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

```
...esktop\Library\LibraryAppMVC\Controllers\DevController.cs
```

```
2
                   .Add(new UserUType { UserID = UserID, UTypeID = 1 });
51
               _ctx.SaveChanges();
52
               return Ok();
53
           }
54
55
       }
56 }
57
```