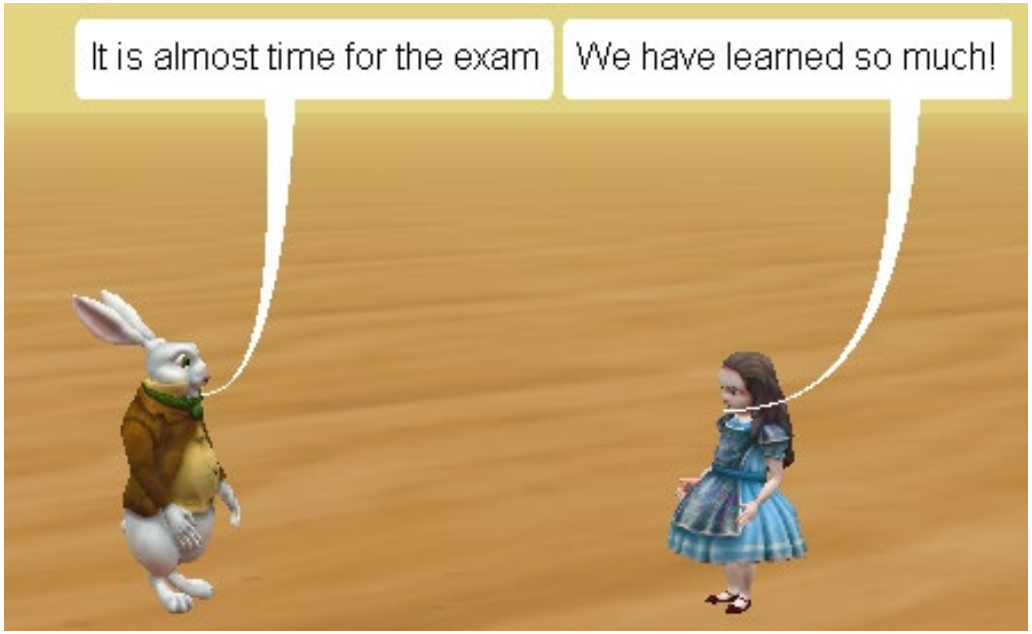
CompSci 94
Study Guide For Exam1
Exam1 on September 26, 2024



Prof. Susan Rodger

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)

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

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

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

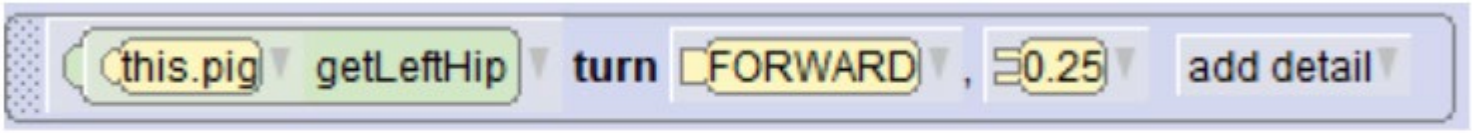
Old exams

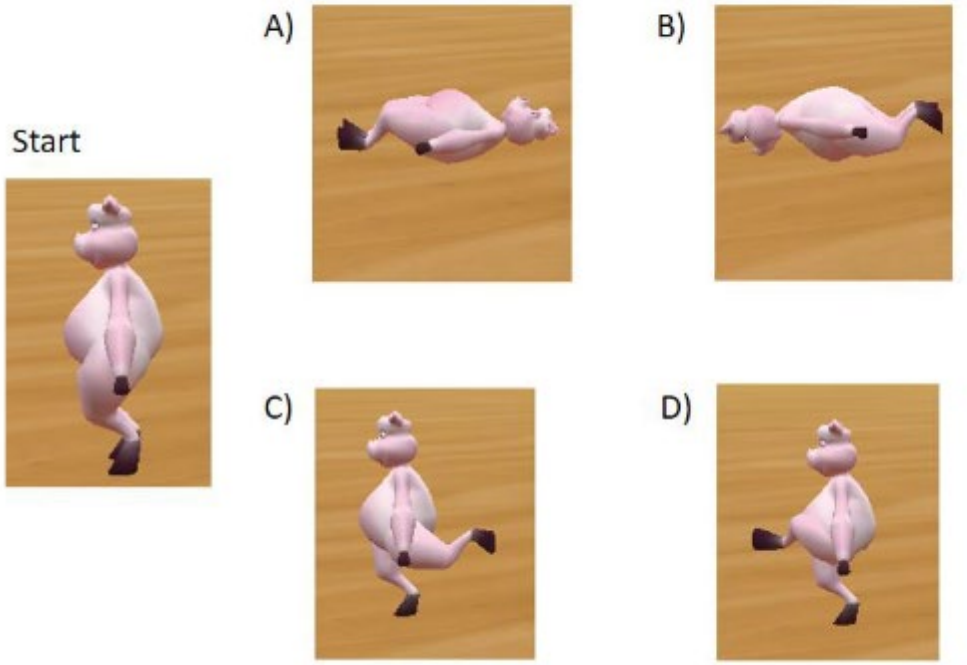
- On resources tab on course web page
- Fall 2022, Fall 2021, Fall 2020, Fall 2019 and Spring 2019 – most like your exam
- Fall 2018, Spring 2018 – Alice 3 (material in different order)
- **See list of questions to study, ignore other ones**
- Practice writing code on paper

Some Practice questions

Problem 1

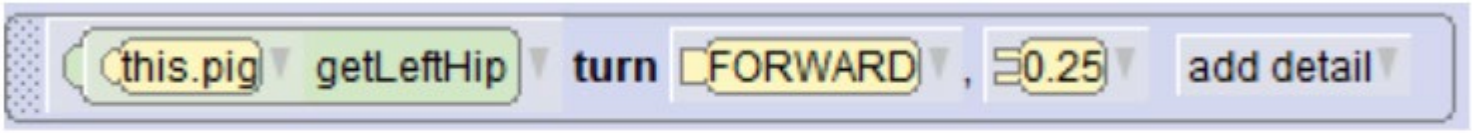
- Consider the following Alice code and the pig is standing straight up as shown with Start in the figure on the left below. Which figure A)-D) is where the pig will be after this line of code is executed?

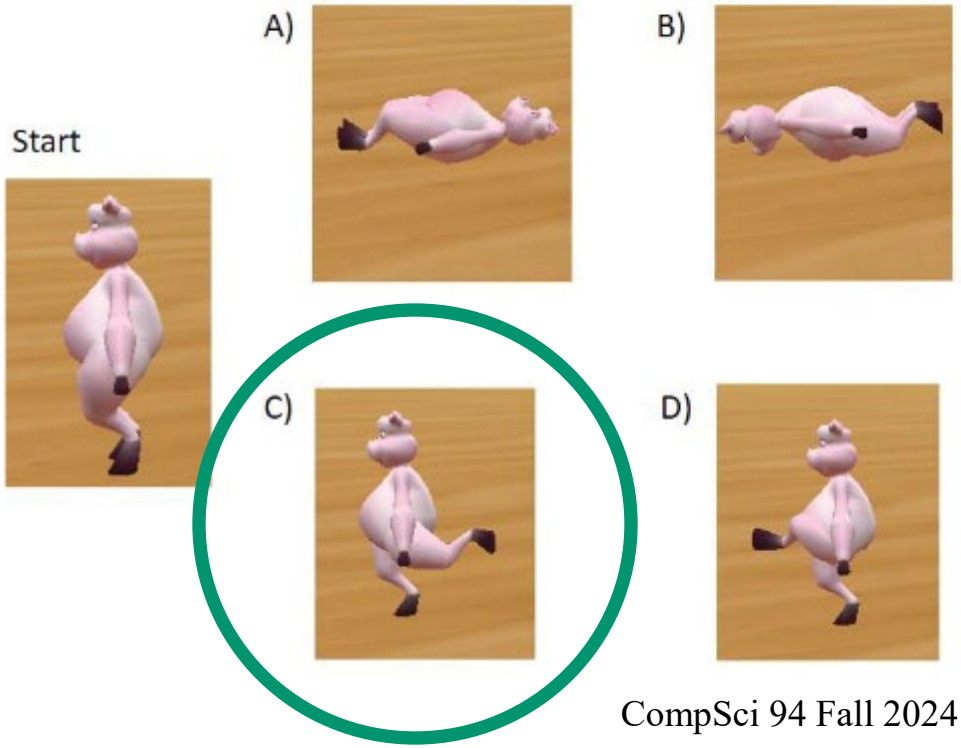




Problem 1

- 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?





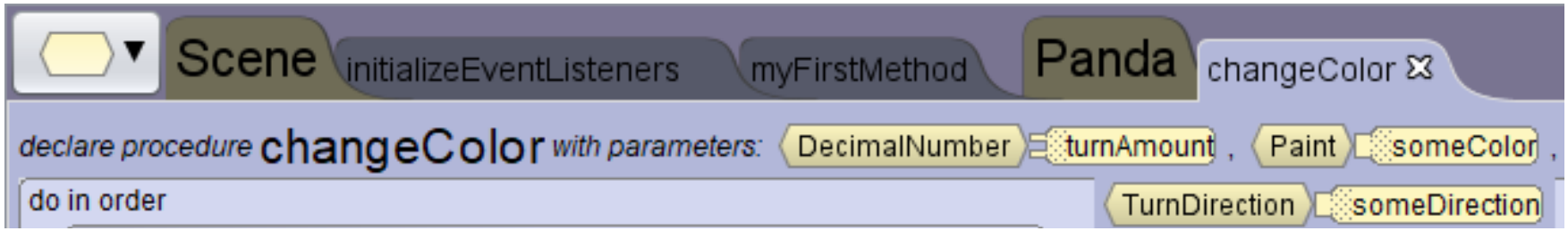
You should practice writing code

- Practice writing code from classworks and old exams

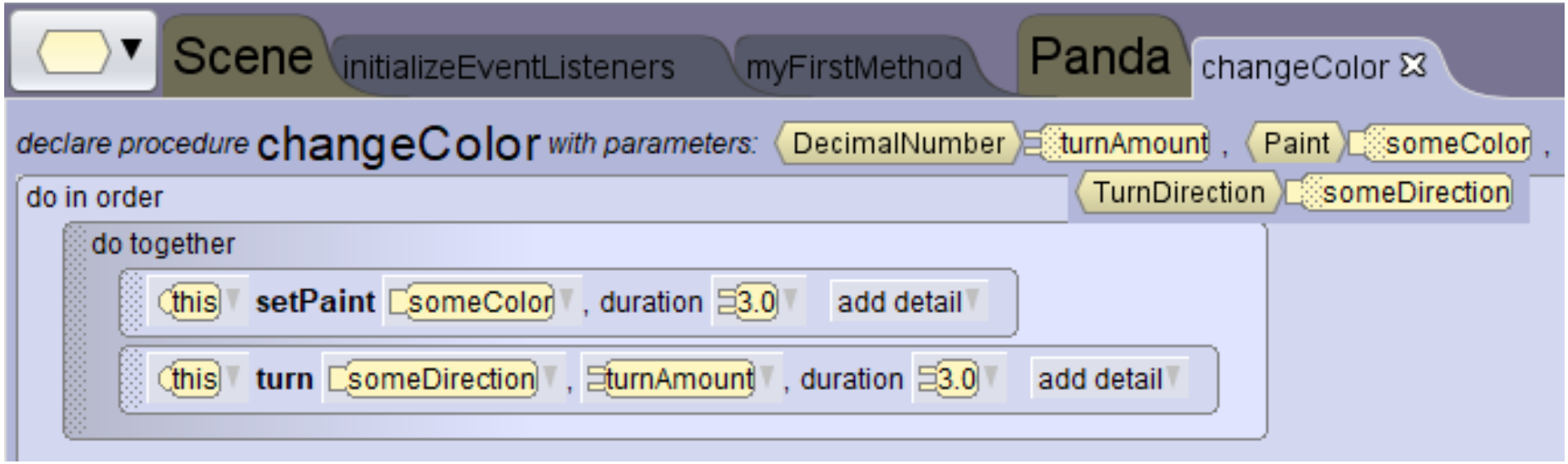
Problem 2
Write **panda** Procedure **changeColor**

- 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.

Write the procedure changeColor



Solution


Scene
initializeEventListeners
myFirstMethod
Panda
changeColor
declare procedure changeColor with parameters:
DecimalNumber
turnAmount ,
Paint
someColor ,
TurnDirection
someDirection
do in order
do together
this setPaint someColor , duration 3.0 add detail
this turn someDirection , turnAmount , duration 3.0 add detail

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

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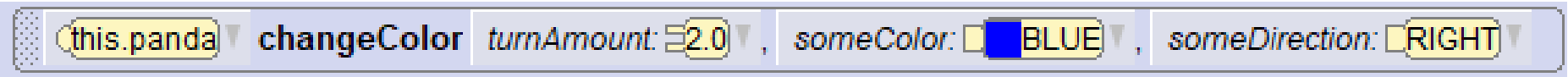
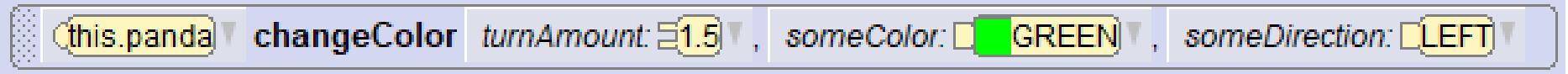


- Give the call that has the panda turn left 1.5 times while turning Green



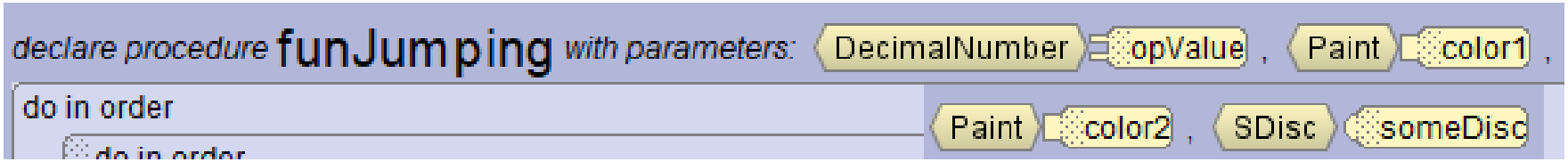
Problem 3:
Write **Bunny** Procedure **funJumping**

- 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

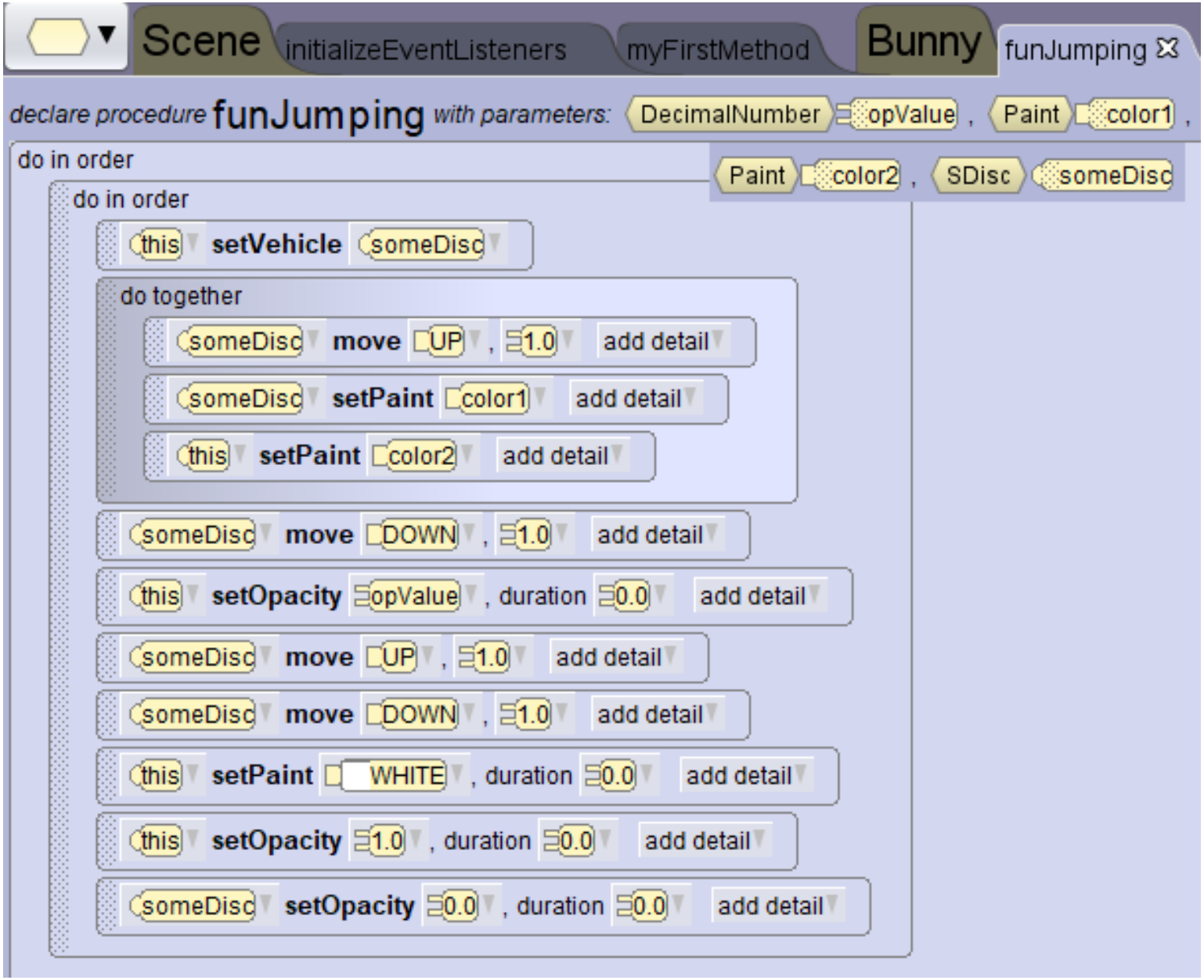
funJumping story(cont)

- 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



A solution


Scene
initializeEventListeners
myFirstMethod
Bunny
funJumping
declare procedure funJumping with parameters: DecimalNumber opValue , Paint color1 ,
Paint color2 , SDisc someDisc
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