

Statement of Delivery

Interactive Prototype 23 Meow Meow Cat

Course: DECO7230 Digital Prototyping

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Concept

Meow Meow Cat is a single-player, side-scrolling game. The player takes on the role of the cat, Meow Meow, whose aim is to reach a ray of sunshine to take a nap by moving along coloured dots on a screen. Players move Meow Meow along by stepping on the corresponding coloured dot on the floor mat to reach the sunshine. A full description can be found at:

<http://lillyhbdigitalprototyping.blogspot.com.au/2015/08/video-prototype-final-concept.html>

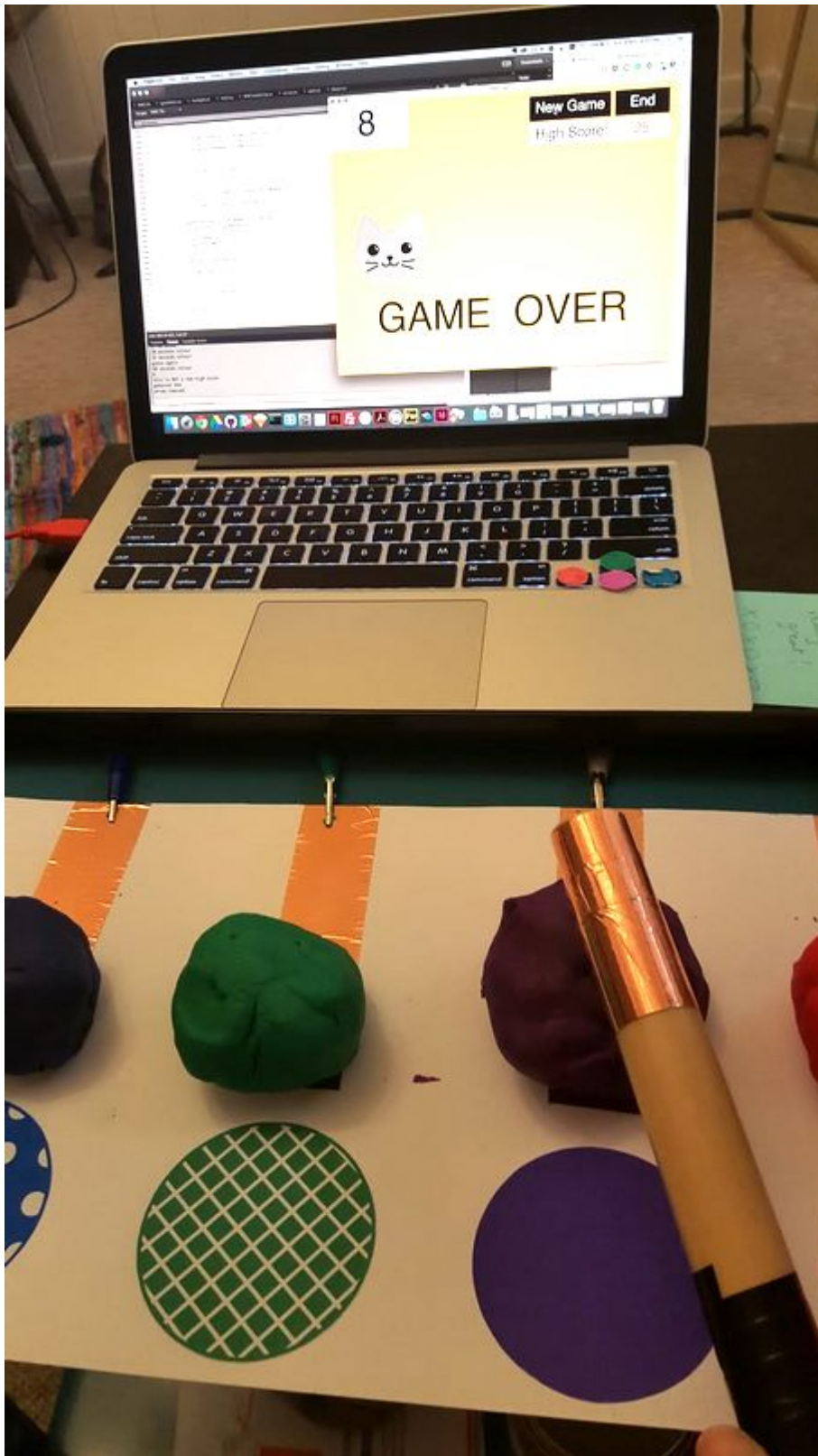
Purpose

Interactive prototype 3 (IP3) is a prototype consisting of a computer (screen, keyboard, and mouse), four balls of playdough, and a stick that users can interact with. The screen displays the main character (meow meow cat), the row of dots, a chevron to indicate the next colour, a timer, two buttons (new game and end), and a high score display. The purpose of this prototype is to test two things:

- Does the background colour changing simulate the change in time, specifically from daytime to nighttime?
- Do users like being able to see their high score on the screen?

Form

IP3 is a high-fidelity, fixed-path prototype that users can interact with. In this prototype, users use a stick to tap coloured balls of playdough that corresponds with the dot colour to move the character forward. The balls are connected to the computer through a Makey Makey device which direct the user inputs. The background colour changes at 5 second increments to show the passage of time simulating sunset. Users have 25 seconds to complete a game of 25 dots.



Physical construction of controllers

Four balls of playdough (in four different colours) are connected with copper tape to wires that go to the Makey Makey controllers of up, down, left, and right arrow.

A stick is coated in copper tap and connected to a grounding wire also connected to the Makey Makey.

Testing

Process

Testing will take place in a workshop session for Digital Prototyping. The process is as follows:

1. A testing computer is set-up connected to playdough through a Makey Makey device.
 1. Four coloured balls of playdough have corresponding dots on them to the dots in the game.
 2. A wire is run from each ball of playdough to the Makey Makey.
 3. A stick to tap the playdough is coated with reflective material and is connected to the grounding wire attached to the Makey Makey.
 4. When the balls are tapped, a signal is sent from the dots to the Makey Makey to the computer. Each four colours corresponds to an arrow key.
2. A [survey](#) is also prepared on the testing computer for users to complete at the end of the session.
3. User sits in front of the playdough and screen, ready to begin and is given verbal instruction:
4. There is a start button that the tester will click to begin game
5. Game can end by either reaching the end of the row of dots or by pressing the 'end game' button.
6. Screen includes character on far left-hand side, a row of coloured dots (four colours with patterns), timer in top left corner, 'Begin game' and 'stop' buttons on top right-hand corner, 'High score' display in top right-hand corner below buttons.
7. User taps coloured playdough to move character forward
8. High-scores are records on the screen at the end of each game
9. Users can restart and replay as many times as they like and can stop play at any time.
10. After user has finished playing, participant is asked about the prototype verbally and through a written questionnaire.

Script

"Thank-you participating in this testing session. It should only take a few minutes of your time.

When you are ready to begin, I will start a game for you to play. Afterwards I will ask you some follow-up questions. I will also take notes during the session. Is this OK?

This prototype is designed to test specific aspects of the game, and is not a complete game.

There are four coloured balls in front of you. When the game starts, you will see a series of coloured dots on the screen. To move the character forward to the next coloured dot, you need to tap the corresponding colour with the stick. Colours also have unique patterns on them to help differentiate between them. The level ends when you reach the end of the row of dots. You have 25 seconds to complete a level of 25 dots.

You can also ask me questions at any time. Do you have any questions before we start? OK, I will start the game for you now."

"Do you have any questions about the video or concept?" (answer any questions)

"OK, now I'll get you to fill out a short questionnaire."

Testing

During the session, the tester will observe and take notes about the user's behaviour. This testing analysis will assess (for each formation):

- Did users keep track of their high score either by themselves or using the counter and did this engage them more in playing?
- Was the time-frame to complete a level too long or too short?
- Were there any problems during game play?
- Did users have any questions after they played the game?

Evaluation

The third step of the testing process is a questionnaire. Questions marked * are mandatory, the others are optional. Questions asked will be:

1. *Were you aware that time was running out during the game? (Yes, No)
2. *What indicated this to you?
3. *Do you remember your best time? (Yes, No)
4. *Was it helpful to have an on-screen record of your best time? (Yes, No, Other - free text)
5. *Did you notice the background colour changing? (Yes or No)
6. *What did the background colour represent to you?
7. *How would you describe the instructions for this testing session? ((Clear - it was easy to understand what to do) to (Confusing - i did not understand what to do))
8. Any other comments? (open)

Prototype design decisions

When planning and creating this prototype, the following decisions about the prototype and how users would interact with it were made.

1. Play is controlled by tapping four separate coloured balls of playdough with a stick.
2. Patterns were added to colours to increase colour accessibility based on feedback.
3. The stick was chosen to complete the circuit rather than have the user form part of the circuit. This was done to make it easier for users to interact with the prototype.
4. The floor dots from the previous prototype were a good simulation of the final concept inputs but their build was unreliable. For this prototype, playdough was chosen as a fun, physically interactive medium interim to allow me to test other elements but without relying on keyboard inputs.
5. A chevron was added to further help users identify which colour they have to tap next.
6. A timer was chosen to add an element of pressure to the game and make it more engaging.
7. The background colour will change from yellow (sunlight) to dark blue (nighttime) to indicate the sun moving further away and signal the timer reaching the end of the level. Colours change every 5 seconds with the timer and aim to mimic sunset. Future prototypes might include the sun setting as time progresses.
8. High scores were added to the stage as in previous sessions users were already taking note of this and trying to better their time on subsequent goes.
9. Future functionality not included in this prototype
 - A count-down to beginning of play (i.e 3, 2, 1, go)

- Winning or losing (reaching end by a certain time)
- Sun graphic on the stage that sets
- More than one level (and level progression)
- Power-ups or added level complexity
- Written instructions/walk through

Credits

Credits are attributed in comments in the prototype code and are also outlined below. New code for IP3 is commented with //New IP3...

player.as class

x and y positioning were adapted from the pong tutorial

main.as class

createpath() and moveDots() functions were adapted from code worked on with tutor

stopwatch() function code from

<http://www.ilike2flash.com/2009/07/simple-stopwatch-in-actionscript-3.html>

Timer from

<http://stackoverflow.com/questions/22141106/as-3-flash-countdown-timer-for-game-over-screen>

Changing colours from

<http://stackoverflow.com/questions/24516267/as3-countdown-timer-color-change>

Sounds

Miracle Park from Playonloop.com

<http://www.playonloop.com/2014-music-loops/miracle-park/>

CC-BY 3.0 License <http://creativecommons.org/licenses/by/3.0/>

Pickup by timgormly (Attribution 3.0 Unported (CC BY 3.0))

<https://www.freesound.org/people/timgormly/sounds/170170/>

Bump by timgormly (Attribution 3.0 Unported (CC BY 3.0))

<https://www.freesound.org/people/timgormly/sounds/170141/>

MMCAudioClip.as class

adapted from pong tutorial for sounds