# Tech Tips from Mr G

How Secure is My Password?



Passwords. They're an unfortunate fact of life. We don't just have them for preventing people from accidentally getting onto our computers and messing them up (do you have kids?), but also to prevent people from intentionally getting onto our computers and messing them up (do you have teenagers?). We have passwords to protect our email from prying eyes and our bank accounts from those who would use sophisticated methods to clean us out electronically. And as issues such as **identity theft** become more and more widespread, it also becomes more and more important to follow good password practices. And thanks to a website called **How Secure is My Password** (howsecureismypassword.net), we can make sure that our passwords are really secure.



### Secure Doesn't Have to Mean Confusing

That's right. These days you're being told that an 8-character password isn't long enough, and that you need to consider passwords of 14 or even 26 characters. How on earth does anyone expect you to remember something like that?

Well here's the little trick. The password fd7833sfdeOff3pgzd is just as long as stpeters54thandlex, but one is easier to remember. The first is a totally random collection of letters and digits that you'd eventually end up writing down on a Post-It note. The second is something that actually means something; it tells me that Saint Peter's Church in Manhattan is at the corner of 54th and Lexington. It's long, but memorable. And even better, it's not one that's easily broken. How do I know that? Because How Secure is My Password told me that it would take 81 billion years to crack.



As you type your potential password into the box, the color of the screen changes as you go from a weaker password to a stronger one. It also shows you how long it would take for a regular desktop computer to eventually figure out your password, using "brute force" calculations at the rate of <u>4 billion</u> per second.

#### How to Choose a Good...and Memorable...Password

Well first of all, you should know that **password** is one of the worst passwords you can use. And yet, many people are lazy enough that that's exactly what they use. Other commonly used passwords that are really horrible choices are **qwerty** and **12345678**. How bad are these choices? They're so bad that when you enter them into **How Secure is My Password**, it doesn't just tell you how many fractions of a second it would take to guess it, it says <u>Instantly</u>. That's because they're some of the things that a password cracker will try first, before actually having to do any calculations. The big surprise to me was that **ncc1701** was another commonly-used password that would be guessed instantly. I suppose I shouldn't have been surprised though, after all, it's the registry number of the **Starship Enterprise** from **Star Trek**.

Other bad choices are your dog's name, your cat's name, your license plate number, or anything else that is easily attached to you. Remember, your 287 BFFs on Facebook know everything about you, and if you're like the average Facebook user, your privacy settings aren't too strong anyway.

So how do you make a good password that's memorable? The key is to have a key, and to step back a bit. I have a friend who uses the names of all the train stops she passed through when she lived in Japan. That's not something that the average person is going to try to guess, and it's definitely going to take a password-cracking program a long time to figure that out.

## I've Never Been to Japan, But I've Been to the Mall

I practically grew up in the malls of North Jersey, and that could be my system. The malls I spent the most time in were Willowbrook, Livingston, and Menlo Park. What can I do with them? Well, I know that Willowbrook is in Wayne, at the intersection of Routes 23 and 46. If I type Willowbrook23and46 into How Secure is My Password, it tells me that it would take a quadrillion years to crack it. Not bad. What about the Livingston Mall? It's at the intersection of Eisenhower Parkway and South Orange Ave. Testing out LivingstonIkeSO gives a result of 435 million years. And the Menlo Park Mall is located on Parsonage Road, between Routes 1 and 27. MenloParkland27 would take 6 billion years to crack.

Maybe you're not a big mall rat, but maybe you travel a bit. When we're heading south, Front Street in Chenago Forks is almost always our first pit stop. **Exit6FrontSt** only takes 25,000 years to crack. **Exit6ChenangoForks** is much better, taking a quadrillion years. We go shopping at the Crossings Outlet Center in Tannersville PA. A password of **Exit299Tannersville** would take 90 quadrillion years to break.

What's so great about these passwords is that you don't really have to remember them. If you do, that's fine, but if all you knew about your password for **Café Press** was that it was the location of the Crossings Outlet, you could look that up. In fact, you could write down "Crossings" next to Café Press in a password clue list, and have just enough information to jog your memory, but not to give it away to strangers.

## So Many Systems, So Many Passwords

Back in the old days, a lot of us would use the same password for everything. Actually, today a lot of us are still doing that...and it's a very bad idea. That's because if someone cracks the one password that you use for everything, all of your accounts are compromised.

So what do you do? How do you keep track of all the passwords you have for all the different accounts you have? This is actually quite easy.

First of all, make sure that your email and Facebook passwords are totally different. And if you have more than one email account, make them all different from each other. How will you be able to keep track? Believe me, if you use these accounts as often as I do, you'll know them better than your own birthday. But let's say that remembering them is a problem. In that case, you can make a list that gives a hint, but not the real password. Take a look at the example below. It refers to some of the passwords I've already shown you.



Second, try to come up with some connection to the account you need to make a password for. Let's say that you use **Walgreens.com** for sharing photos. Did you take photography in high school from Ms Norton? Did

you get a photography badge when you were a Boy Scout or Girl Scout? Then maybe you might want to try **MsNortonCorcoran** or **Troop360PhotoBadge**. For your **iTunes** account you might want to use the name of a music teacher. **MrsRobertsBradfordSchool** would take a septillion years to crack.

How about your **Amazon** and **Barnes & Noble** accounts? Names of English teachers or librarians would work. **MrDanteBradfordSchool** would take a nice 8 quintillion years to crack. Maybe the address of your local Barnes & Noble store would work. **3454ErieBlvdDeWitt** would take a quadrillion years, but if I really wanted to screw someone up, I could use the address of a store that was nowhere near me...like the one in Bethlehem PA. It's just a matter of remembering what store you used, so that you can look up the right address.

## About the Dog

I stated early on that using your dog's name was just about the worst thing you could do, because it'll be one of the first things someone guesses. But if you really want to keep your dog involved, there are ways to do it without being obvious.

Where does your dog stay when you go away? Do you have a friend who comes over and watches the dog while you're on vacation, or do you board Spot at a local kennel? When I was a kid, we sent our dog to the kennel when we were leaving town for a few days. So if your dog is a regular guest at **Bark Avenue** on East Madison Ave, you could create a password of **SpotatBarkAve**. That should get you a good 160,000 years or so. On the other hand, if your friend Shannon over on Peck Ave comes over everyday while you're gone to check on Spot and bring in the mail, your could use **SpotandShannon249PeckAve**, and get 82 septillion years.

## A Few Last Thoughts

I've shown you a number of different ways to create memorable and secure passwords, but don't just limit yourself to what you've seen here. Use your imagination and **How Secure is My Password** to come up with your own system for creating passwords. After all, the last thing I want is for you to all be using the same system. With that in mind, you can be absolutely certain that I haven't given you all the secrets...after all, I don't want you to be able to figure out how I do my passwords, and I just found out that some of the good passwords I had were woefully insecure!

But remember, no matter what you do, don't use one password for everything. It's like having one key for your house, your car, your office, and everything else important in your life.

## One More Last Thought: Suspicious Minds

I have to tell you, that as I was trying out all of these many possible password combinations, I started wondering to myself, "How do I know that these people aren't just trying to collect all the possible passwords I intend to use so that they can hack me later?"

The answer is that I <u>don't</u> know that. The website says that you need to be running JavaScript for security reasons, and those security reasons are that the JavaScript code is run on <u>your machine</u>, and not on their server...so that theoretically they're not harvesting potential passwords.

However, if you're really concerned about this, you could always run your password tests on <u>someone</u> else's computer. In fact, we invite you to come in and use our public computers for that very purpose.

Now go change your passwords already!

## Tech Tips from Mr G is a publication of the Liverpool Public Library.

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