



Security and Password Management

CA Maitri Chheda

Instances where one needs Password

Computer and Mobile Devices

- Laptop, PC, Phone
- Tablet, E-Reader etc

Apps, Banks, E-Wallets Etc

- Money Control
- Paytm, Bank App etc

E-Commerce Websites

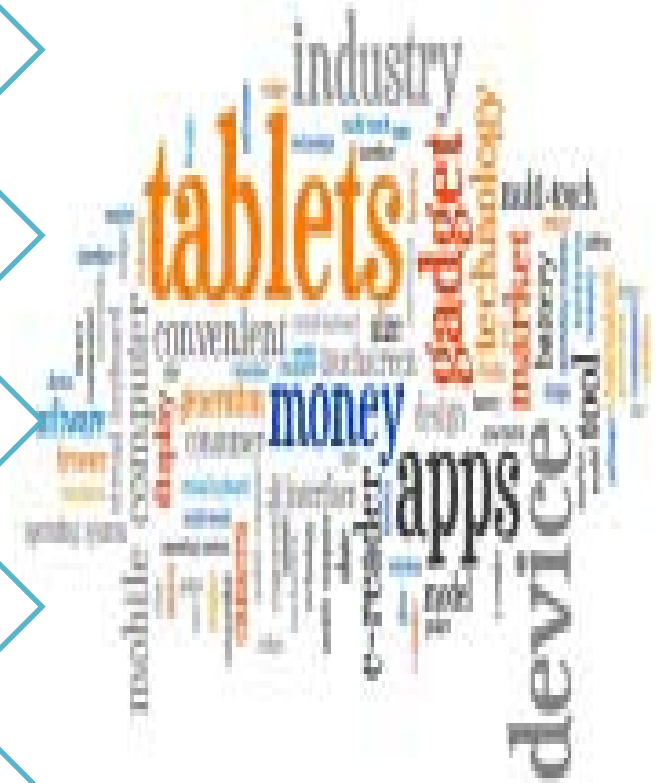
- Amazon
- Flipkart etc

Emails & Social Networks

- Gmail, Yahoo etc
- Facebook, Twitter etc

Professional Sites

- ICAI
- Income Tax, Sales Tax



Quick Quiz

Which of the following best describes your password :

- A. Is based on common dictionary words
- B. Is based on common names
- C. Is based on user/account name
- D. Is short (under 6 characters)
- E. Relatives name, Pet's Name etc

Most Common Passwords

Open Sesame

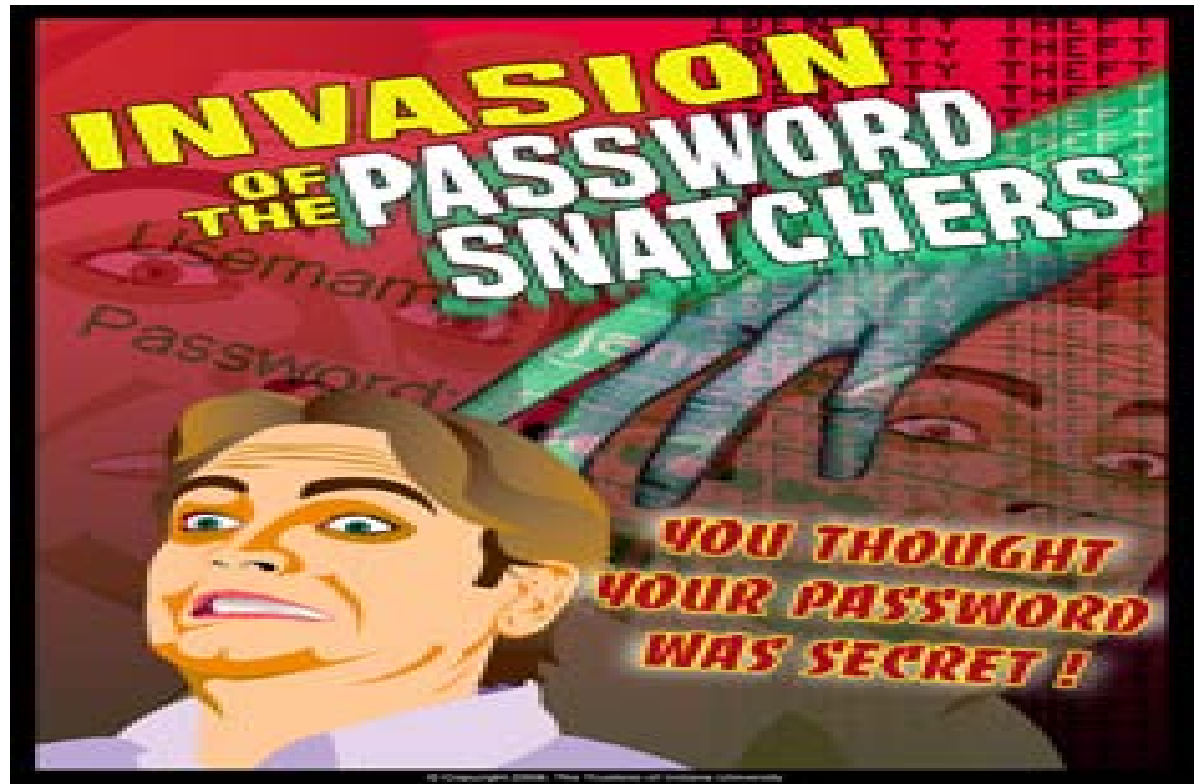
Most popular passwords of the past 4 years

	2011	2012	2013	2014
1	password	password	123456	123456
2	123456	123456	password	password
3	12345678	12345678	12345678	12345
4	qwerty	abc123	qwerty	12345678
5	abc123	qwerty	abc123	qwerty
6	monkey	monkey	123456789	123456789
7	1234567	letmein	111111	1234
8	letmein	dragon	1234567	baseball
9	trustno1	111111	iloveyou	dragon
10	dragon	baseball	adobe123	football

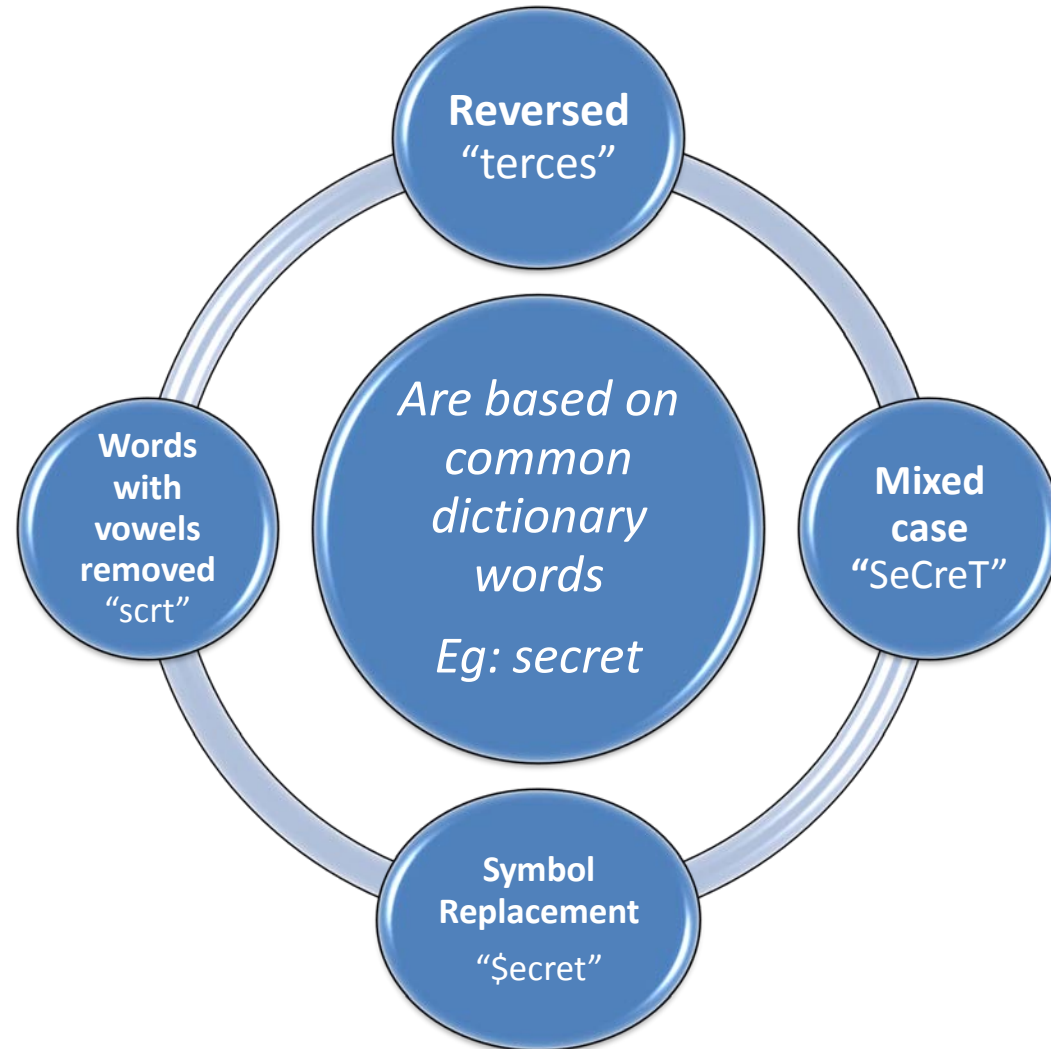
Source: SplashData

The Wall Street Journal

Your Identity and Privacy are at risk



Characteristics of *weak* passwords



Characteristics of *weak* passwords



*based on
common
names eg.
Pets*



*based on
common
keyboard
patterns
(e.g.,
“qwerty”)*

Characteristics of *weak* passwords



*based on
user/account
identifier*



*Short (under
8 characters)*

Characteristics of *weak* passwords

85% of my time online is spent clicking "forgot password" links.

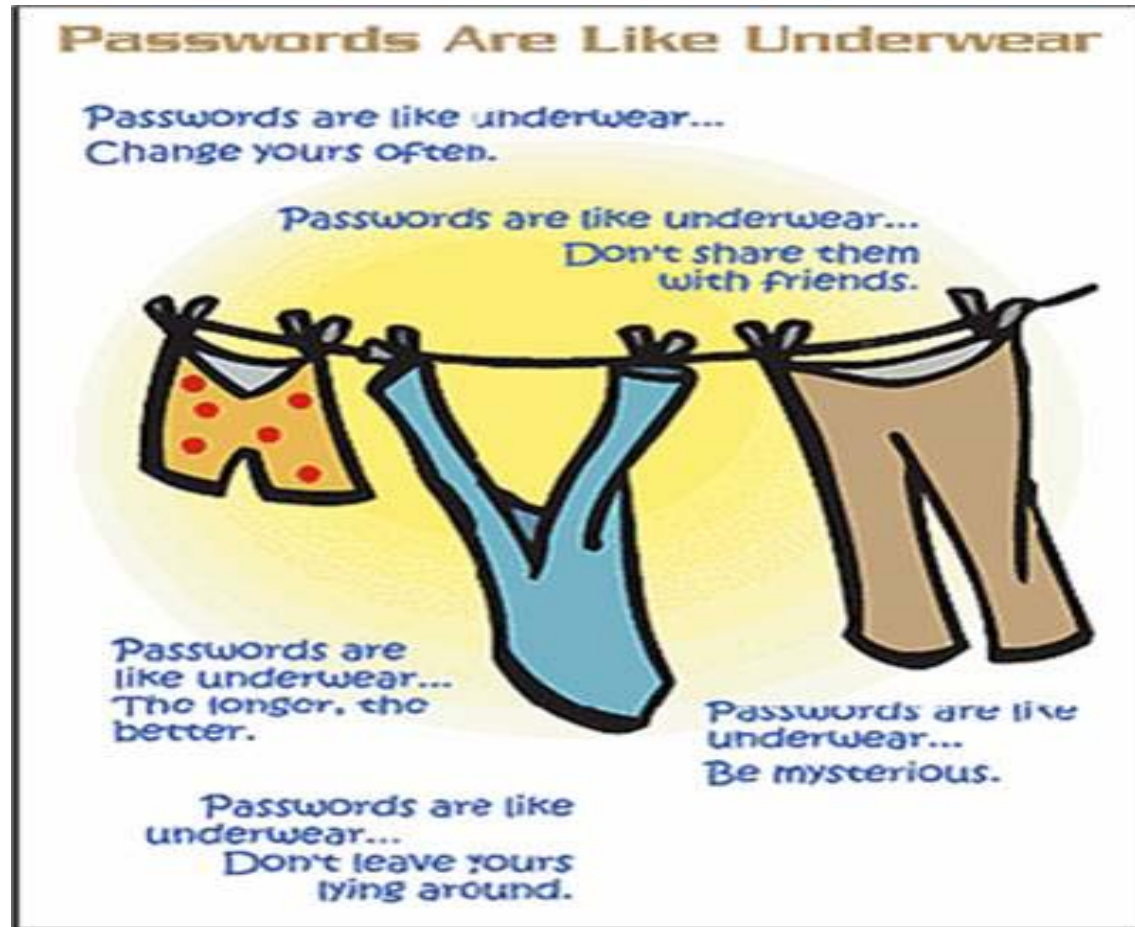


id	username	password	passwordHint
1	admin	1337	k3w1 dud
2	pumpkin22	halloween	my favorite holiday
3	johndoe	queen	Freddie Mercury's band
4	alexa45	password	password
5	guy	123456	NULL
6	maryjane	queen	I'm one!
7	dudson123	halloween	scary movie!

Are
Difficult to
Remember

composed
of single
symbol
type (e.g.,
all
characters)

Weak Password Practices



Weak Password Practices



Characteristics of **Strong** Passwords

- Strong Passwords contain at least *one of each* of the following:
- Digit (0..9)
- Letter (a..Z)
- Punctuation
- Symbol (e.g., !)
- Control character (e.g., ^s, Ctrl-s)

Sorry, but your password must contain an uppercase letter, a number, a hieroglyph, a feather from a hawk and the blood of a unicorn.



Characteristics of Strong Passwords

- Strong Passwords
 - are based on a verse (e.g., passphrase) from an obscure work where the password is formed from the characters in the verse
 - e.g., “tiagdfm” derived from the First letter of each word of your favorite phrase etc (eg. Today is a good day for me)
 - sometimes referred to as a *virtual password*

To be or not
to be, that is
the question.



2bon2btitq



Strong Password Practices

Avoid a Weak Password...

- DONT REUSE PASSWORDS**
for at least a year.
- DONT**
use a duplicated good password
example—create your own.
- DONT USE THE SAME PASSWORDS**
for multiple accounts.
- PERSONAL INFORMATION**
Don't use a password with
(name, birth date, etc.)
- DICTIONARY WORDS**
Don't use
- MIX IT UP**
Don't make your password all
numbers, uppercase letters or
lowercase letters—
- QWERTY**
or sequential numbers
12345
- 222TT**
Don't use repeating characters

Tips

And the magic
password solution
is...

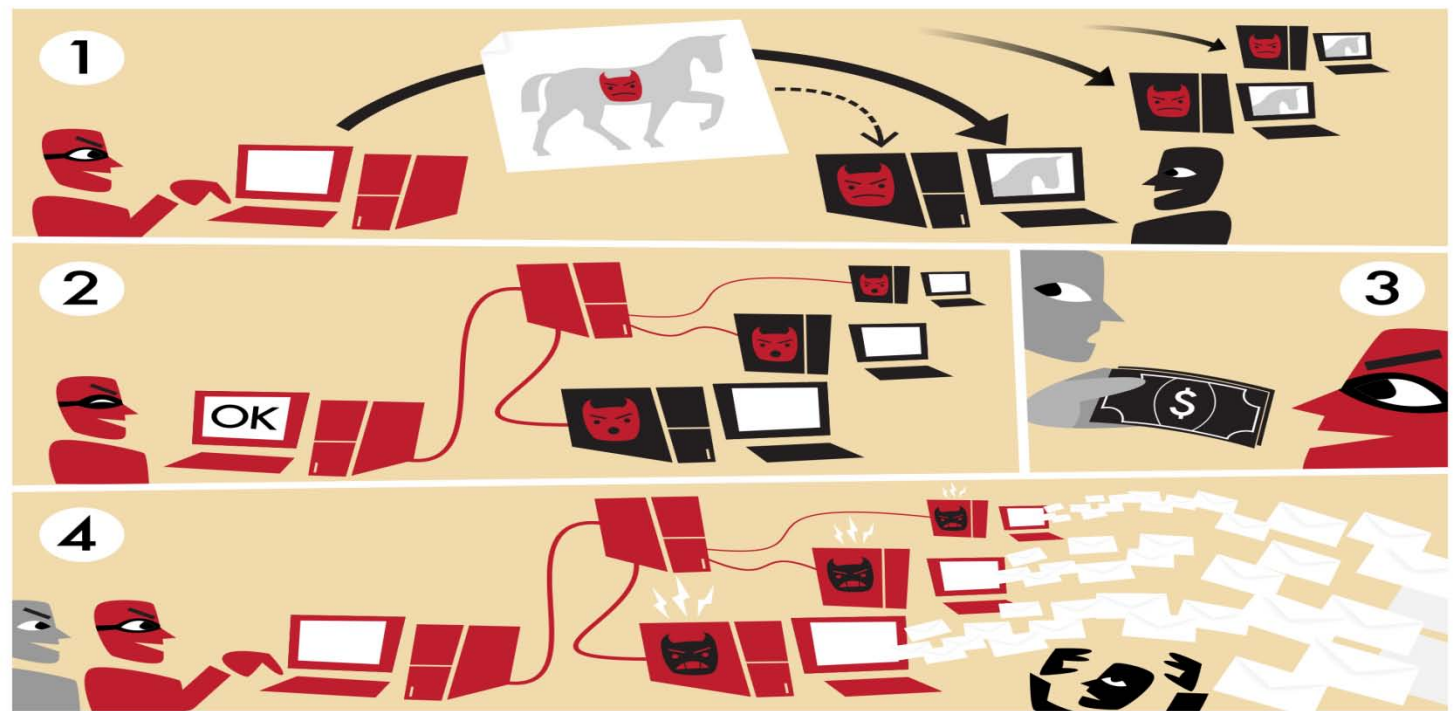


Top 10 Password Vaults

1. DashLane 3.0
2. LastPass 3.0
3. Sticky Password
4. RoboForm Everywhere 7
5. Keeper Password Manager & Digital Vault 8
6. RoboForm Desktop 7
7. Authentic8 Silo
8. LogMeOnce Password Manager Ultimate
9. Password Genie 4.4
10. Zoho Vault
11. Random.org

Security Threats And Attacks

- Botnets :A botnet is a collection of compromised computers often referred to as "zombies" infected with malware that allows an attacker to control them.



Security Threats And Attacks

- Phishing : **Phishing** is the attempt to acquire sensitive information such as usernames, passwords, and credit card details (and sometimes, indirectly, money), often for malicious reasons, by masquerading as a trustworthy entity in an electronic communication.



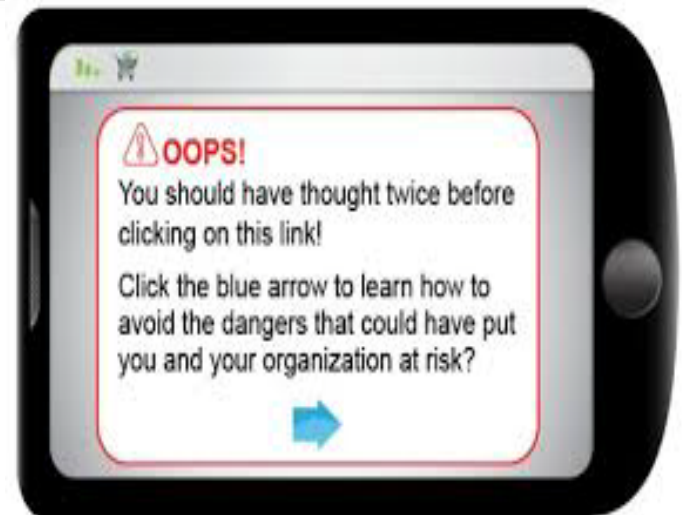
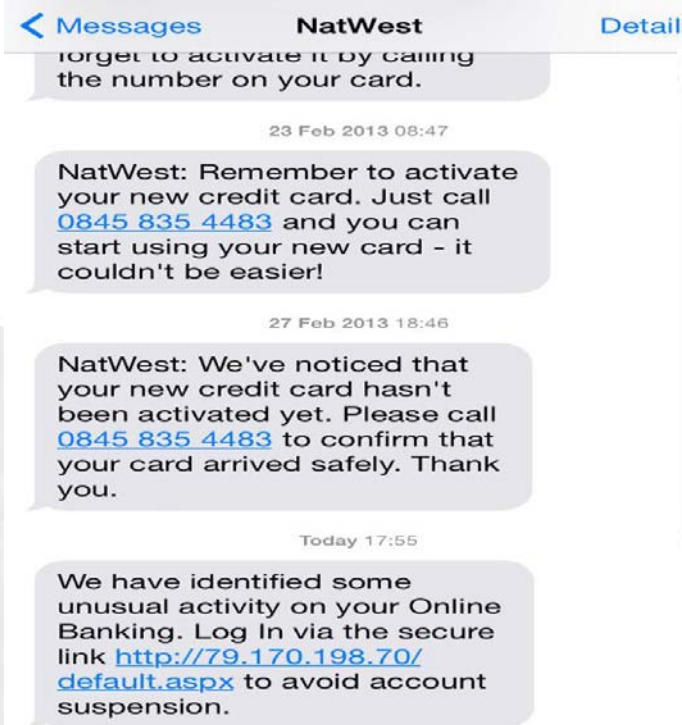
Security Threats And Attacks

- Vishing : **Vishing** is the act of using the telephone in an attempt to scam the user into surrendering private information that will be used for identity theft. The scammer usually pretends to be a legitimate business, and fools the victim into thinking he or she will profit.



Security Threats And Attacks

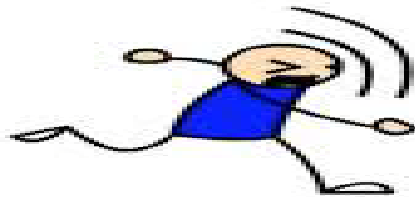
- **SMiShing** is a security attack in which the user is tricked into downloading a Trojan horse, virus or other malware onto his cellular phone or other mobile device. **SMiShing** is short for "SMS phishing."



Security Threats And Attacks

- Password Hacking Attacks :Most successful attacks are based on

DICTIONARY ATTACK!



- Dictionary attacks
- Brute Force Attacks
- OpenSesame Attacks



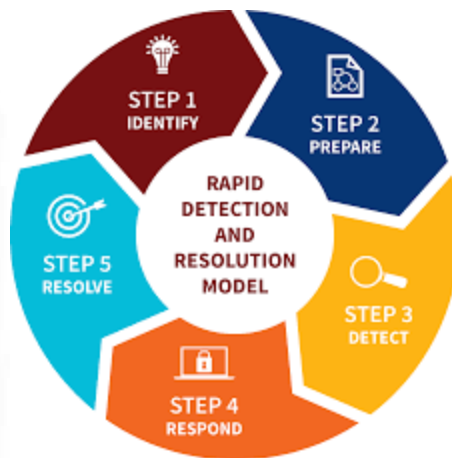
Brute Force

- Guess every possible password
- Depending on the length and complexity of your password, this can take time
- If it takes an infeasibly long time to find your password, you may be safe

Security Threats And Attacks

- **Ways to reduce Your risk:**

- Remain vigilant and inquisitive
- Be aware that your password keystrokes may be observed by others
- Confirm authorization and establish trust before releasing any important information
- Use Strong Password Techniques
- Change Passwords Regularly
- Have a strong Firewall,IDS,IPS and UTM





THANK YOU

GRACIAS
ARIGATO
SHUKURIA
JUSPAKAR
DANKS
TASHAKKUR ATU
SUKSAMAN EKHET
MEHRIBANI
BOLZIN
MERCİ
BİYAN SHUKURIA