION STEPS:

1. Open a terminal.
2. Compile all files.                                                                  command: javac \*.java
3. Run the EventManager.java program first as it is the pub/sub system (server).

command: java EventManager

1. Open three (more or less) terminal window and then run the PubSubAgent.java program (client) command: java PubSubAgent
2. Enter Your name i.e. client name and perform the following functions given in the list i.e.

* advertise
* publish
* subscribe
* unsubscribe
* Notify

1. Select the activity of your choice
2. NOTE:

I have hardcoded the server/host name. If you are running the server as well as the client on the same machine, then the code will function properly. If you are running on different machines then, you need to copy all the files on both the machine i.e. on client machine as well as on servers machine and in PubSubAgent.java class you have to change the hostname or IP address (the one of the server).

1. FILES:

* Readme.txt: Information about file structure, compilation, execution.
* EventManager.java - pub/sub server implementation.
* PubSubAgent.java - pub/sub client implementation.
* Publisher.java and Subscriber.java - interface
* ReadingData.java - thread at the servers end that reads the data entered by the client
* Event.java and Topic.java - data structure to store the data

1. TEST CASES (SAMPLE OUTPUT):

Listening on port: 2424

Somebody connected ...

Listening on port: 55311

offer ... 55311

Socket[addr=/127.0.0.1,port=55312,localport=55311]

Somebody connected ...

Listening on port: 55452

offer ... 55452

Socket[addr=/127.0.0.1,port=55453,localport=55452]

Somebody connected ...

Listening on port: 55462

offer ... 55462

Socket[addr=/127.0.0.1,port=55463,localport=55462]

Port being used from now: 55311

Socket[addr=localhost/127.0.0.1,port=55311,localport=55312]

Enter your name:

Adiba

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

1

You entered string 1

ADVERTISE

Enter the keyword

women-cell

Keyword chosen: [women-cell]

Enter the name

RIT

Name chosen: RIT

Id:1

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

2

You entered string 2

PUBLISH

Enter the topic which you want to publish:

RIT

Topic chosen: RIT

Enter the title:

Halloween

Title chosen: Halloween

Enter the content:

ghost

Content written: ghost

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

0

Port being used from now: 55452

Socket[addr=localhost/127.0.0.1,port=55452,localport=55453]

Enter your name:

Richa

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

3

You entered string 3

SUBSCRIBE

Enter the topic which you want to subscribe:

RIT

Topic chosen: RIT

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

1

You entered string 1

ADVERTISE

Enter the keyword

city

Keyword chosen: [city]

Enter the name

NYC

Name chosen: NYC

Id:1

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

2

You entered string 2

PUBLISH

Enter the topic which you want to publish:

NYC

Topic chosen: NYC

Enter the title:

shopping

Title chosen: shopping

Enter the content:

For-india

Content written: For-india

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

5

You entered string 5

SHOW NOTIFICATION

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Event title: Halloween

Event content: ghost

Event topic: RIT

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Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

0

Port being used from now: 55462

Socket[addr=localhost/127.0.0.1,port=55462,localport=55463]

Enter your name:

Swathi

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

3

You entered string 3

SUBSCRIBE

Enter the topic which you want to subscribe:

RIT

Topic chosen: RIT

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

3

You entered string 3

SUBSCRIBE

Enter the topic which you want to subscribe:

NYC

Topic chosen: NYC

Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

5

You entered string 5

SHOW NOTIFICATION

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Event title: Halloween

Event content: ghost

Event topic: RIT

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Event title: shopping

Event content: For-india

Event topic: NYC

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Select the activity of your choice:

0: Quit

1: Advertise

2: Publish

3: Subscribe

4: Unsubscribe

5: Show notification

0