```
1 using DatabaseConnect;
 2 using DatabaseConnect.Entities;
 3 using Microsoft.AspNetCore.Cryptography.KeyDerivation;
 4 using Microsoft.AspNetCore.Mvc;
 5 using System;
 6 using System.Collections.Generic;
 7 using System.Ling;
 8 using System.Security.Cryptography;
 9 using System.Threading.Tasks;
10 using static LibraryAppMVC.Models.Models;
11
12 namespace LibraryAppMVC.Controllers
13 {
14
        [Route("/dev/")] // All endpoints checked 2/25/18
15
        public class DevController : Controller
16
            private Context _ctx;
17
            public DevController(Context context)
19
20
                _ctx = context;
21
22
            [Route("adduser")]
23
24
            [HttpPost]
            public IActionResult AddUser([FromBody]NewUser newuser) // Checked 2/25/18 →
25
               working
26
            {
27
                if (newuser.UserTypeInt == 0) { newuser.UserTypeInt = 1; }
28
                User user = new User() { SchoolID = newuser.Username, Password =
                  newuser.Password };
29
                byte[] salt = new byte[128 / 8];
30
                using (var rng = RandomNumberGenerator.Create())
31
32
                    rng.GetBytes(salt);
33
                string hashed = Convert.ToBase64String(KeyDerivation.Pbkdf2(
34
35
                        password: user.Password,
36
                        salt: salt,
                        prf: KeyDerivationPrf.HMACSHA1,
37
                        iterationCount: 10000,
39
                        numBytesRequested: 256 / 8));
40
                user.Salt = Convert.ToBase64String(salt);
41
                user.PasswordHash = hashed;
42
                _ctx.Users.Add(user);
43
                _ctx.SaveChanges();
44
                int UserID = _ctx.Users
45
                    .Single(u => u.SchoolID == user.SchoolID)
46
                    .UserID;
                _ctx.UserUType_rel
47
48
                    .Add(new UserUType { UserID = UserID, UTypeID = 1 });
49
                ctx.SaveChanges();
                return Ok();
50
```

```
...esktop\Library\LibraryAppMVC\Controllers\DevController.cs
51     }
52     }
53 }
```

```
54
```