

Team ID	PNT2022TMID15657
Project Name	Efficient Water Quality Analysis and Prediction using Machine Learning

Python code

```
import numpy as np
from flask import Flask, render_template, request
import pickle
app = Flask(__name__)
model = pickle.load(open('wqi.pkl', 'rb'))
@app.route('/')
def home():
    return render_template("web.html")
@app.route('/login', methods = ['POST'])
def login():
    year = request.form["year"]
    do = request.form["do"]
    ph = request.form["ph"]
    co = request.form["co"]
    bod = request.form["bod"]
    na = request.form["na"]
    tc = request.form["tc"]
```

```
total = [[float(year), float(do), float(ph), float(co), float(bod), float
(na), float(tc)]]
y_pred = model.predict(total)
y_pred = y_pred[[0]]
if(y_pred >= 95 and y_pred <= 100) :
    return render_template("web.html", showcase = 'Excellent, The
predicted value is '+str(y_pred))
elif(y_pred >= 89 and y_pred <= 94) :
    return render_template("web.html", showcase = 'Very good, The
predicted value is '+str(y_pred))
elif(y_pred >= 80 and y_pred <= 88) :
    return render_template("web.html", showcase = 'Good, The predicted
value is '+str(y_pred))
elif(y_pred >= 65 and y_pred <= 79) :
    return render_template("web.html", showcase = 'Fair, The predicted
value is '+str(y_pred))
elif(y_pred >= 45 and y_pred <= 64) :
    return render_template("web.html", showcase = 'Marginal, The predicted
value is '+str(y_pred))
else :
```

```
        return render_template("web.html", showcase = 'Poor, The predicted  
value is '+str(y_pred))  
if __name__=='__main__':  
    app.run(debug = True,port=8000)
```