

CompSci 94

Study Guide For Exam1

Exam1 on September 26, 2024



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CompSci 94 Fall 2024

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Exam 1 Date

- Exam 1 is Thursday, Sept 26
 - Old tests are on course website, Resources tab
 - See them on exam's date with problems marked out (we have not done if, loops and written functions yet)

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Exam Logistics

- Exam is on paper
- Thursday, Sept 26, regular class time
 - More time if you get accommodations
 - Should have gotten email from me
- The exam is your own work
- Do not talk about the exam with anyone until it is handed back
- See the Exam1 reference sheet
 - Alice snapshots of procedure names provided on the exam

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Exam Topics - Alice

- Alice Videos on warpwire
 - 2.x, 3.x, 4.1.0-4.1.6
- Setup, camera markers, invisible object markers
- Built-in procedures and functions
- Built-in properties: vehicle, opacity, height, etc
- Do in order, Do together
- Write a procedure with parameters
- Use procedure with arguments

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Best Way to Study for Exam

- Study Lecture notes, watch video again
- Study Classwork
 - Can you write a procedure on paper or type in file?
 - Try to recreate a classwork or write on paper
- Old exams are available on course web page
 - See “Old Tests” link (on resources tab)
 - **Practice writing methods on paper**
 - Most important – practice writing code

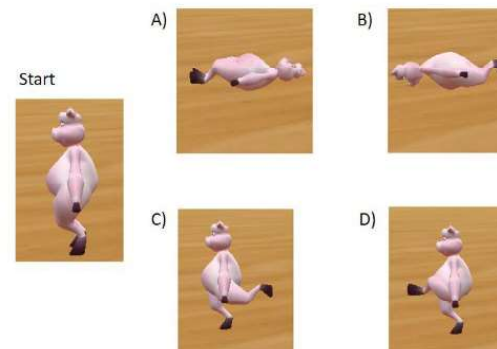
Old exams

- On resources tab on course web page
- Fall 2022, Fall 2021, Fall 2020, Fall 2019 and Spring 2019 – most like your exam
- Fall 2018, Spring 2018 – Alice 3 (material in different order)
- **See list of questions to study, ignore other ones**
- Practice writing code on paper

Some Practice questions

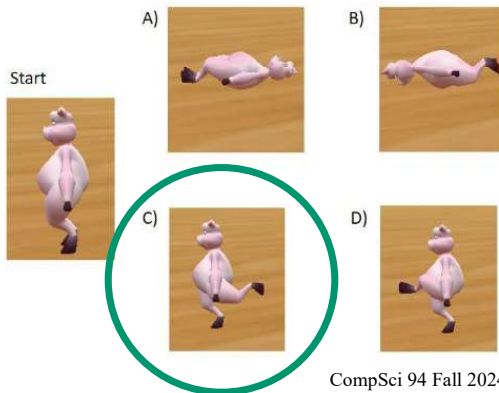
Problem 1

- Consider the following Alice code and the pig is standing straight up as shown with Start in the figure on the left below. Which figure A)-D) is where the pig will be after this line of code is executed?



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You should practice writing code

- Practice writing code from classworks and old exams

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Problem 2

Write **panda** Procedure **changeColor**

- This procedure has **three parameters**
 - One parameter of type **Decimal** named **turnAmount**
 - One parameter of type **Paint** named **someColor**
 - One parameter of type **TurnDirection** named **someDirection**.
- When called, taking 3 seconds total, the panda turns around the turnAmount in the direction someDirection while at the same time changing to the color someColor.

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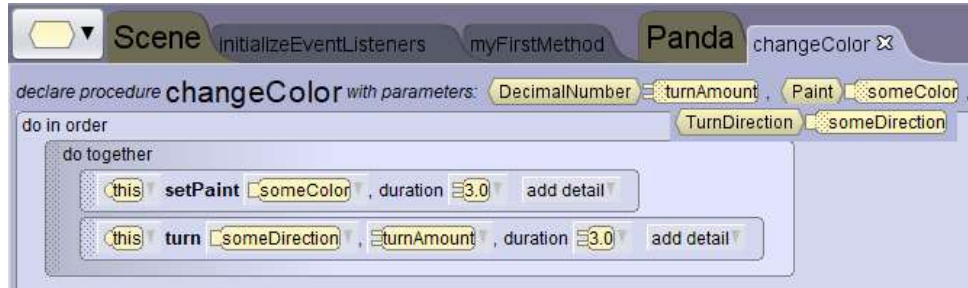
Write the procedure changeColor



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Solution



Give the two calls to changeColor

- Give the call that has the panda turn right twice while turning Blue



- Give the call that has the panda turn left 1.5 times while turning Green



Give the two calls to changeColor

- Give the call that has the panda turn right twice while turning Blue
- Give the call that has the panda turn left 1.5 times while turning Green

Problem 3: Write **Bunny** Procedure **funJumping**

- This procedure has **four parameters**
 - One parameter of type **Decimal** named **opValue**
 - Two parameters of type **Paint** named **color1, color2**
 - One parameter of type **Sdisc** named **someDisc**
- Before called, the bunny is standing on a disc that will be passed as an argument



funJumping story(cont)

- The disc moves up 1 and back down to the ground carrying the bunny up and down with it. As the disc moves up it changes its color to color1 and the bunny changes its color to color2.
- Next the bunny changes its opacity to opValue
- The disc moves up 1 and back down again with the bunny
- Then instantly, the bunny turns back to its original color, the bunny is no longer faded and the disc disappears.

Write the procedure funJumping

```
declare procedure funJumping with parameters: DecimalNumber opValue, Paint color1,
do in order
  do in order
    Paint color2, SDisc someDisc
```

A solution

```
declare procedure funJumping with parameters: DecimalNumber opValue, Paint color1,
do in order
  do in order
    this setVehicle someDisc
    do together
      someDisc move UP 1.0 add detail
      someDisc setPaint color1 add detail
      this setPaint color2 add detail
    someDisc move DOWN 1.0 add detail
    this setOpacity opValue, duration 0.0 add detail
    someDisc move UP 1.0 add detail
    someDisc move DOWN 1.0 add detail
    this setPaint WHITE, duration 0.0 add detail
    this setOpacity 1.0, duration 0.0 add detail
    someDisc setOpacity 0.0, duration 0.0 add detail
```

Now you should look at some of
the old exams