Powerschool Assignment:

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Backend:

I used python language for constructing the backend.

For web development I used Flask.

Flask is a web framework. This means **flask** provides you with tools, libraries and technologies that allow you to build a web application. This web application can be some web pages, a blog, a wiki or go as big as a web-based calendar application or a commercial website

For using flask install python then set up virtual environment then install flask.

For frontend :

I used HTML ie hypertext mark-up language

For styling the webpage CSS ie Cascading Style Sheet is used.

Ajax is a set of web development techniques using many web technologies on the client side to create asynchronous web applications.

Description of code:

For text autocomplete I used a dataset of cities.

```
cities=["Spain","Aachen","Germany","Aalborg","Denmark","Abbotabad","Calangute",
        "Calicut",      "Campirganj", "Canacona", "Chaba", "Chabbewal",
        "Dabani","      Dabhadi",     "Dabhoi","Jabal",     "Jabalpur","K.Paramathi",
        "Kaas Plateau","Zadkala",     "Zaheerabad"]
```

Now,

```python
from flask_wtf import Form

from wtforms import TextField, BooleanField


app=Flask(__name__)

class SearchForm(Form):
    autocomp =TextField('Insert City',id='city_autocomplete')
import os
SECRET_KEY = os.urandom(32)
app.config['SECRET_KEY'] = SECRET_KEY


@app.route('/_autocomplete',methods=['GET'])
def autocomplete():
    cities=["Spain","Aachen","Germany","Aalborg","Denmark","Abbotabad","Calangute", "Calicut",  "Campirganj",   "Canacona", "Chaba"
    "Dabani","  Dabhadi",   "Dabhoi","Jabal",   "Jabalpur","K.Paramathi",   "Kaas Plateau","Zadkala",   "Zaheerabad"]
    print(cities)
    return Response(json.dumps(cities),mimetype='application/json')

@app.route('/',methods=['GET','POST'])

def index():
    form = SearchForm(request.form)
    return render_template("index.html",form=form)

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

Autocomplete api will give data to the function and will dump the cities .

```
<script>
    $(function(){
        $.ajax({
            url:'{{url_for("autocomplete")}}'
        }).done(function(data){
            $('#city_autocomplete').autocomplete({
                source:data,
                minLength:2
            });
        });
    });
</script>
```

Index.html

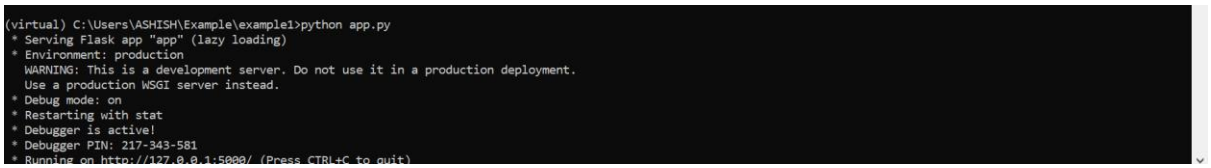
```
<!DOCTYPE html>
<html>
<head>
    <title>PowerSchool
    </title>
    <link rel="stylesheet" href="http://code.jquery.com/ui/1.12.1/themes/base/jquery-ui.css">
    <script src="http://code.jquery.com/jquery-1.12.4.js"></script>
    <script src="http://code.jquery.com/ui/1.12.1/jquery-ui.js"></script>
</head>
<body>
    <h1>Enter Text</h1>
    {{form.autocomp.label}}:{{form.autocomp}}
<script>
    $(function(){
        $.ajax({
            url:'{{url_for("autocomplete")}}'
        }).done(function(data){
            $('#city_autocomplete').autocomplete({
                source:data,
                minLength:2
            });
        });
    });
</script>

</body>
</html>
```

So this will show the textbox with insert cities and give dropdown list of cities.

To run use command prompt

Python app.py



Use specified http for getting results.