Team WiDaKa

Art & CS 107

Professor Morgan McGuire

May 14, 2015



Dalia Luque [dkl3@williams.edu](mailto:dkl3@williams.edu) Lead Programmer, Music, Documentation, Level Design

Kar Yern [kc10@williams.edu](mailto:kc10@williams.edu) Lead Programmer, Graphics, Documentation, Level Design

Winnie Ma [wm3@williams.edu](mailto:wm3@williams.edu) Lead Graphic Designer, Programmer, Documentation, Level Design

Analysis:

Wanderlust’s puzzles strike an effective balance between being fun and being frustrating. The game mainly engages the player intellectually rather than through manual dexterity, which creates a different yet interesting playing experience. The variety of mechanics, including switching worlds and activating different parts of each level, interact well with each other and allow for the creation of more complex puzzles. The different mechanics and animations also make the game more visually stimulating. In addition, the simple and clean graphics enrich the overall playing experience and contribute to the fiction of the game. The graphics illustrate both nature and architectural elements, reflecting the idea that the protagonist’s worlds are shaped by her mind and the human touch.

One of the lingering flaws of the design is that the game could be more intuitive. We tried to make the gameplay more obvious to the player by streamlining graphics and color-coding the different types of holes, although there is still room for improvement. Aso, the fiction of the game could be more developed and more tied-in with the mechanics and graphics. A story would help connect the game together. Better instructions are also needed to clarify gameplay for the player. If we had more time, we would also have liked to create more levels to envelop a wider range of difficulty levels and create more challenges for the player.

We playtested with a number of individuals with varying levels of gaming experience and recorded the levels that they completed, as well as any feedback that they had about improving the game. In addition, we wrote down observations from watching them playtest and important comments that they made while playtesting.

At first, we wanted to make an action adventure game but eventually decided to make a puzzle game instead. In addition to wanting to make the game more focused on being intellectually challenging, we also thought that the interaction mechanic was interesting and wanted to delve into that specific aspect more deeply. Our original theme was about gender identity, but we discovered that it was difficult to broach such a controversial topic in a such a short amount of time and eventually decided on a theme about isolation and wanderlust. For mechanics, we originally implemented the ability to push objects but decided to remove it and focus on the ability to pick up and place objects due to complicated collision detection problems.

We balanced the game mainly by playtesting ourselves and playtesting with other individuals. At first, the puzzles were too easy to solve, so we increased their complexity by adding the activation mechanic, whereby players must figure out how to unlock certain part of the puzzle in order to complete them. We carefully observed how other people solved the puzzles and received feedback about how difficult and engaging they thought the puzzles were.

The most critical mechanic of the game is the ability to switch between two worlds. The player character remains in the same position on the game screen/canvas but the environment around him or her changes to a different one that has different walkable paths and objects. We created the two worlds on each level so that they fit together to create a single puzzle. The levels cannot be completed without the use of the switching worlds mechanic. Thus, the player has to remember the character’s position and the objects and paths of two different worlds and actively use the switching mechanic to be able to solve the puzzle, adding complexity to the game. However, this makes solving the puzzle even more fulfilling, as the player is able to find various interaction between the “switching worlds” mechanic and the “picking up objects” mechanic.

State and Actions

**State**

Has the game has started/ended

musicArray

* Contains all the songs that would be played

Dialogue

* Creates dialog in certain scenes to guide players
* Where in the narrative the players are

Character

position

x,y

direction (n,s,e,w)

dpad (ascii w,a,s,d)

dead or alive

Has the player overlapped an enemy (physical contact)

isPickingUp

whether he has picked up an object

PickedUpObject

the object that he picked up

worldArray

roomArray

* Has room been completed. Done by retrieving a certain object
* Contains all the rooms of the game

room

x,y

direction(n,s,e,w) - direction the enemy is facing

backgroundArray: Contains the images for the background

objectArray - contains all the objects for the world

obstacle

position - position of the object

x,y

size - size of the object

x,y

interactable - string to show how it is interacted

image - the image of the object

passability - whether it is passable

Game completed or not

have all the levels(rooms) been completed.

**Actions**

Moving up down left right - enemy and player

Switch Worlds

* Pressing button causes the background to change.
* Pressing the same button again would change it back to the original background. This can be done multiple times within a level.

Interact

Pick up objects - star

* Pressing the interact button when facing small objects would pick it up.
* Pressing it again when holding it would drop it to an empty tile in front of it.

Retrieve objects - heart

* Pressing interact button allows the player to collect an item again. It disappears as the player collects it, but every object can be picked up and placed down at any time. Objects don’t remain in any location permanently.

Teleport between locations (portal)

* The player presses the interact button when they are in front of the object. This action teleports (relocates) the player to another location in the same room.

- The player can complete levels (rooms) by collecting the quest item by pressing the interact button.

- When the player overlaps with a hole, the player stops moving.

- When the player overlaps with the quest item and presses the interact button, the player enters the next level/room.

Schedule

4/25/2015: Meeting #1

* Discussed the design and theme of our game.
* A game about a child coming of age and exploring their gender. A top-down RPG game with costume changes.

**-** Primary Mechanic Elements

- Statistical Combat & Tech Tree

4/28/2015: Meeting #2

* Decided that the player would have different attacks based on costume but regardless of gender. Each attack causes the same amount of damage but would look different.
* The player receives a new costume as they defeat an enemy
  + The enemies represent either discrimination or stereotypes.
  + Trying on the costume is optional

4/29/2015: Winnie and Dalia make a rough layout for the prototype.

**Programming**: Fused Knight and Pathfinder

* Finished the draft of the first level
* First World has a river and things that move you
* Dalia took the title screen, motion, dpad, and draw screen from Knight
* Winnie simplified pathfinder to use the basic tiled floor and the different grass and water tiles to create a set background. Winnie merged both source codes into one sublime text and we uploaded it into our google drive.
* Kar Yern created a way (key activation) to change from one world to another (regular tile—> shadow tile). Used a slow tile change that switches one tile at a tile and goes in numerical order.
* Winnie created a door (a specific location on the screen) where a player moves from one screen to another (regular tile —> grass tile)

4/30/2015: Edit the prototype

* Winnie and Dalia created a condition so that the player goes from one room to another and then can go back to the previous room.
* Updated the flipping world function so that the player can return to the original world.
* Kar Yern updated the pattern of the flipping world function.
* Winnie and Kar Yern created overlap function and obstacles that player cannot walk through.
* Dalia finalized the list of all Mechanics and Graphics.

5/2/2015

* Created filler graphics for the obstacles in Level 1. Coded the walls and the river as obstacles. Coded the locations of death holes. Implemented an obstacle array. - We fixed the overlap function. We laid out where everything goes in the first level.

Level 1

* Create Colored squares for all the objects on the screen & Upload
  + One Rock
  + Wall Barriers
  + River
  + Object to Pass the Level
  + Enemy
  + Death Holes
* Make the river a moving path such that when an object overlaps with the river they move at a constant (velocity = 0) and positive (+x,+y) speed.
* Change the rock object so that if the player presses the interact button the player can pick up the rock, move it with themselves, and place down the object in any location (except on holes or on walls)
* Altered the rock and player functions so that the player can change worlds while carrying the rock.

5/3/2015

* Fused together all the versions of the code to make it more efficient. Made the river function, and the function to push rocks and not overlap with boundaries. Brainstormed and sketched out more level designs.

5/4/2015: Design all the levels and playtest our modified prototype

* Winnie and Dalia brainstormed two level ideas.
* Created a new level one to replace the original one we had because of our changed mechanics.
* Winnie and Dalia created the physical level map
* Kar Yern: The player can move rocks, place the rocks on the holes, walk across the holes that are overlapped with rocks, and change from one world to another
* Dalia Wrote the game instructions
* Playtested with Nigel
  + Changed the color of the rock to contrast it with the other objects on the screen
  + Changed the rock and hole interaction so that the rock disappears when it is placed over the hole and the hole changes color to the rock’s color. The player can also pick up the rock again after they have placed it in a hole.
  + Designate places(x,y) on the screen where IF the placer overlaps with the place they die and the game restarts to the beginning of the previous level (holes)
  + Created a playtest document and a to-do list for the day

5/5/2015: Finished all the level designing and implemented the levels.

* Brainstormed another level. Implemented both levels.
* Created the on-screen maps for each of the levels.
* Revised every level to work with the current game mechanics and to make them slightly more difficult than the first level.
* Added on to the code so that the player can pass a level
* Added to the code the function to allow the player to move to the next level when they pass the current level
* Did lots of tweaking and fixing to the functions
  + The player can pick up objects regardless of the direction they are facing
  + The players can’t move out of the platform without dying in the circles
  + Changed the river to work with the last level
  + Player can teleport with the object
  + Added the key item to move from one level to the other
  + You can no longer pick up the object you are standing on
  + layer can no longer pick everything around you. you can only pick up one level.
* Added teleports so that if a player steps on the purple circle them are sent to a different location either in the same world or the other world.
  + Revised the teleport function so that the player can teleport while carrying the rock.

5/6/2015

- Created a function to hide and change images. Images on the screen are activated when the player places a rock in a certain hole.

* Based on this new mechanic, we reworked all the levels to incorporate the new mechanics
* As a result, the gameplay is much more difficult but way more satisfying.
* created more new holes
* Looked at reference art: Monument Valley (Landscape) and Broken Age (Player) and Zelda (Perspective)
* We will have a female character

-Fixed a bug where the player can cross through holes.

-Fixed a bug where the player can carry the star from the back.

-Tightened the movement and interact mechanics.

5/10/2015

* Level 1 Graphics Completed
  + Platform, Background, Holes,
* Sketch of Player Character(Player Head, Body, and four side views)

5/11/2015

* Level 2 and Level 3 Graphics Completed
  + Platforms, Background, Holes.

- Edited the background, platforms, and character images.

- Finalized the list of music and sound effects.

5/12/2015

* Meeting with professor McGuire.
  + Added all the new character images, quest item sprite sheet, holes and special effects.
  + Added fading transitions between worlds.

5/13/2015

-Updated the restart level button and added game instructions and ending.

Change Log

4/28/2015

* We decided that we were not going to make a game about gender because of time restrictions. We also had a difficult time creating mechanics that would not insult anyone with the limited time we had to design a game.

4/30/2015

* Our game will no longer be about changing appearances because without the gender theme it would not make an interesting mechanic. Graphically, our game will no longer be connected by a large tile array because they are not significant for the game mechanics.

5/2/2015

* Our game will only have three levels as opposed to the four we originally planned; each one of us will design a level.

5/4/2015

* The main mechanics for our game will now only be moving and grabbing and placing rocks. Due to the designs that we created our game is now strictly a puzzle game where the player has to unlock items and navigate around the limited platform areas.

5/4/2015

* After playtesting we altered our game so that we will no longer have the player die when they overlap a hole. Holes are now obstacles that the player can’t pass through unless they place an object over it. The player does not die anymore. Graphically, we changed the interaction between the objects and the obstacles. When the player places an object over an obstacle the obstacle will be filled with the design of the object.

5/5/2015

* In order to advance to the next level, the player must first find a quest item that transports them to the other world.
* The player can now use the teleports while holding an object but the levels are created so that the player has to utilize every object to complete the level.

5/6/2015

* Added a new mechanic to the game to make the levels more difficult to solve. The player will have to place the objects on specific holes in order to access platforms and make the quest item appear.

5/11/2015

* We decided to make our main character a female because there is a lack of female characters in most video games. This is significant because our game is about solving puzzles so the player is perceived as intelligent. For her appearance we intend to make her look racially ambiguous.

5/12/2015

* We decided to make the soundtrack to the game just one song so that the game would be more connected. Transitioning songs does not function well with our game because it is a puzzle game so the music sound be peaceful and not distract from the gameplay.
* We also decided to add a few animations to enhance the gameplay and make certain mechanics more obvious for the player.

Bibliography

*LUXX*, broove, 2012, newgrounds.com, 10 May 2015.