

## Required Features

1. Story: As a user who enjoys playing retro games, I want to be able to play them on my computer as I remembered them.

Acceptance Tests:

- Popular classic games are playable:
  - Pacman (Blinky) is playable (pass)
  - Pong is playable (pass)
  - Space Invaders is playable (pass)
- Lesser-known games (ex. UFO and Tank) are playable (pass)
- Loading a file that is not a CHIP-8 game (fail)

Story Points: 3

2. Story: As a user, I want a graphical interface so that I can easily interact with the game on my computer.

Acceptance Tests:

- Window shows CHIP-8 graphics (pass)
- Contents of the display update consistently (pass)
- Stuttering or unwanted frame skipping is present (fail)

Story Points: 3

3. Story: As a gamer using modern technology, I want the original CHIP-8 graphics to be replicated on my higher definition screen.

Acceptance Tests:

- Video output does not have visible stretching (pass)
- Video output has no noticeable slowdowns (pass)
- Evident artifacts are visible (fail)

Story Points: 2

4. Story: As a user, I want to be able to browse my files and choose a game to play.

Acceptance Tests:

- User is able to see the filesystem on their computer (pass)
- Only files of the extension “.ch8” are viewable (pass)
- Files of different extensions (other than “.ch8”) are viewable (fail)

Story Points: 2

5. Story: As a user, I want to see the display on my computer.

Acceptance Tests:

- Display window launches when running the application (pass)
- Display window does not launch when running the application (fail)

Story Points: 2

6. Story: As a player, I want to be able to interact with my character using my computer keys in order to progress.

Acceptance Tests:

- The computer registers all 16 keys (pass)
- The 16 keys correspond to the original hexadecimal keypad keys on the computer (pass)
- A keyboard key that should not be bound to anything is bound to a CHIP-8 keypad key (fail)

Story Points: 2

## Optional Features

7. Story: As a user, I want to hear audio to enhance my gaming experience.

Acceptance Tests:

- The emulator produces a beeping noise to represent sound effects in games (pass)
- The emulator does not beep at the correct time, or does not beep at all (fail)

Story Points: 1

8. Story: As a busy person, I want to be able to save my game so that I can play it for short periods and come back whenever I have time.

Acceptance Tests:

- A save file will be created if none exists (pass)
- A save file will be loaded if a valid one exists (pass)
- A save file will be loaded if an invalid one exists (fail)
- A save file will be updated if it was modified by a game (pass)

Story Points: 2

## Wishlist Features

9. Story: As a newcomer to emulation, I want a place to get information about the program and have a place to download it from.

Acceptance Tests:

- Website loads on all web browsers (pass)
- Download link provides a working download to the file (pass)
- Website passes accessibility tests at <https://wave.webaim.org/> (pass)

Story Points: 3

10. Story: As someone who's not good at video games, I want to be able to save at any time so that when I lose, I can continue from where I was in the game.

Acceptance Tests:

- The emulator saves a game from any location (pass)
- The emulator restores the saved location at any time (pass)
- The game restores at a random location (fail)

Story Points: 3