Password Mania: Build the best password and win!

Password Mania is a card game for 2-5 players, ages 7+, and should take about 10 minutes to play. If playing with younger children, an adult or older child may need to help with reading the cards.

Why create a game about passwords?

We put so much data about ourselves online, so we need to make sure we're keeping that data safe. Password Mania is a fun and fast-paced card game to help you learn about the things that make passwords strong—and some of the things that make your data more vulnerable. We've built this game with a focus on helping elementary and middle school students develop strong password habits, but we think the game is useful for people of all ages. If you use a smartphone or have online accounts, you should know how to build strong passwords.

Goal of The Game (how to win)

The goal of Password Mania is to build the "best" password by collecting cards with the highest values and building a five-card hand with more points than any other player. Each card (except Wild cards) has a point value listed on the card. Cards with better password behaviors are worth more points.

Types of Cards

There are five types of cards in this game. Each category is labeled and is a different color to make them easier to see. Three types of cards cover the three factors that make strong passwords – password length, characters used in the password, and content of the password. There are also Wild cards and Bonus cards in the deck.

- **Length Cards** (yellow; 1 to 5 points): Password length is the single most important factor in building a strong password. You get more points for cards that add more characters to your password.
- **Characters Cards** (blue; 0 to 5 points): Passwords can include letters, numbers, symbols, or a combination of them. Strong passwords use a combination of letters, numbers, and characters. Weak passwords may only use one type of character or even just repeat a single character, like the password "77777."
- **Content Cards** (purple; 0 to 5 points): Stronger passwords are memorable to you but hard for other people to figure out, like when you list a bunch of random words together. Weak passwords includes common information like your birthday or your pet's name—these are things a hacker could easily guess.
- **Wild Cards** (orange; no points): Wild cards mix things up by having you immediately complete the action written on the card. Wild cards may have you draw additional cards, swap cards with another player, or more. None of the wild cards directly provide you with points, and the card should be discarded immediately after being played.
- **Bonus Cards** (red; up to 7pts): Bonus cards provide additional bonuses for engaging in good security behaviors that help keep your data safe. Here's some information about the behaviors listed on the bonus cards.

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- o *Password Managers:* It's hard to remember all the different passwords you have! If you use a password, you only have to remember one "master" password (so make that one is really strong!) and it remembers all the others for you.
- o *Two-factor authentication:* Also known as 2FA, this provides an extra layer of security to your accounts. Once you enter your password, you have to verify your identify a second way—usually by entering a code sent to your phone. This means that even if someone figures out your password, your account may still be safe.
- o *Security Questions:* Like 2FA, security questions add an extra layer of security. When you have these set up, you have to answer one or more questions about yourself correctly before you get access to your account. One challenge with these questions is they often ask about common things, like your pet's name, so you may want to get creative with your answers! For example, instead of entering "Rufus" (my dog's name), I might enter, "Eats Tennis Balls" to describe something he does or "Belly Rubs" to describe something he likes. You don't have to provide the whole truth and nothing but the truth in these responses. Just make sure you have a way to remember what the answer is, like storing them in your password manager.

How to Play

Shuffle the deck and deal five cards face down to each player. Play starts with the person to the left of the dealer and moves clockwise. On your turn, you will draw one card and discard one card. You can draw a card from the deck or from the top of the discard pile. If you draw a Wild card, that card must be played immediately, then discarded. All cards but the Wild cards have a point value listed on them. Higher points are given for cards that describe stronger password practices, while lower points are given for weaker password practices.

Play continues, with players taking turns drawing and discarding cards to try to build a five-card hand with the most points. When a player thinks they have the best hand—meaning they think that they have more points than anyone else—they announce during their turn "I'm out!" and put their cards face down in front of them. At this point, all other players take one more turn, drawing one card and discarding one card. Then everyone shows their hands and counts up the points from their best five (5) cards. The player with the highest score wins.

Want to take the game one step further? Each player creates a password based off of the guidelines listed on the cards in their final hand. And while you should never share your real passwords with other people, this time can be a fun exception! Get creative and see who comes up with the funniest password.

There are two versions of the game:

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Beginner: This version works best for younger players or when you're first learning the game. In this version, your final hand can include any combination of five cards. You can choose whether to have everyone hold their cards or place them face up in front of them so everyone can see each other's hand.

Advanced: This version of the game is more advanced and includes rules that limit the types of cards you can have when you go out so you can create a real password at the end of the game. In order to go out, your final hand should include at least one card from each of the three password components—Length, Characters, and Content. However, you can only have only Characters card and one Content card. You can have multiple length cards, and you can also have 1-2 bonus cards.

- Why these rules? If you look at the Characters cards, many of them conflict with each other. For example, I can't create a password that only has numbers AND only has letters. The same idea applies to the Content cards. A real password shouldn't be a combination of four random words AND your birthdate. This isn't a problem for the Length cards because each of those cards adds additional characters to the password length.

Odds & Ends
Not sure how to handle a situation in the game? This section might have your answer.

Number of Cards in Your Hand
- It's possible to end the game with more than five cards in your hand. If that happens, you only count the five cards with the highest point values toward your final score.
- If you're playing the advanced version of the game and you want to go out, you have to have the required set of cards in your hand first (one Characters card, one Content card, and one or more Length card).
- If you're playing the advanced version and someone else goes out, you may not meet the hand requirements. In that case, only count the values for the cards that meet the requirements. For example, if you have two Characters cards, one Content card, one Length card, and one Bonus card, you should only count the points on the higher-valued Characters card and ignore the other one.

Bonus & Wild Cards
- If a player is dealt a Wild card during the initial deal, they should play that card on their first turn, before drawing, then draw an extra card on their turn to get back up to six cards before discarding.
- If a player draws a Wild card after another player has announced they are going out, any effects of that Wild card do not apply to the player who has gone out.
- There are duplicates for each of the Bonus cards; however, you can only hold one of each type. For example, even if you draw both cards for adding two-factor

authentication, you can only count one toward your final score, so you should probably discard it.

How to Use This Game as Part of Educational Curriculum

This card game was developed by a research team at the University of Maryland as a resource for library staff, teachers, and families teaching children about passwords. To learn more about digital privacy and security, including additional educational materials and curriculum that complement this game, visit https://safedata.umd.edu or email lead designer Jessica Vitak at jvitak@umd.edu.

Card Deck Details (full deck is 72 cards)

72 cards in a deck
- 24 length cards
- 12 characters cards
- 14 content cards
- 14 wild cards
- 8 bonus cards

Category	Point	# of Cards	Text
Length	5	4	Add 12 characters to your password's length.
Length	4	4	Add 9 characters to your password's length.
Length	3	5	Add 7 characters to your password's length.
Length	2	5	Add 5 characters to your password's length.
Length	1	6	Add 3 characters to your password's length.
Characters	5	2	Your password has letters, numbers, and special characters.
Characters	3	3	Your password has letters and numbers.
Characters	2	3	Your password only has letters.
Characters	1	2	Your password only has numbers.
Characters	0	2	Your password repeats the same letter (aaaa) or number (1111).
Content	5	2	Your password is 4+ random words and includes numbers. Example: Bird4Doors2RedWindow
Content	4	2	Your password is 3+ random words. Example: FruitAcornStudent
Content	2	2	Your password has words about you with numbers and/or special characters. Example: IAmss0ccerg!rl
Content	2	2	Your password has personal information mixed with other words. Example: FidoLovesApples.
Content	1	2	Your password has personal information with numbers and/or special characters. Example: Jackson9$3
Content	0	1	Your password is your birthday.
Content	0	1	Your password is your name.

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Category	Point	# of Cards	Text
Content	0	1	Your password is your pet's name.
Content	0	1	Your password is the name of your school.
Wild	n/a	2	Card swap! Take a random card from another player's hand and give them one of your cards in return.
Wild	n/a	2	Discard any two cards from your hand, then draw three cards from the deck.
Wild	n/a	2	Choose a category of cards. All other players must discard any cards from that category.
Wild	n/a	2	Go through the discard pile and select a card to add to your hand.
Wild	n/a	2	Each player pulls a random card from the hand of the person on their left.
Wild	n/a	2	Each player draws two additional cards from the deck.
Wild	n/a	2	Pick a player. They must give you their best card. They should draw another card from the deck to replace it.
Bonus	varies	2	This card becomes a copy of any of your other cards. Play it and get that many points.
Bonus	7	2	You add two-factor authentication to your password.
Bonus	7	2	You start using a password manager to store your passwords.
Bonus	5	2	You set up security questions on your account.