

# CPSC 473 - Web Programming and Data Management

Spring 2015

## Homework Assignment 7, due the week of April 6

In this homework assignment, you will use Node.js, Express and [Redis](#) to create a [URL shortener](#) like [bit.ly](#) or [TinyURL](#).

Your program should do the following:

1. Provide the user with a textbox in which to enter URLs.
2. When a long URL is entered, create a new shortened URL (e.g., <http://localhost:3000/abcd>).
3. If a shortened URL is entered, display the original long URL.
4. When users access a shortened URL, redirect them to the long URL.
5. Display the top ten most popular shortened URLs sorted by the number of times they have been followed.

You may implement the application either as

- A Web Service API returning JSON with an associated static HTML / AJAX page, or
- As HTML generated with a [Jade](#) template.

### Submission

E-mail the following items to [csuf.kenytt.net@gmail.com](mailto:csuf.kenytt.net@gmail.com):

1. A link to a new GitHub repository containing your application
2. Screenshots showing your application in action

### Tips

- <https://github.com/ProfAvery> hosts implementations in [Ruby](#) and [Python](#).
- Note that since Redis is a key-value store, you will probably want to store each (*long*, *short*) URL pair twice: once for retrieval in each direction.
- Consider generating short URLs as numbers in [Base 36](#).
- Consider using Redis [sorted sets](#) to track clicks.
- Set the Subject: line of your e-mail to  
[CPSC 473 - Section 1] Assignment 7  
or  
[CPSC 473 - Section 2] Assignment 7

as appropriate (Wednesday night is Section 1; Monday night is Section 2).

**Note:** if you do not use the Subject : line exactly as given above, one point will be subtracted from your score for the assignment.

### Grading

Each feature listed above is worth 2 points, for a total of 10.

Your code must be properly indented. Failure to do so will result in loss of a point. If you cannot figure out how to do this, click [here](#).

Your code must pass JSHint using the configuration shown [here](#). Failure to do so will result in loss of another point.