|  |  |  |
| --- | --- | --- |
| **Variables**: | | |
| * **Passcode**: \*\*\*\* * **SecurityLevel**: 3 * **Name**: VotingSoftware (Name of created Component) * **SourceCode**: VS.jar (Source code file name of created Component) * **InputMsgID 1**: 701 (CastVote with attributes VoterPhoneNo, CandidateID) * **InputMsgID 2**: 702 (RequestReport with attributes Passcode,N) * **InputMsgID 3**: 703 (Initialize TallyTable with attributes Passcode,CandidateList) * **OutputMsgID 1**: 711 (AcknowledgeVote with attribute Status) * **OutputMsgID 2**: 712 (AcknowledgeRequestReport with attribute RankedReport) * **OutputMsgID 3**: 26 (Acknowledgement with attributes AckMsgID,YesNo,Name) * **Component Description**: VotingSoftware checks voters using VoterTable and counts votes into TallyTable. Each voter is supposed to have a unique VoterPhoneNo.   When message 701 is received, the VoterPhoneNo is checked against the VoterTable. If it is already there, the voter is prevented from voting, and message 711 is sent with Status 1 (duplicate vote). If it is not there, the VoterPhoneNo is added to VoterTable, and the CandidateID is checked against TallyTable. If CandidateID is not there, Message 711 is sent with Status 2 (invalid vote). If CandidateID is there, that entry is incremented and Message 711 is sent with Status 2 (valid vote).   When message 702 is received and Passcode is verified, a RankedReport containing the first N CandidateID's with highest rankings is generated, and a message 712 is sent containing this RankedReport as a long string. If passcode is wrong, this RankedReport is null. At the end both VoterTable and TallyTable are destroyed.   When message 703 is received and Passcode is verified, TallyTable is initialized by loading it with CandidateList. A general acknowledge message 26 is sent. * **KnowledgeBase**: VoterTable,TallyTable | | |
| **MsgID**:22 | **Description**: Kill Component | **Example**:[Msg22.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/SysXML/22.XML) |
| **Variables**: | | |
| * **Passcode** (Passcode of Administrator) * **SecurityLevel** (Security Level of Administrator) * **Name** (Name of killed Component) * **SourceCode** (Source code file name of killed Component) | | |
| **MsgID**:23 | **Description**: Connect to server | **Example**:[Msg23.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/SysXML/23.XML) |
| **Variables**: | | |
| * **Passcode** (Passcode of Administrator) * **SecurityLevel** (Security Level of Administrator) * **Name** (Name of Component to be connected to server) | | |
| **MsgID**:24 | **Description**: Activate Component | **Example**:[Msg24.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/SysXML/24.XML) |
| **Variables**: | | |
| * **Passcode** (Passcode of Administrator) * **SecurityLevel** (Security Level of Administrator) * **Name** (Name of activated Component) * **SourceCode** (Source code file name of activated Component) | | |
| **MsgID**:25 | **Description**: DeActivate Component | **Example**:[Msg25.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/SysXML/25.XML) |
| **Variables**: | | |
| * **Passcode** (Passcode of Administrator) * **SecurityLevel** (Security Level of Administrator) * **Name** (Name of deactivated Component) * **SourceCode** (Source code file name of activated Component) | | |
| **MsgID**:26 | **Description**: Acknowledgement | **Example**:[Msg26.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/SysXML/26.XML) |
| **Variables**: | | |
| * **AckMsgID** (This is Ack for MsgID) * **YesNo** (Yes/No for positive/negative Ack) * **Name** (Name of involved Component) | | |
| **MsgID**:701 | **Description**: Cast Vote | **Example**:[Msg701.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/DataXML/701.XML) |
| Variables: | | |
| * **VoterPhoneNo** * **CandidateID** | | |
| **MsgID:**702 | **Description**: Request Report | **Example**:[Msg702.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/DataXML/702.XML) |
| Variables: | | |
| * **Passcode** * **N** (number of winners) | | |
| **MsgID:**703 | **Description**: Initialize Tally Table | **Example**:[Msg703.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/DataXML/703.XML) |
| Variables: | | |
| * **Passcode** * **CandidateList** (a string of CandidateID separated by semicolons) | | |
| **MsgID:**711 | **Description**: Acknowledge Vote | **Example**:[Msg711.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/DataXML/711.XML) |
| Variables: | | |
| * **Status** (1: duplicate, 2: invalid, 3: valid) | | |
| **MsgID:**712 | **Description**: Acknowledge RequestReport | **Example**:[Msg712.XML](http://people.cs.pitt.edu/~chang/163/interface1/xml/DataXML/712.XML) |
| Variables: | | |
| * **RankedReport** (a string of N CandidateID,NumberVote separated by semicolons) | | |