Welcome

Introduction to Computer Science using Alice

Erik Amerikaner
Oak Park High School
Oak Park, California
emerikaner@oakparkusd.org
computerteach@roadrunner.com
http://erikamerikaner.com
We will show you today

- Why use Alice as an Introduction to Computer Science
- Background of Alice
- How to access and install the Alice program
- How to run the Alice program
- Alice online resources
- Tutorials and examples of Alice worlds your students can use immediately.
- Alice Learning Materials, Projects, and Assessments
Erik Amerikaner’s Background

- National Board of Teaching Standards in Career and Technical Education- Information Technology
- Microsoft Certified Professional
- Microsoft Master Instructor Office 2007/2010/2013
- AP Computer Science and Advanced Office Applications teacher at Oak Park High School, Oak Park, CA.
- High School Webmaster and Teacher Trainer
- Teacher Lead and Developer for CTEOnline.Org
Erik Amerikaner’s Background

- Co-author/reviewer for
  - Glencoe/McGraw-Hill Publishing
  - Pearson Higher Education
  - John C. Wiley
Development in response to decline of CS majors and especially the decline of women in CS Careers.

Developed at Carnegie Mellon University and the University of Virginia in 1999.

Refreshed in 2004 and 2009.

Alice 2.2 released in 2009.

- Improved video.

Alice 3.2 released fall, 2014.
Alice 2.2 Download Screen

Download Mirror: Alice 2.2 on Kenai.com

Note: If you have problems with the downloads below, please try downloading from Kenai.com.

Windows release last updated 06/10/2009
Mac release last updated 06/10/2009

Download Alice 2.2 for Windows (250MB)
Download Alice 2.2 for Mac (281MB)

Alternate downloads:
Alice 2.2 for Windows with Learning to Program with Alice textbook worlds (285MB)
Alice 2.2 for Mac with Learning to Program with Alice textbook worlds (351MB)
Source code (Win/Mac) (9.6MB)
Alice Community Forums

Currently Active Users: 5 (0 members and 5 guests)
Threads: 9,950, Posts: 51,457, Members: 10,185
Welcome to our newest member, abukwalk

Welcome to the Alice Community.
If this is your first visit, be sure to check out the FAQ by clicking the link above. You may have to register before you can post: click the register link above to proceed. To start viewing messages, select the forum that you want to visit from the selection below.

Announcements

<table>
<thead>
<tr>
<th>Forum</th>
<th>Threads</th>
<th>Posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community News and Announcements</td>
<td>32</td>
<td>617</td>
</tr>
<tr>
<td>The latest news concerning the Alice community and the Alice project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>He/SheBuilder - by MrMoke</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-22-2015 - 08:48 AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contests</td>
<td>27</td>
<td>361</td>
</tr>
<tr>
<td>Check here for Alice-related contests and competitions!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shooter Game Contest: - by AliceAndConnor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-21-2015 - 08:39 PM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Alice 2.4 in the Welcome Screen
Welcome to the Alice Tutorial!
This tutorial will introduce you to the basics of Alice.
Click "next" to move to the next step in the tutorial.
In this chapter of the tutorial, you’ll learn how to teach Alice worlds and objects how to do new things.

Click "next" to continue.
Examples of Alice Worlds

- amusementPark
- flightSimulator
- lakeSkater
- lakeSkaterDemoSt...
- LightDemo
- snowLove
Alice 2.0
Shelly Cashman

Alice 3
In Action
Computing Through Animation
Instructor’s Manual
Syllabus
PPT Presentations
Solutions
Test Bank
Alice 2.0 PowerPoint Files

Alice 2.0: Introductory Concepts and Techniques
(978-1-4188-5934-3)

PowerPoint Presentations

1. Project 1 PowerPoint Presentation
2. Project 2 PowerPoint Presentation
3. Project 3 PowerPoint Presentation
4. Project 4 PowerPoint Presentation

File Size | Date
--- | ---
4.01 MB | 11/27/06
6.02 MB | 11/27/06
1.78 MB | 11/27/06
3.61 MB | 11/27/06
Alice 2.2 ExamView on my website

Click here to open exam

Intro to Programming

<table>
<thead>
<tr>
<th>Alice Project One</th>
<th>Alice Project Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alice Project Two</td>
<td>Alice Project Four</td>
</tr>
</tbody>
</table>
Alice 2.2 ExamView Test online

Name: __________________________ ID: ____________________

Email: __________________________

Alice Project 1

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. A computer program is _____.
   a. a virtual world with three dimensions and time
   b. a visualization of a problem description
   c. a step-by-step set of instructions telling a computer how to perform a specific task
   d. an animated object with real world properties

2. The instructions in the language of Alice are contained on ____ which you can drag and drop into place to ____ new programs.
   a. tiles, write
   b. titles, run
   c. images, write
   d. menus, start

3. Alice allows you to focus on ____ instead of worrying about details of a new language.
   a. programming concepts
   b. graphic design
   c. syntax, such as spelling and punctuation
   d. animation

4. Alice is both ____ and ____.
   a. visual, virtual
   b. object-oriented, event-driven
   c. complex, simple
   d. procedural, complicated
107. In the name of an Alice method, the name of the method comes ___________________ the period.

108. Instructions that should happen at the same time should be in a(n) ___________________ tile.

109. The direction and number of revolutions are the ___________________ for the turn method.

110. The Export Code for Printing feature exports the file to a(n) ___________________.
Alice 2.2
ExamView Result
Earn College Credit while Learning Alice, OOP, Java, and XML

Learn to Program using Alice

Table of Contents

The New Face of Computer Science Education - The Scratch Generation

This series of tutorial lessons is designed to teach aspiring programmers who have no programming experience how to program using the Alice programming environment.

- Slide index for classroom lecture use
- Practice tests
- 100 Getting Started
- 105 Setting the Stage
- 110 Objects in 3D Space
- 115 Setting the Stage Manually, Part 1
- 120 Setting the Stage Manually, Part 2
- 125 Your First Alice Program
- 130 The Program Development Cycle
- 135 Functions that Return Values
- 140 Data Types and Variables
- 145 World-Level Methods
- 150 Class-Level Methods and Inheritance
- 155 Syntax, Runtime, and Logic Errors
I have been doing webinars on Alice and have materials that go along with the webinars at http://home.cc.gatech.edu/TeaParty/65. You will be asked for a user-id and a password or a key. Just enter a key of brillig.

I also have short videos at http://home.cc.gatech.edu/TeaParty/57.

You are welcome to use my materials. Just keep my name on them.

Thank You,

Barb Ericson
Resources

- Alice.org
- Shelly-Cashman Introduction to Alice 2.0
- Shelly-Cashman Faculty Link
- Dick Baldwin
- Barb Ericson
- Computer Science Teachers Association
Getting Started With Alice
by Andrew Schwab

Introduction

In this lesson, students will be introduced to the Alice Programming Environment with emphasis on accessing and installing the Alice software and navigating the Alice Interface.

From the Alice.org Web site:

Alice is an innovative 3D programming environment that makes it easy to create an animation for telling a story, playing an interactive game, or a video to share on the web. Alice is a teaching tool for introductory computing. It uses 3D graphics and a drag-and-drop interface to facilitate a more engaging, less frustrating first programming experience.

The name Alice from "Getting Started with Alice":

Alice was named in honor of Charles Lutwidge Dodson, an English matician and logician who wrote under the pen name Lewis Carroll. Carroll wrote Alice's Adventures in Wonderland and Through the Looking Glass.


Lesson Time

California STEM Symposium  October, 2015
Oracle Academy - FREE Training

Java Development Environments
Oracle Academy faculty and their students may access the following environments to learn Java, the development platform used by more than 9 million developers worldwide. Click on the images below to download these Java development environments from their respective web sites.

<table>
<thead>
<tr>
<th>JDE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alice</td>
<td>Developed by Carnegie Mellon University, Alice is designed to awaken students' interest in computer programming. Suitable for a wide range of students - ages 8-22 - and downloaded more than a million times a year, Alice is used by thousands of schools globally.</td>
</tr>
</tbody>
</table>
Microsoft DreamSpark

See how DreamSpark can provide a library of software you need.

DreamSpark for Students
new to DreamSpark?
Find out how to get professional developer and designer tools at no cost!

DreamSpark for Academic Institutions
get Microsoft software
Enroll your institution in a DreamSpark subscription to get software for teaching and research.

dream big and develop bigger
Be part of the next big thing in phone development.

say hello to next generation
Create applications that deliver a Windows experience.

DreamSpark News:
DreamSpark introduces GitHub Student Developer Pack | view product
DreamSpark introduces Visual Studio Community 2013 | view product
DreamSpark introduces Microsoft OneNote | view product
Resources cont’d

All,
We hope that your spring semesters are starting well, and that the weather has not been too terrible.

ncwit.org
Summer 2015 workshops now OPEN FOR APPLICATIONS!

2015 Summer Workshops: The beginner workshop will start Tuesday June 16. It will run June 16-20,22-26 and the followup workshop will be July 13-16. The applications are now open! If you have questions, contact Kathy Menchaca (menchaca@cs.stanford.edu).
Summer Programming for Girls

Programming 4 Girls
Encouraging girls to explore computer science

Alice Workshop for Girls
Learning to program in a 3D environment

Spend two weeks creating virtual worlds while learning about programming!

The 2015 Workshop:
Participants will create stories and computer games using 3D animation. The Alice interface is user friendly and easy to learn; students will begin designing a virtual world the very first day. An easy-to-follow textbook and memory stick with Alice loaded on it are included so students can continue to learn and work with Alice after the class is over.

Participants: Open to rising 6th through 9th grade girls.

Location: Guilford College in Greensboro, NC
(A map and parking directions will be forwarded to participants prior to the start of the session)

Dates: June 15 - June 26, 2015

Time: Classes meet Monday - Friday, 8:30 AM - 12:00 PM

Cost: $300 per student per session. Fee includes a textbook, a memory stick with the Alice program loaded on it (students will also save their virtual worlds on the memory stick), and lessons and guidance from our Alice Workshop Instructors.

Instructors:
Alice 3 Resources

Additional tutorials and workshop materials

Do you want to continue practicing your Alice skills? These additional free tutorials will provide step-by-step guidance for building a complete Alice animation from start to finish:

- Tutorial 1: Get Started with Alice 3
- Tutorial 2: Add and Position Objects
- Tutorial 3: Use Procedures and Arguments, Add Rotation and Randomization
- Tutorial 4: Declare Procedures
- Tutorial 5: Use Control Statements and Functions
- Tutorial 6: Use the IF and WHILE Control Structures
- Tutorial 7: Use Expressions and Variables
- Tutorial 8: Use Keyboard Controls
- Tutorial Solutions (ZIP)

Are you a teacher, workshop leader, or volunteer? This lesson and supporting resources will teach you how to prepare for and deliver an Alice workshop in your community.

- Preparing for an Alice 3 Workshop
- Sample Workshop Agenda
- Workshop Preparation Checklist
- Facilitators Guide
- Seating Chart
“I hacked into the school computer and changed all my grades. Then the school hacked into my computer and deleted all my games!”