uCertify

Course Outline

Getting Started with Coding

05 Jul 2024

1. Course Objective
2. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions
3. Expert Instructor-Led Training
4. ADA Compliant & JAWS Compatible Platform
5. State of the Art Educator Tools
6. Award Winning Learning Platform (LMS)
7. Chapter & Lessons

   Syllabus

   Chapter 1: INTRODUCTION

   Chapter 2: PROJECT 1: GET STARTED

   Chapter 3: PROJECT 2: JUNGLE CHAT

   Chapter 4: PROJECT 3: FREEZE THE POPS

   Chapter 5: PROJECT 4: JELLYFISH JUMBLE

   Chapter 6: PROJECT 5: CARD WAR

   Chapter 7: PROJECT 6: AVOID THE ASTEROIDS

   Chapter 8: PROJECT 7: GET FANCY

   Videos and How To

1. Course Objective

The Getting Started with Coding course is designed to simplify the art of programming for beginners and enthusiasts alike. Whether you aspire to become a software developer, seek to automate tasks, or are simply curious about the world of coding, this course offers a friendly and accessible introduction to the fundamentals. Establish a solid foundation in coding principles, setting the stage for advanced learning and specialization through this course.

2. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.

3. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.

4. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

5. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

6. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

7. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been

recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution
    2. Best Virtual Learning Solution
    3. Best Student Assessment Solution
    4. Best Postsecondary Learning Solution
    5. Best Career and Workforce Readiness Solution
    6. Best Instructional Solution in Other Curriculum Areas
    7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform

2. Best Instructional Solution in Other Curriculum Areas
3. Best Learning Relationship Management Solution

- **2019**
  1. Best Virtual Learning Solution
  2. Best Content Authoring Development or Curation Solution
  3. Best Higher Education Learning Management Solution (LMS)

- **2020**
  1. Best College and Career Readiness Solution
  2. Best Cross-Curricular Solution
  3. Best Virtual Learning Solution

8. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: INTRODUCTION

- ABOUT THIS COURSE
- WHAT’S NEW IN THE SECOND EDITION
- ABOUT YOU

- ABOUT THE ICONS

Chapter 2: PROJECT 1: GET STARTED

- CODING QUICKSTART
- FLOWCHARTING
- PICKING A LANGUAGE
- USING A DASHBOARD (IDE)
- SETTING UP YOUR ACCOUNT IN SCRATCH
- GETTING AROUND IN SCRATCH
- USING THE CODE TAB IN SCRATCH
- GETTING AROUND IN MAKECODE
- USING THE CODE TOOLBOX IN MAKECODE
- FIXING ERRORS
- GETTING HELP

Chapter 3: PROJECT 2: JUNGLE CHAT

- BRAINSTORM
- FLOWCHART
- START A NEW PROJECT

- ADD A BACKDROP
- ADD ANIMAL SPRITES
- ADD TEXT-TO-SPEECH COMMANDS
- CODE THE MONKEY TO RUN WHEN CLICKED
- CODE THE MONKEY TO ASK THE USER'S NAME
- MAKE AND GIVE THE GREETING
- CODE THE MONKEY TO PLAY A SOUND
- CODE THE SNAKE TO PLAY A SOUND YOU RECORD
- CODE THE TOUCAN TO PLAY A SOUND FROM THE SOUND LIBRARY
- ENHANCE YOUR SCENE
- SAVE, TEST, AND DEBUG YOUR PROGRAM
- SHARE YOUR PROGRAM WITH THE WORLD
- BIG IDEAS IN THE PROJECT

Chapter 4: PROJECT 3: FREEZE THE POPS

- BRAINSTORM
- FLOWCHART
- START A NEW PROJECT
- MAKE A VARIABLE

- CODE BUTTON A TO MEASURE AND SHOW THE TEMPERATURE
- CONTINUE CODING BUTTON A TO SHOW IF THE POPS ARE FROZEN
- SAVE, TEST, AND DEBUG YOUR PROGRAM
- TRANSFER YOUR PROGRAM TO THE MICRO:BIT
- PUT YOUR MICRO:BIT IN THE FREEZER
- ENHANCE YOUR GADGET
- BIG IDEAS IN THE PROJECT

Chapter 5: PROJECT 4: JELLYFISH JUMBLE

- BRAINSTORM
- FLOWCHARTS
- START A NEW PROJECT
- ADD A BACKDROP
- ADD A JELLYFISH SPRITE AND CUSTOM COSTUMES
- MAKE A MR. JELLY SPRITE AND A FAKE SPRITE
- CODE THE GREEN FLAG BLOCKS
- CODE THE FAKER CLONES TO SWISH
- CODE MR. JELLY TO KNOW HE’S BEEN FOUND

- ENHANCE YOUR SCENE
- SAVE, TEST, AND DEBUG YOUR PROGRAM
- SHARE YOUR PROGRAM WITH THE WORLD
- BIG IDEAS IN THE PROJECT

Chapter 6: PROJECT 5: CARD WAR

- BRAINSTORM
- FLOWCHARTS
- START A NEW PROJECT
- MAKE A VARIABLE
- CODE ON SHAKE TO MAKE AND SEND YOUR NUMBER
- CODE AN ON RADIO RECEIVED BLOCK TO IDENTIFY A WINNER
- SAVE, TEST, AND DEBUG YOUR PROGRAM
- TRANSFER YOUR PROGRAM TO THE MICRO:BIT
- ENHANCE YOUR GADGET
- BIG IDEAS IN THE PROJECT

Chapter 7: PROJECT 6: AVOID THE ASTEROIDS

- BRAINSTORM

- FLOWCHARTS
- START A NEW PROJECT
- ADD THREE BACKDROPS
- ADD A ROBOT SPRITE
- ADD AN ASTEROID SPRITE
- MAKE DENTS AND TIMER VARIABLES
- ADD BACKGROUND MUSIC FROM THE SOUND LIBRARY
- CODE THE GREEN FLAG BLOCKS
- BUILD YOUR ASTEROID FIELD
- CODE KEY CONTROL OF THE ROBOT
- ENHANCE YOUR SCENE
- SAVE, TEST, AND DEBUG YOUR PROGRAM
- SHARE YOUR PROGRAM WITH THE WORLD
- BIG IDEAS IN THE PROJECT

Chapter 8: PROJECT 7: GET FANCY

- PROGRAMMING YOUR OWN IDEAS
- GETTING YOUR SCRATCH PROGRAMS INTO THE WORLD
- MAKING YOUR GADGETS REAL

- UPPING YOUR GAME
- SOUPING UP USER INTERFACES IN SCRATCH
- NEXT STEPS

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