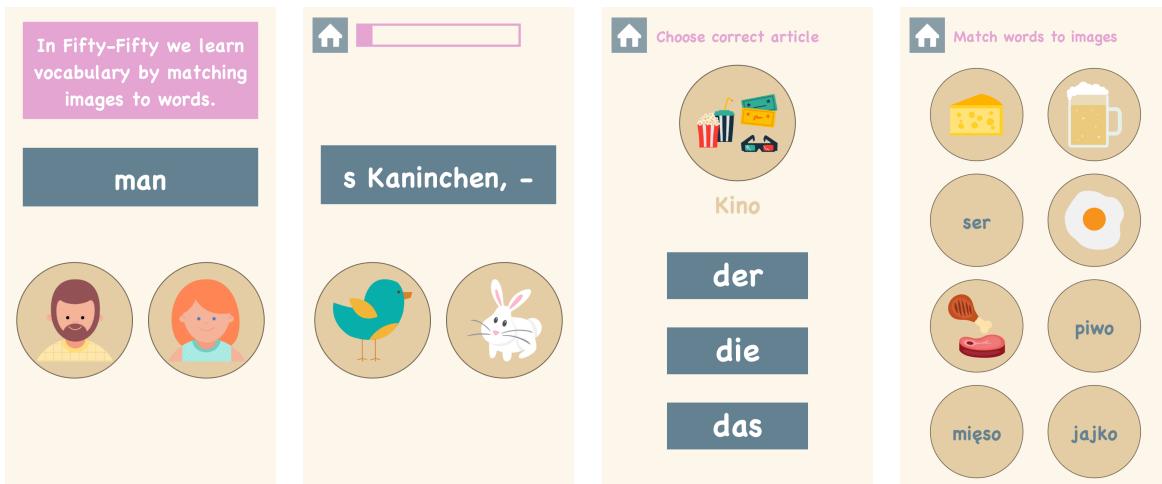


Fifty-Fifty

Fifty-Fifty is a series of fun language learning games in which the player learns vocabulary by matching words to images. In total there are four versions available: English, German, Irish and Polish.



Overview

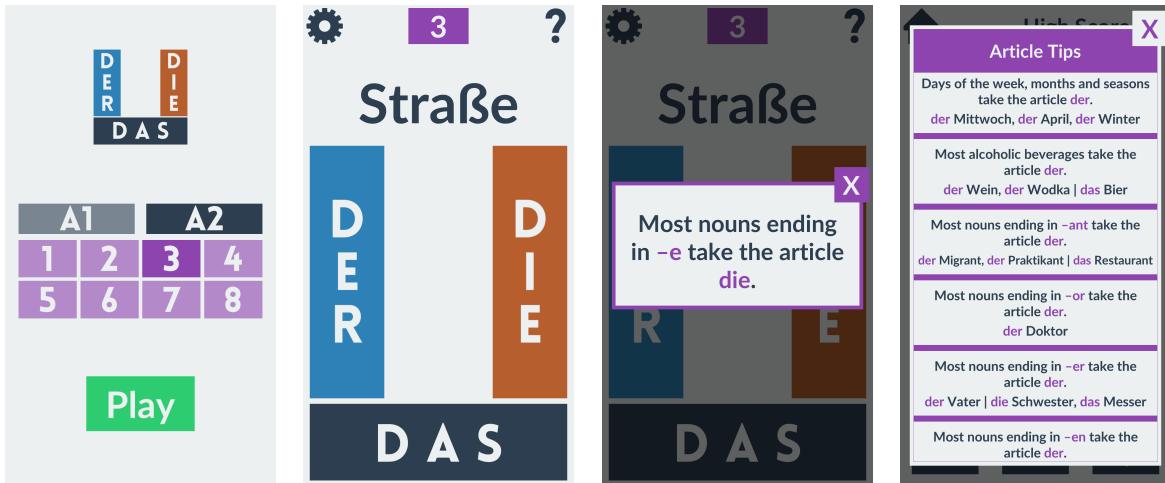
- Developed using Unity and C#
- One of the first games of its type for the Irish language
- German: Innovative in that a noun's article and plural are stressed when learning
- Features custom build scripts to build the various games from a single project
- Features custom editor scripts to automatically import assets for the relevant game

Responsibilities

- Game Concept
- Lead Game Developer
- UI Designer
- Sound Effects Composer
- Audio Processing
- Analytics
- Asset Optimization and Technical Artist
- Organizing Beta Test
- PR

Der Die Das

Der Die Das is a fun German article quiz game in which the player tries to guess the correct article for a set of nouns.



Overview

- Developed using Unity and C#
- Features nouns adhering to A1 and A2 Goethe-Institut examinations
- Features clever tips to recognize articles for certain nouns
- Features custom editor scripts to import assets and custom asset import pipeline

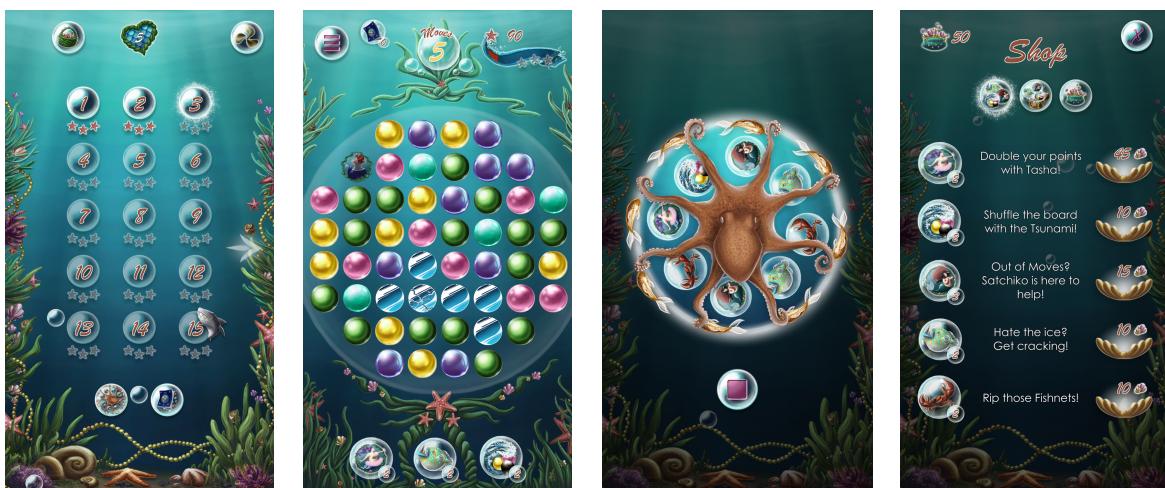
Responsibilities

- Game Concept
- Lead Game Developer
- UI Designer
- Sound Effects Composer
- Audio Processing
- Analytics
- Asset Optimization and Technical Artist
- Organizing Beta Test
- PR

Fat Mermaid Fishing

Fat Mermaid Fishing is an original match-3 game with an underwater theme featuring

- over 60 levels and five different game types
- wheel of fortune
- sticker book with unlocked mermaids
- shop where boosters can be bought with in-game currency, and the in-game currency itself can be bought as in-app purchases



Overview

- Developed using Unity and C#
- Created a tool for the Level Designer in which level variables could be easily updated

Responsibilities

- Lead Game Developer
- Audio Processing
- Analytics
- Asset Optimization and Technical Artist
- Organizing Beta Test
- Code Documentation and Project Documentation

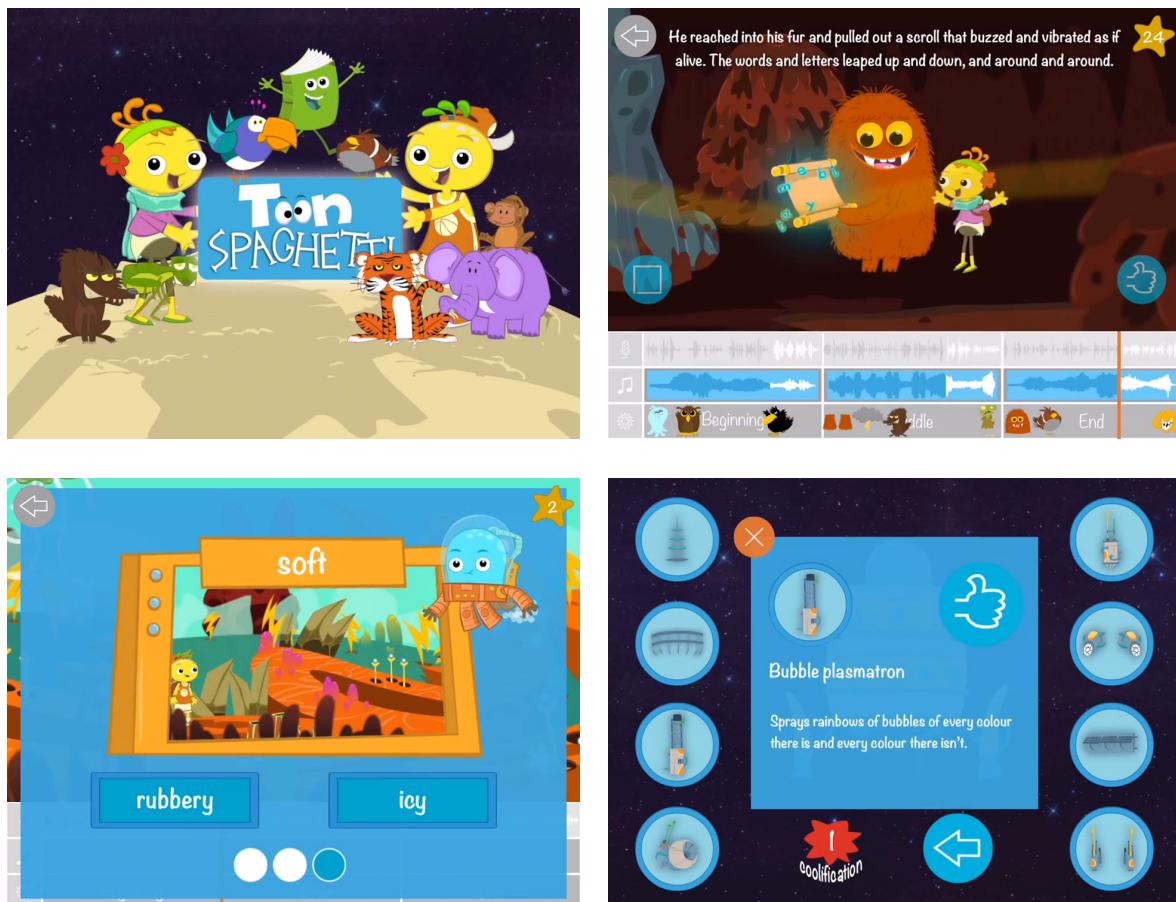
Assisted

- Game Design
- Level Design

ToonSpaghetti: Story Lab

ToonSpaghetti: Story Lab is an educational game for children aged 5+. Featuring four planets with their own adventures, the game teaches language literacy through multimedia story creation. The game offers:

- solve fun word games and challenges to build descriptive vocabulary
- identify moods and add emotional music to bring stories to life
- create sound effects and record story narration



Overview

- Developed for iOS using Swift and SpriteKit
- Featured by Apple in the US (Educational Category)
- Minor features in other territories (i.e. China)

Responsibilities

- Lead Game Developer
- Audio Processing
- Asset Optimization and Technical Artist

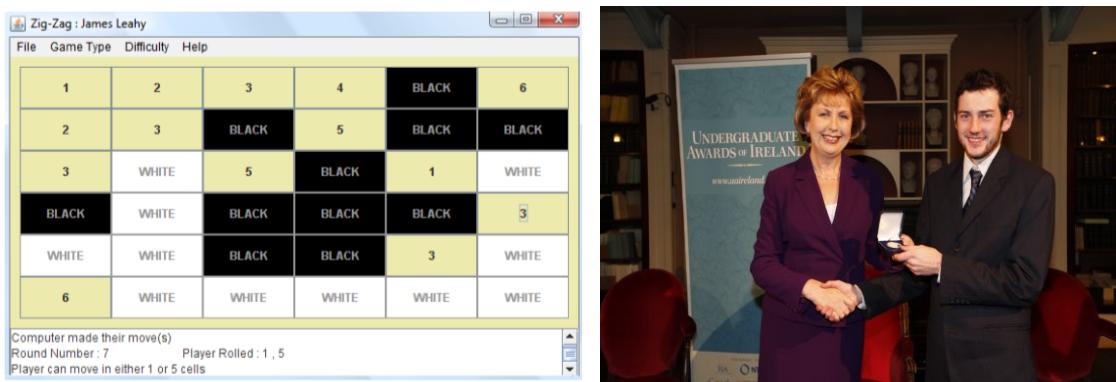
Assisted

- Concept
- Artistic Direction
- UI Asset Creation

Zig-Zag

Connection Games are a genre of *Abstract Board Games*, with Zig-Zag being a relatively unknown and unstudied Connection Game whose board consists of a numbered 6x6 grid, with the player rolling die to progress their piece vertical towards the end goal.

For my Bachelor's thesis, I conducted original research on this unstudied game, developing winning theories and deducing the strongest board cells. A simple yet efficient Zig-Zag computer game was developed which can compete against a human opponent.



Overview

- Developed using Java
- Awarded the Undergraduate Award for Mathematics
- First known in-depth analysis of the Connection Game Zig-Zag
- First known computer game implementation of Zig-Zag
- AI utilized a Monte-Carlo approach and could compete against an experienced human opponent
 - won every 1 out of 3 games
 - each turn would take less than a second to compute