

# The Frog Dungeons

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## **Introduction:**

Two weeks ago, the fair Princess Gorf of the Frog Kingdom was kidnapped by the evil Frog Sorcerer and trapped in a magical dungeon. As a frog adventurer, it is your job to rescue her and restore peace to the kingdom!

To rescue Princess Gorf, you must pass through a large maze-- one that is different each time you embark on the quest! As you progress, you gain stronger items that will boost your skills, but beware! Enemies also become more powerful as you advance deeper into the dungeon. If you get knocked out, you are sent back to the beginning to restart your quest.

Use weapons, melee and ranged, to defeat the Frog Sorcerer's army of monsters and save Princess Gorf. Enemies will drop weapons and other useful items for your task.

## **Instructions:**

### **Starting Screen:**

New Game, Load Game, and How to Play buttons.

### **New Game:**

When the user clicks "New game", a new maze is generated, and the player can begin exploring.

### **Load Game:**

When the user clicks "Load game", a list of all saved files is displayed. If one is selected, then the saved maze, player, items, and monster are loaded, and the user can continue from the saved point. If no save files exist, the screen will only have a "Back" button.

### **How to Play:**

When the user clicks "How to Play", they are shown a screen that contains the controls for the game, and the main objective.

The dungeon is a large maze! Find your way through each room, fighting monsters and gaining items as you go, to find the Frog Sorcerer-- the final boss!

Use WASD to move the character. Left-click to use a melee attack when an enemy is within range, and right-click to use a ranged attack. Press E to pick up items.

## **Features List:**

### **Must-have Features:**

- Movable Frog character that can have 2 weapons (1 melee and 1 projectile)
- WASD to move, left click to use the melee weapon, right click to use projectile weapons. E to “access” items and NPCs.
- Moving monsters that attack the player.
- Bird’s eye view dungeon, shaped like a large [maze](#), with rooms/hallways. The Frog Sorcerer’s chamber is randomly generated into a room near the end of the maze.
- Rooms that contain monsters and loot
- Final boss room
- Health that can be increased with loot
- Randomly generated maze each time the program is run.

### **Want-to-have Features:**

- Background music
- Toggleable difficulty levels - Easy, Normal, Hard.
  - Easy: enemies have lower health and player is given additional health
  - Normal: all normal functions
  - Hard: enemies have high health and the player is given less health.
- Items such as potions give buffs.
- Once defeating Frog Sorcerer, the player can either end the game or continue exploring (rooms continue generating).
- Obstacles such as rocks and logs within rooms to make combat more interesting.
- Different enemies as rooms progress.
- Currency (coins) that can be spent at special shopkeeper rooms for items.
- A save feature, that allows you to save your progress. When you leave the game and rejoin, you are put back where you left off. When you die, you will go back to the start.

### **Stretch Features:**

- Dungeon keys that open rooms that have increased loot. Dungeon keys will be obtained like other items.
- Miniboss rooms
- Custom textures and sprites
- Variation in room themes (such as a water-themed room) with corresponding themed enemies.

## **Class List:** ([LINK TO UML](#))

- Entity (Superclass for any entity on the maze)
  - Frog (Player class, controlled by the user)
  - Shopkeeper
  - Monster (Superclass for enemies)
    - Fly (Weakest Monster)
    - Snake (Medium level monster)
    - Sorcerer (Final boss at end of dungeon)
- MeleeWeapon (Superclass for Melee weapons)
  - Knife (Weakest melee weapon)
  - Sword (Upgraded melee weapon)
  - Hammer (Upgraded melee weapon)
- ProjectileWeapon (Superclass for Projectile weapons)
  - Bow (Weakest ranged weapon)
  - Pistol (Stronger ranged weapon)
  - Rifle (Strongest ranged weapon)
- Projectile
- abstract Item (Superclass for items)
  - HealthPotion
  - SpeedPotion
  - StrengthPotion
- Main
- DrawingSurface extends PApplet
- interface ScreenSwitcher
- abstract Screen (Contains a DrawingSurface, and uses PApplet methods)
  - MenuScreen
  - PauseScreen
  - FrogDungeon (DrawingSurface Equivalent)
  - InfoScreen
  - BossGui
  - ShopkeeperGui
  - GameOverScreen
  - LoadGameScreen
  - VictoryScreen
  - ShopkeeperGui
  - BossRoom
- Wall (Wall that the Dungeon is generally made of)
- BossTile
- Button
- ButtonListener

## **Credits:**

- Justin
  - Player animation
  - Maze generation
  - Button (and ButtonListener)
  - Screen superclass
  - Saving to/Reading from file
- Jeremy - Frog, Weapons, Monsters, Items
  - Player function
  - Weapon classes
  - Monster movement
  - Items on the ground
  - GUI for shopkeeper
- Mikaela
  - Projectile function
  - Title screen images
  - Weapon art
  - Menu, Help, and Pause screen function
  - Shopkeeper function

## **Images:**

- Frog Sprite: <https://opengameart.org/content/pixel-adventure-2>
- Title Screen, GameOver Title, Victory Title, Frame, Weapons, Shopkeeper, Items artwork - Mikaela.

## **Music:**

- Menu Screen music: <https://opengameart.org/content/dungeon-king>
- Game Screen music: <https://opengameart.org/content/spooky-dungeon>
- Boss Screen music: <https://opengameart.org/content/strange-dungeon-theme>
- Death Screen music: <https://www.youtube.com/watch?v=X2WH8mHJnhM>
- Victory Music: <https://youtu.be/eX1TjYv3dfc>

## **Dependencies:**

- Processing core: <https://processing.org/download/>
- Processing sound (+dependencies):  
<https://github.com/processing/processing-sound/releases/tag/v2.3.1>
- SnakeYAML (for writing to file):  
<https://repo1.maven.org/maven2/org/yaml/snakeyaml/1.23/>