

# CUS1166 – Software Engineering

## Technology Presentation

### **Flask-SocketIO**

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- Flask-SocketIO is an extension of Flask
- Based on Websockets
  - Computer Communication Protocol

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## Purpose/Goal of Technology

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- To create communications bi-directional communications between the clients and the server in real-time
- Can create private and public chats
- Can be used along with other Flask extensions

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## Use Cases/Examples/ Applications

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- Examples:
  - Live Chats
  - Live Streams
  - Online Polls
  - Commenting

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## Background – Key Concepts

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- Uses JavaScript for the client side
- Uses Python for the server side
  - The server side is not created within the routes
- Message history will not be stored
  - You will need SQLAlchemy to store past history
- When creating chat rooms, it is important that you are able to get the session id
- \$pip install flask-socketio

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## Getting Started Tutorial

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```
from flask import Flask, render_template
from flask_socketio import SocketIO, send
```

```
app = Flask(__name__)
app.config['SECRET_KEY'] = 'secret!'
socketio = SocketIO(app)
```

```
@socketio.on('message')
def handleMessage(msg):
    print('Message: ' + str(msg))
    send(msg, broadcast=True)
```

```
if __name__ == '__main__':
    socketio.run(app)
```

```
<script type="text/javascript">
  $(document).ready(function() {
    var socket =
    io.connect("http://127.0.0.1:5000");
    socket.on('connect', function() {
      socket.send('User has connected!');
    });
    socket.on('message', function(msg) {
      $("#messages").append('<li>'+msg+'</li>');
      console.log('Received message');
    });
    $('#sendbutton').on('click', function() {
      socket.send($('#myMessage').val());
      $('#myMessage').val('');
    });
  });
</script>
```

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On to the Code!

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- <https://flask-socketio.readthedocs.io/en/latest/>
- <https://github.com/miguelgrinberg/Flask-SocketIO>
- <https://blog.miguelgrinberg.com/post/flask-socketio-and-the-user-session>
- [https://www.youtube.com/watch?v=RdSrkkvj3l4&list=PL1Sfe0mki1OXITsa7zZjQ6\\_biF-agtoPh](https://www.youtube.com/watch?v=RdSrkkvj3l4&list=PL1Sfe0mki1OXITsa7zZjQ6_biF-agtoPh)

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Q&amp;A

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# Questions?

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# Thank you!!!

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