Alice - Introduction

Chari Distler – North Broward Preparatory School

Beginning Alice

• Install Alice
• Create “Alice Class” folder on computer
• Explain .a2w files
• Make sure teacher shared folder in DropBox is accessible.
• What is Alice Programming Language?
  o Creating interactive stories or games
  o Learn programming in an easy drop and drag method
  o Problem solving with visual feedback
  o Learn Computer Science
    ▪ Loops, classes, methods, functions and arrays

• Alice Virtual World
  o Hands on
  o Interactive
  o Visual
  o Less error prone
  o Exciting results right away

• Getting to know the work area
  o Object Tree
  o Events
  o Events > Create new event button
  o Methods
  o Methods > Create new Variable
  o Functions Tab
  o Properties Tab
  o Code Editor
  o World > Properties Tab > Import Texture Map Button
  o Create New Variables
  o Create New Parameter
  o Open the New Parameter Box
  o Make Billboard
  o Add 3D Text
  o Import Image
  o .a2w
Mouse overs in Alice

Methods Tab

Methods are the actions that an object knows how to do. Most objects come with default methods, and you can create your own methods as well.

Methods Tab > Create New Method

Create a New Blank Method and Open It for Editing.

Functions Tab

Functions are the things that an object can answer about themselves or the world.

Properties Tab

This tab allows you to view and edit the Properties of the Selected Object.

Method > Create New Parameter

Open the New Parameter Dialogue Box.
Parameters allow you to send information to a method when you run it. You may choose among several types of information to send (like numbers, objects, and Booleans).
Method > Create New Variable

Open the New Variable Dialogue Box
Variables allow you to store information in a method when it runs. You may choose among several types of information (like numbers, objects, and Booleans).

Events > Create New Event

Events run Methods when certain things happen (like when the mouse is clicked on an Object or when a certain key is pressed).

Worlds > Properties Tab > Import Texture Map

Import Texture Map
Load an Image File into this World.
Objects use image files as textures.
You can change an object’s texture by setting its skin property.

Getting to Know the Work Area

Glossary

Object Tree
The object Tree shows all of the objects in the world.

Code Editor
The area on the screen, where you drag your methods into.

Events
Events run Methods when certain things happen (like when the mouse is clicked in an object or when a certain key is presses).
Events > Create new event button
This button allows you to create new event types (like when the mouse is when a key is typed or when something is true).

Methods
Methods are the actions that an object knows how to do. Most objects come with default methods, and you can create your own methods as well.

Methods > Create new Variable
Opening the New Variable Dialogue Box Variable allows you to store information (like numbers, objects and Booleans).

Functions Tab
Functions are the things that an object can answer about themselves or the world.

Properties Tab
This tab allows you to view and edit the Properties of the Selected Object.

World > Properties Tab > Import Texture Map Button
Loads an Image File into the existing world. Objects use image files as textures. You can change an objects texture by setting its skin property.

Create New Variables
Open the New Variable Dialogue Box. Variable allow you to store information in a method when it runs. You may choose among several types of information (like numbers, objects and Booleans).

Create New Parameter
Open the New Parameter Box
Parameters allow you to send information to a method when you run it. You may choose among several types of information to send (like numbers, objects and Booleans).

Make Billboard
Make a billboard object from an image (comes with methods)

Add 3D Text
Import Image
Import Images from your computer

Lists
A list of objects that can perform the same actions simultaneously, or one by one.

• Show examples
Learning about objects
  • Alice has a library of 3d objects
    ▪ Objects have multiple parts that are movable
    ▪ Selected objects selected are stored in Object Tree
    ▪ Objects are positioned
      • In 3D Space
      • Have six degrees of freedom (up, down, forward, back, left, right)

Getting Started

We are going to make a little animation where a Penguin jumps up and down and then a Joey turns his body to the left and says something.
  • Show and explain how: Penguin jumps, Joey turns head and talks
    • What a “Do in order” is:
      ▪ Penguin move up 1 meter
      ▪ Penguin move down 1 meter
    • What a “Do together” is:
      ▪ >Joey turn left .25 revolutions
      ▪ >Joey say “How y’all doing?”

  • Opening Alice
    • When you open Alice you are given options
      ▪ Choose > Templates
      ▪ Choose a the grass (default)
      ▪ Click Open
      ▪ Save file (check name every time you create a new Alice) in Alice Class Folder
        • Yournamemyfirstalice.a2w
    • Adding objects to your world
      ▪ Click add objects button
      ▪ Click on Folder
        ▪ Drop and drag the object to your stage
        ▪ Or double click the object and choose add instance
          ▪ Select
            • Penguin (from Animal folder)
            • Joey (from Animal folder)
      • Positioning (objects in 3d space)
        ▪ Keep in mind that the Undo button is your friend.
        ▪ ***Note*** Never move ground
      • Using the Arrow control button
• Move the Penguin to the left
• Move the Joey to the right
  ▪ Using the Up and Down button
  ▪ Using the Turn Objects Left and Right button
  ▪ Using the Turn Objects Forward and Backward button
  ▪ Using the Tumble Objects button will spin your object around.
• Try spinning your Penguin and Joey so that are facing the camera.
  ▪ Using the Resize Objects button
    ▪ Make the Joey bigger
  ▪ The Dummy Camera
    ● Drop a Dummy
      ● Rename “Dummy Objects” folder (in object tree) to “CameraViews”
        ○ These are like tripod views
        ○ Open the newly named “CameraViews” folder
        ○ Rename the “Dummy” view to “OriginalView”
          ▪ This is a good habit to get into when starting worlds
    ● Moving the camera (while still in add objects mode)

| Move: up, down, left and right | Move: forward, backward, left and right | Turn: forward or backward |
- Move the camera to focus on the Joey.

  ![Joey Focus](image)

  - Click Drop Camera View
  - Go back to the folder and rename “dummy” to “JoeyView”.
    - Get the camera back to original view
      - Right click Camera (in object tree)
      - Set Point of View to: > CameraViews > Original View
      - Your world should look like this

  ![Original View](image)

  - Click Done

- Ready to program some code...
  - Go to the Object tree and click on the Penguin
  - Click the Methods tab
  - Make sure it says “penguin’s details” over the Methods tab

  ![Penguin Details](image)

  - Drag the “penguin move” method over to the code editor area
    (The tab should say “world.my first world”)

  ![Code Editor](image)

  - Choose > Up > 1 meter
• Again, drag the “penguin move” method over to the code editor area
• Choose > Down > 1 meter
• Click the play button
• Wow... Your penguin should jump up and down.
  o Great!!
  o Now to make the Joey turn and say “How Y’all doing?”
• Click the Joey in the Object Tree
• Make sure the Methods tab is chosen
  o Drag > Joey Say > Choose other > type “How Y’all doing?”
  o Click Enter or Return
• Your code should look like:
  ![Code Snippet]
• Click Play
• Save File