



Cyberwise



School of Education  
School of Computer Science



Our Public  
Service



An Roinn Comhshaoil,  
Aeráide agus Cumarsáide  
Department of the Environment,  
Climate and Communications

# Adventures in Cyberland 2022 Awards



UCD O'Brien Centre for Science  
13th December 2022

[www.cyberwise.ie](http://www.cyberwise.ie) [info@cyberwise.ie](mailto:info@cyberwise.ie)





**Tuesday 13th December**

**10.00 am to 2.00 pm**

**Moore Auditorium, UCD O'Brien Centre for Science**

## **P R O G R A M M E 2 0 2 2**

- 9.00 - 10.00 Registration and preparation of exhibitions
- 10.00 - 11.00 Minister Ossian Smyth will view exhibitions and speak to participating students
- 11.00 - 11.05 Welcome - Professor Joe Carthy, UCD School of Computer Science
- 11.05 - 11.15 Opening Address - Minister Ossian Smyth
- 11.15 - 11.20 Overview of the day - Marelle Rice, UCD School of Education
- 11.20 - 11.25 Presentation of First Year Awards
- 11.25 - 11.45 Launch of the Primary Cyber Security Short Course - Ciara Molloy, St. Coleman's National School Mucklagh
- 11.45 - 11.50 Presentation of Primary School Awards
- 11.50 - 12.00 Irish Heart Foundation's media campaign to combat social engineering in the fast-food industry targeted at children - Mark Murphy
- 12.00 - 12.05 Presentation of Second Year Awards
- 12.05 - 12.10 Update on Junior Cycle Cyber Security Short Course - Karen Maye, UCD School of Education
- 12.10 - 12.15 A Teacher's Perspective on the Implementation of the Short Course - John Lowndes, Tullamore College
- 12.15 - 12.20 Presentation of Third Year Awards
- 12.20 - 12.30 Cybercime Investigations - Gerry Buttner, Senior Analyst, UCD Centre for Cybersecurity & Cybercrime Investigation
- 12.30 - 12.35 Transition Year Cyber Security Module - Dara Byrne & Kelan O'Connell  
Presentation of Transition Year Awards
- 12.35 - 12.45 Females in Technology (FIT) Apprenticeships - Jessica McKeown
- 12.45 - 12.50 Presentation of Leaving Certificate Applied Awards
- 12.50 - 12.55 Presentation of Overall Cyberwise Champions 2022 Awards
- 12.55 - 1.00 Closing Remarks - Dr Rachel Farrell, School of Education
- 1.00 - Lunch in Pi Restaurant

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***Special thanks to:***

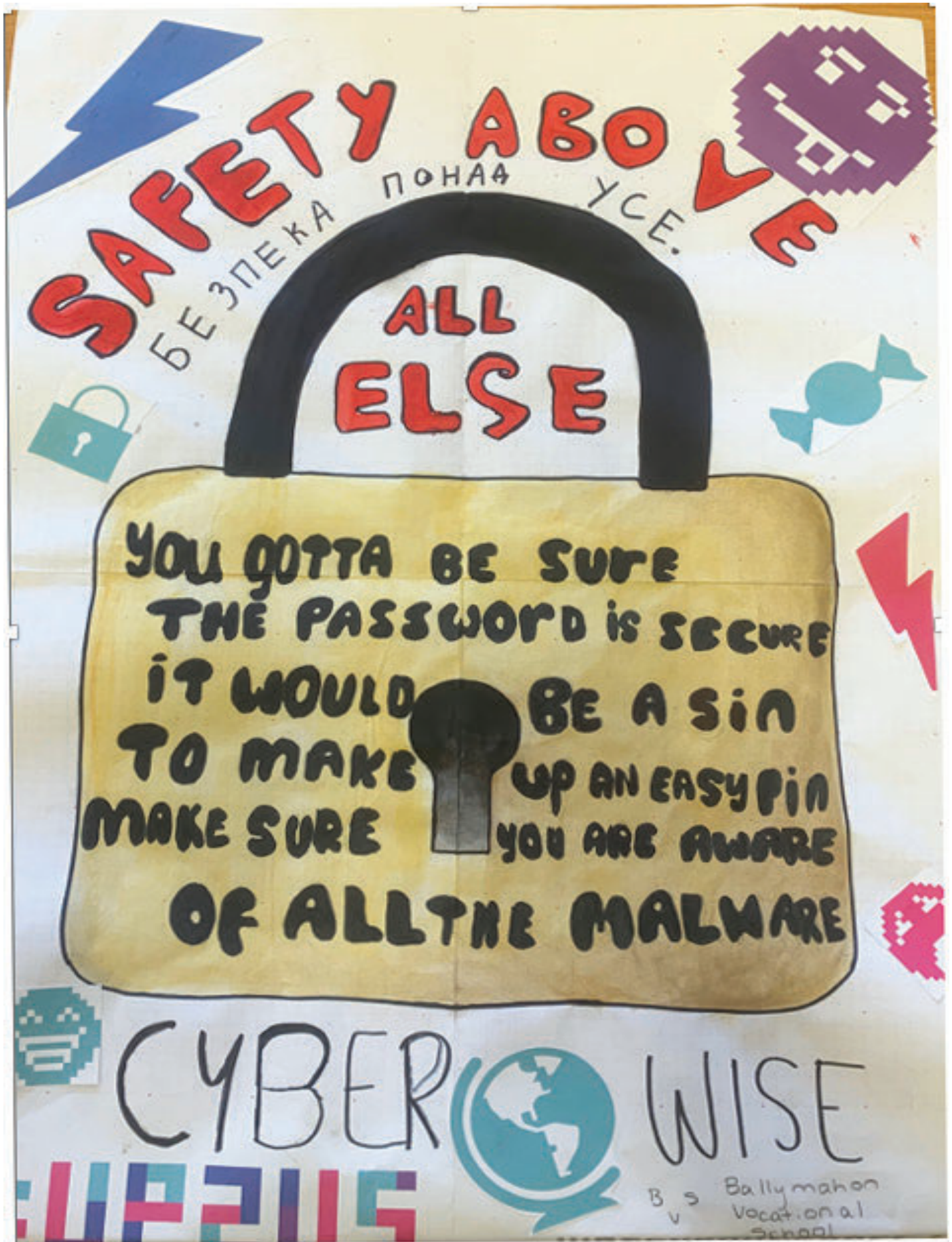
Camera Crew - Mark Baldwin, Caoimhe Durkin & Tadhg Daly

Photographer - Paul Moore Photography; Display Board Manager - Ciaran McNeill

Hospitality Manager - Thomaz Wierny; Steward - Maksim Webb

UCD Conference and Events Coordinator - Anna- Elizabeth Quinn





Poster and poem created by Angelika, Aislinn, Zara, Shauna, Angela, Kelly & Liliana, Ballymahon Vocational School - 2022 silver medal winners

School	Teacher	Students	Presentation Title	Year	Award
Ballymahon Vocational School	Ms McGoey & Mr Arrigan	Nicholas Reinhardt, Isaac Kearns, Stephen Mills, Liam McCormack Groves, Harry Pearman Howard, Jason Adigwe, Jack Ward	The Notorious Catfish	3rd	Gold
Ballymahon Vocational School	Ms McGoey & Mr Arrigan	Liliana Kurzelewska, Angela Maduabum, Aislinn Naughton, Kelly Bullett-Neligan	Safety Above All Else	3rd	Silver
Ballymahon Vocational School	Ms McGoey & Mr Arrigan	Erin Boyce, Zara-Louise Kenny, Shauna Doyle, Anjelica Nakonieczna	Reject Cookies	3rd	Cert
Coláiste Choilm Swords	Kate Sheils	Claude Paris Rizalda, Eoghan Brady, Franek Polak, Rocco Marsella	Social Engineering	2nd	Gold
Swords Community College	Jake Weldon	Sam Bailey, Aoife Boylan, Dylan McPartlin, Leo Smith, Karac Merrigan, Tadhg Daly	Social Engineering	1st	Gold
Swords Community College	Jake Weldon	Sorcha Ruane, Juliette Coughlan	Passwords	1st	Silver
Swords Community College	Jake Weldon	Evan Wilson, Harrison McGrane, Robert Smyth	Cookies	1st	Silver
St. Coleman's National School, Mucklagh, Co. Offaly	Ciara Molloy	Ella Healion, Ciara Cummins, Elise Cusack, Molly Twomey, Lucy Molloy, Alice Molloy	Creative Implementation of the Primary School Cyber Security Short Course	6th class	Gold
Sacred Heart School, Tullamore	Gloria Enrique	Avrit Rose Machado, Nandana Anilkumar	Women in Cybersecurity	2nd Year	Gold
Tullamore College	John Lowndes	Arran Ryan	Cyberland: How to Stay Safe in an Ever Growing and Ever Dangerous Online World	1st	Cert
Tullamore College	John Lowndes	Amelie O'Connor	Cyberland Map	TY	Gold
Tullamore College	John Lowndes	Isobel McAuliffe	'Catch Me If You Can' – Film Review	TY	Gold
Tullamore College	John Lowndes	Dwyane Joseph Pangan	The Difference Between Baiting Phishing	TY	Gold
Tullamore College	John Lowndes	David Kenna	Cyber Security	1st	Bronze
Tullamore College	John Lowndes	Emily Ryan	Phishing	1st	Silver

School	Teacher	Students	Presentation Title	Year	Award
Tullamore College	John Lowndes	Dawson Delamere	Not All Cookies Can Be Trusted	1st	<b>Cert</b>
Tullamore College	John Lowndes	Eva Lowndes	Adventures in Cyberland: Threats and Safeguards	1st	<b>Silver</b>
Tullamore College	John Lowndes	Rachel Berry	Cyber Safety	1st	<b>Bronze</b>
Tullamore College	John Lowndes	Mya Harvey, Kelci Boland, Aoibhin Hand	Cyberwise!	TY	<b>Silver</b>
Tullamore College	John Lowndes	Eve Bermingham, Leah Doyle Da Silva	Cyber Security: Piggybackng	TY	<b>Cert</b>
Tullamore College	John Lowndes	Orla Hanlon, Sarah Corcoran, Grace Malone, Ella Gorry	What is the Difference between Blagging and Phishing?	TY	<b>Silver</b>
Tullamore College	John Lowndes	Jimmy Heffernan, Eva McDowell Flynn, Skaiste Slezeviciute	Smishing, Phishing, Spoofing, Shouldering	TY	<b>Bronze</b>
Tullamore College	John Lowndes	Alannah Kelly, Aoife Greene	Piggybacking	TY	<b>Bronze</b>
Tullamore College	John Lowndes	Muireann Garry, Ciara Meredith	Pretexting	TY	<b>Bronze</b>
Tullamore College	John Lowndes	Siyana Petrova, Abbie Maunsell, Shauna Geraghty, Grace Grattan, Sarah Ryan	Protecting Yourself in a Cyber World	TY	<b>Silver</b>
Tullamore College	John Lowndes	Maeve Lally, Huyen Glynn, Caoimhe O'Toole	Piggybacking and Shouldering	TY	<b>Silver</b>
Tullamore College	John Lowndes	Shane Marsden	Pretexting	TY	<b>Silver</b>
Oaklands Community College	Shona O'Callaghan	5 LCA Students	Coding Games to Build Cybersecurity Skills LCA	LCA	<b>Gold</b>
Oaklands Community College	Shona O'Callaghan	TY Students	First Lego League Fostering Cybersecurity Skills	TY	<b>Silver</b>
Oaklands Community College	Shane Creevy	5th Year Students	Coding Club fostering Cybersecurity Skills	5th	<b>Silver</b>
Loreto College Crumlin	Miss Ruth Murphy & Azhraa Duadu	1st Year Students	Minecraft in Education Cybersecurity Games	1st	<b>Silver</b>



## Catch Me If You Can

*Review by Isobel McAuliffe, Tullamore College*

Catch Me If You Can is a crime comedy that leaves viewers in awe of the young protagonist's ability to swindle others. Of course, being directed by Stephen Spielberg and starring actors like Leonardo De Caprio and Tom Hanks, it was sure to be a success.

The film follows the life of a sixteen-year-old Frank William Abagnale Junior, as he becomes a full-time con artist. Throughout his life, the real Frank Abagnale impersonated an airline pilot, was appointed Chief Resident Paediatrician at Cobb General Hospital, in Georgia, and became the Assistant Attorney General in Louisiana. He cashed almost four million dollars in fraudulent cheques, in twenty-six foreign countries and fifty states, all through good old-fashioned graft.

Having the confidence to bluff your way into an airplane's cockpit in an impressive feat, but it's hardly the kind of scam that affects us in modern life. However, rewatching this old favourite – with terms such as 'scareware' and 'pretexting' in mind, I began to see many similarities between Abagnale's traditional cons, and the online scams that threaten us now. Abagnale relies on the same principals of human behaviour, and emotions such as fear or greed, that hackers and social engineers do. The only difference – he did it face to face.

In the opening scenes of the film, we see Abagnale's extradition from France to America. A seemingly critically ill Abagnale (De Caprio) is locked in a cold cell when FBI agent Carl Handratty (Hanks) arrives. The French guard warns "You do not pass him anything. You do not open door" in his limited English, stating only what is necessary. As Handratty reads the extradition terms, Abagnale begins to cough violently before collapsing. While Handratty is initially unconvinced, he is calling for a doctor moments later, as fears of Abagnale dying set in. Contrary to the guard's original instruction, the door is opened and Abagnale is escorted to the medical wing. In the minute long argument Handratty has with the prison warden, Abagnale manages to escape unnoticed.

While he wasn't as ill as he pretended, he was still too sickly for a successful escape and was soon captured. However, one could argue that this was a (failed) attempt at real life scareware. According to [imperva.com](http://imperva.com) scareware is when "victims being bombarded with false alarms and fictitious threats. Users are deceived to think their system is infected with malware, prompting them to install software that has no real benefit (other than for the perpetrator) or is malware itself. Scareware is also referred to as deception software, rogue scanner software and fraud ware". One could argue that Handratty was bombarded with false alarms and fictitious threats, as Abagnale being deathly ill was fictitious and threatened Handratty's years of work to catch him. This in turn led to him being deceived and was followed by his taking foolish action causing himself more harm than no action would have – the same way deception causes victims of scareware to take foolish action in installing harmful software.

Then, the film rewinds six years, to where it all began. We soon encounter our next hoax; in the same way that scareware preys on fear, baiting preys on greed and curiosity. Be it the promise of a thousand pounds if you click here, or a genuine desire to donate money to help homeless kittens here, the outcome is often the same – granting a hacker access to your device or account. We see Frank Abagnale Senior use a real-life version of baiting quite early in the film. He attempts to rent a suit for Frank Jnr. The sales assistant is unconvinced by his claims of a "a death in the family. War hero, military funeral, twenty-one-gun salute" he turns to baiting. A bright, expensive looking necklace appears in his hand, and a question on his lips "Is this yours?" and he asks the young, well-dressed sales assistant. "I just found this in the parking lot. Must have slipped right off your neck". From the sales assistant's point of view a lost necklace has no owner coming back, and this man offering it has no reason not to believe it's hers. It seems like a win for her, when really it is a win for Abagnale Snr. – the same way that thousand pounds seems like a win for you, when really it is the hacker who benefits.

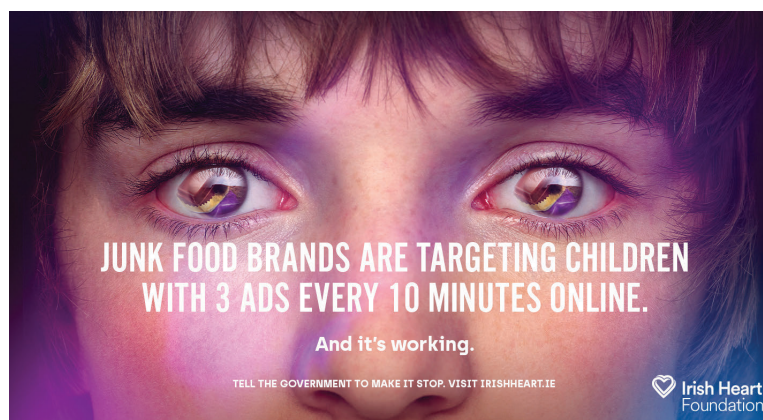
As the film progresses, Frank's home life falls apart, and he runs away. The sight of a pilot, and how well he is treated, inspires Jnr. to try his hand at it. Rather than go back to school, go through the application process, and undertake all the necessary examinations, Frank took a shortcut. He pretended to be a schoolkid writing an article for the school paper and rang Panam Airlines to request a meeting with Mr. Morgan – Panam head honcho. This clever ruse gave

him the perfect opportunity to ask endless questions and learn everything he needed to know in order to get what he wanted – in this case, free flights and the ability to cash payroll cheques. Nowadays, pretexting is when “an attacker obtains information through a series of cleverly crafted lies. The attacker usually starts by establishing trust with their victim by impersonating co-workers, police, bank and tax officials, or other persons who have right- to-know authority. Abagnale may not have claimed to be from the bank or asked for credit card details, but his con fits the pretexting definition perfectly. In fact, he was simply the in-person version of a common online issue.

As Abagnale’s antics grow, Handratty becomes fixated on catching him. Approaching the Christmas holidays, Handratty tracks Abagnale to his hotel. On entering Abagnale’s room, Handratty sweeps the room with his gun, intent on finding his perpetrator. A flush sounds in the bathroom. Water from the tap hits the sink. He’s got him, Abagnale is still in the room! Handratty is ready, gun in hand, when out steps – a fast taking young man in a suit, drying his hands and commenting on “this guy” ’s equipment, and “envelopes addressed to himself”. A tense few seconds proceeds a disappointed Handratty learning that the man before his is from the Secret Service. The young agent checks Handratty’s ID, before asking Handratty to mind the crime scene and exiting the room with the most valuable piece of evidence. The sheer guile Abagnale displays in this scene is something your everyday hacker lacks. The quick thinking and self preservation we see is admirable, if sustained by unadvisable intentions. There is no online equivalent to this, it is simply one of many moments throughout the film where viewers are filled with reverence of Abagnales ingenuity.

The film continues, and from pilot, to doctor, to lawyer, to engaged, Abagnale does it all. Tension builds, and viewers can sense the approaching climax as Handratty investigation draws nearer and nearer still. All good things come to an end, and on November 2 nd , 1970, Frank Abagnale’s spending spree was no different. Only five years into his twelve year sentence, he was released on parole, to work in the FBI’s Financial Crimes Unit. In the closing scene, text fills the bottom of the screen, telling the audience a little bit about Abagnale’s life in 2002, when the film was released.

Who’d have thought that impersonating a pilot would have so many similarities with modern day scams? The tricks remain the same, only now it’s online that’s the platform for deceit. All in all though, you have to hand it to Abagnale – his story makes one hell of a film. By Isobel McAuliffe, Transition Year, Tullamore College.



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# Adventures in Cyberland - A Primary School Cyber Security Short Course

[www.cyberwise.ie/adventures-in-cyberland/](http://www.cyberwise.ie/adventures-in-cyberland/)

This innovative and creative primary school cyber security short course was adapted from the new junior cycle cybersecurity short course supported by the Department of the Environment, Climate and Communications and designed by Ciara Molloy, Deputy Principal in St. Coleman's National School, Mucklagh, Co. Offaly.

The development of the short course was supported by UCD School of Education and funded by Our Public Service Innovation fund 2022.

The short course will be made available to schools via [www.scoilnet.ie](http://www.scoilnet.ie) in the near future!



## INTRODUCTION

Have you ever received an email saying you have inherited five million dollars from a prince in another country? All you need to do is provide the sender with your bank account number, and he'll put the money in your account, making you an instant millionaire! Sometimes, this bonkers schme actual works. As a result, unfortunate individuals who provided their bank account details later discovered that their accounts had been cleaned out. This sort of scam is a type of social engineering.

Cybercrime consists of illegal activity conducted through a communication device either by scamming people (social engineering) or breaking into computers (hacking).

New scams are being dreamed up every day and no one is 100% safe from being duped! Being aware and alert to some 'red flags' might save you from being a victim of a cyber crime.

Let's explore the world of cybercrime and see can we tell the difference between what is fake and what is real!

## The Cyberwise Squad



## CYBER HYGIENE

*Protecting my data*



If passwords are weak Hackers have many ways to reveal them.

Hackers use these 7 strategies to steal your information. Before clicking into each one, discuss how each one might work.



- Credential Stuffing
- Key Logging
- Phishing
- Password Spraying
- Brute Force
- Local Discovery
- Extortion



## CODES, CIPHERS, ENCRYPTION:

*The techie stuff in cybersecurity*



## CIPHER FUN

Try out your skills in these cipher/code breaking missions



Morse Code Translator  
The translator can translate between Morse code and Latin, Hebrew, Arabic and Cyrillic alphabets. It can only help to elaborate the Morse code. You can also download...