



#### Assumptions:

Max characters for the short URL is 7 to 8.

I considered different approaches B10( $10^7$ ), B26, B52, B62 and MD5 hashing, due to size limitation I debated Base62 VS MD5

- MD5 give very long string and 7 to 8 characters will run into many hash collisions.
- B62 ( $62^7$ ) we get more than 3 Trillion combination

Run:

there are 2 endpoints

- **localhost:9000/api/v1/encode POST**  
Input JSON  
{ "originalUrl": "http://www.google.com/1245/5897"}  
Output JSON

```
{  
  "originalUrl": "http://www.google.com/1245/5897",  
  "shortUrl": "http://short3murl.com/VCDRwL"  
}
```

- **localhost:9000/api/v1/decode GET**

Input JSON

```
{ "originalUrl": "http://short3murl.com/VCDRwL" }
```

Output JSON

```
{  
  "originalUrl": "http://www.google.com/1245/5897",  
  "shortUrl": "http://short3murl.com/VCDRwL"  
}
```