**BTC4201 / ICS4104: Distributed Systems**

**Assignment: Inter-process Communications in Distributed Environment**

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**Toy Java FX and Socket Programming**

Toy Fx is a simple Java FX application that implements socket programming, it allows two applications on the same or different PC's to communicate via objects. One computer acts as the server while the other acts as a client.

The UI of the project has been enhanced by a Java Fx Material Design Library called JFoenix. To configure the JFoenix library path to point to your pc, one can download the JAR file from <https://github.com/jfoenixadmin/JFoenix>. The use of screen builder was helpful in designing the interface.

The application that includes simple .fxml files with attached controller and Main class to quick start. Artifact to build JavaFX application is provided.

The application facilitates client and server interactions. The server can ask the client program to send the toy identification details, ask the client program to send the toy information, ask the client program to send the toy manufacturer details, ask the client program to send a thank you message with a unique identification code, ask the client program to send all the toy information in one single instruction and lastly the server can send to client a message to indicate the communication succeeded or aborted.

The client can send the toy identification details to the server program, send the toy information to the server program, send the toy manufacturer details to the server program, Send a thank you message with a unique code through the random UUID to the server program and lastly it can send all the above toy information in one single instruction to the server program.

The 4 java classes (SocketClient.java, ClientProtocol.java, SocketServer.java, ServerProtocol.java) are implemented in the Client and Server classes and controller classes.