

ADVANCED MULTIMEDIA DEVELOPMENT (CIC2P13) Laboratory Four

Please follow the textbooks for the lab exercises:

Macromedia Flash MX 2004 Game Programming – Graig S. Murray, Justin Everett-Church (2003)

Please use Flash MX 2004

Please refer to the subject website for example files and resource files:

At the end of this lab session, students should be able to:

- Write simple ActionScript programs
- Create a simple game Mouse Chaser with ActionScript programming

Exercise 1 – Flash ActionScript

Example: ch2_14If_else_condition fla

Reading / Reference: Textbook Pg56, 57 & 59

Example: ch2_15Switch_condition fla

Reading / Reference: Textbook Pg63 to 65

Example: ch2_16While_Loop fla

Reading / Reference: Textbook Pg66

Example: ch2_17DoWhile_Loop fla

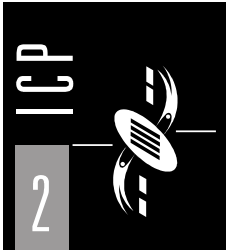
Reading / Reference: Textbook Pg67

Example: ch2_18For_Loop fla

Reading / Reference: Textbook Pg68

Example: ch2_19VarTypeConversion fla

Reading / Reference: Textbook Pg71



Advanced Multimedia Development
Subject Code: CIC2P13
Diploma in Internet Computing
AY 2004/2005 Year 2, Semester 1
Multimedia Option

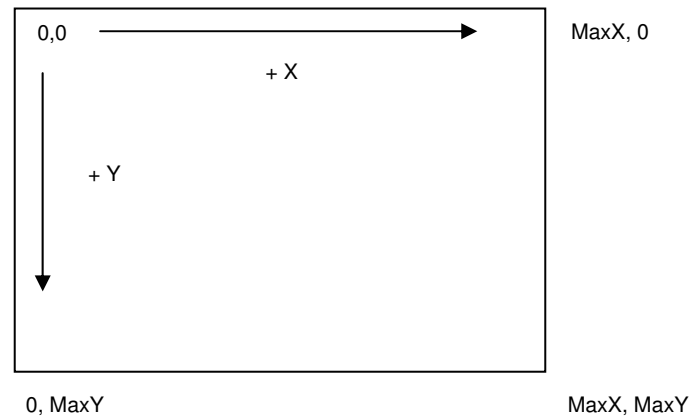
Example: ch2_20LogicalOperators fla
Reading / Reference: Textbook Pg73 to 77

Example: ch2_21LogicalOperatorPrecedence fla
Reading / Reference: Textbook Pg75

Exercise 2 – Simple Game: Mouse Chaser

Coordinates System

The coordinates system in most computer programs is different from conventional coordinates system learnt in secondary schools.



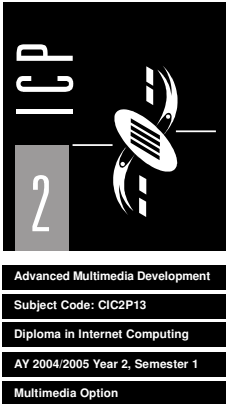
The coordinates of a point in ActionScript = (_x, _y), same as (X, Y) in our usual coordinates system learnt in secondary school.



Exercise 2 – Simple Game: Mouse Chaser

Major Tasks

1. Obtain Art
 - Subtasks:
 - i. The critter
 - ii. The critter's home
 - iii. The mouse pointer (skip, not necessary)
 - iv. The target
 - v. The score display
2. Script Organization
 - Subtasks:
 - i. Frame 1 Frame Script to control the game
 - ii. Instance Scripts attached to instances
 - iii. Develop line of communication between different pieces of scripts
3. Bat chases (follows) the user's mouse pointer, If Bat reaches pointer, ...
 - Subtasks
 - i. Move the bat - mouse_chaser_step1_movebat fla
 - ii. Test to see if the bat has caught the mouse - mouse_chaser_step2_TestBatHitMouse fla
 - iii. If the mouse has been caught,
 - iv. test for a high score
 - v. reset the score
 - vi. reset the speed
 - vii. move the bat home - mouse_chaser_step3_ResetGame fla
4. Target when clicked, move randomly ...
 - Subtasks:
 - i. Increase the score
 - ii. Increase the speed
 - iii. Move the bat home
 - iv. Move the target randomly - mouse_chaser_step4_testTarget fla; - mouse_chaser_step5_TargetClicked fla
5. Testing
 - mouse_chaser_step6_TestHighScore fla



Exercise 2 – Simple Game: Mouse Chaser

Major Task 1. Obtain Art and prepare them for program

Download the file mouse_chaser_raw.fla file from the subject website. Rename it to mouse_chaser_step0. (You some movie symbols created for you)

Target => mouse_chaser_step0_importimages.fla (example)

Change the frame rate to **40 fps**. (You may make it smaller/lower, depending on the speed of the game.)

Change the dimensions of stage to **350 x 470 px**. (same as the background image bat cave)

Create 4 layers and name the layers (in the top down sequence below)

- "Bat"
- "Scoreboard"
- "Target"
- "Background"

P114 to 115, follow instructions to create a new movie clip (mc) symbol, "Scoreboard". Follow the instructions on the textbook to create the text boxes. (the Var fields of the dynamic text boxes are important.)

Insert the movie clip symbols to the respective layers.

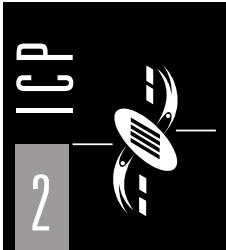
Name the instance of bat mc symbol => "bat"

Name the instance of target mc symbol => "target"

Name the instance of the bat cave mc symbol => "home"

We do not need to name the instance of the scoreboard mc symbol, because we are going to refer to the dynamic textboxes in the instance (not the instance itself).

Names are important, as we need to refer to the names later in the program..



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Exercise 2 – Simple Game: Mouse Chaser

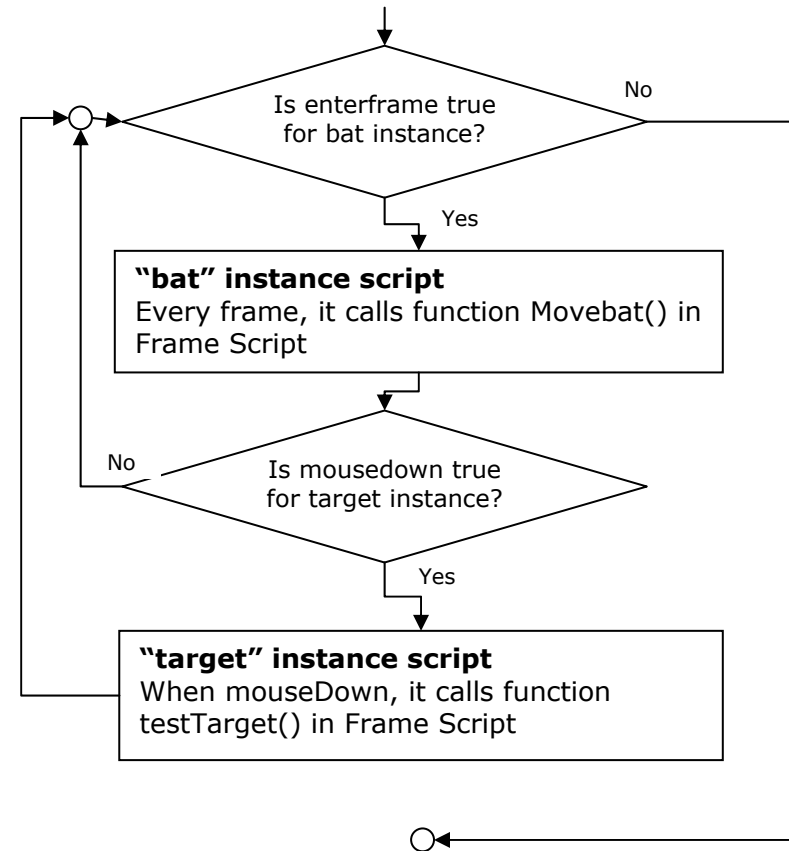
Major Task 2. Script Organization

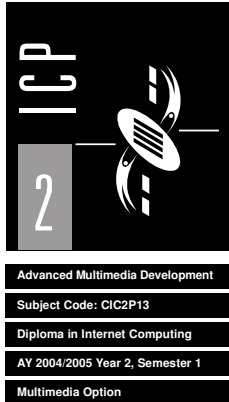
Frame Script (main timeline _root)

```

All variables' declarations
All functions' declarations
    Movebat()
    testTarget()
    ...
    ...
(on the main timeline _root, so that
other scripts can use)
  
```

Instance Scripts





Exercise 2 – Simple Game: Mouse Chaser

Major Task 3. Bat chases (follows) the user's mouse pointer, If Bat reaches pointer, ...

Target => mouse_chaser_step1_movebat.fla (example)

Pg117 to 118, move the bat (to follow your mouse pointer)

Target => mouse_chaser_step2_TestBatHitMouse.fla (example)

Pg119, test to see if the bat has caught the mouse

Target => mouse_chaser_step3_ResetGame.fla (example)

Pg120 to 121,

test for a high score

reset the score

reset the speed

move the bat home

Major Task 4. Target when clicked, move randomly ...

Target => mouse_chaser_step4_testTarget.fla (example)

Pg121 to 122, hit testing (if someone clicked the target)

Target => mouse_chaser_step5_TargetClicked.fla (example)

Pg123 to 126,

Increase the score

Increase the speed

Move the bat home

Move the target randomly

Major Task 5. Testing

Target => mouse_chaser_step6_TestHighScore.fla (example)

Pg126 to 127, the score and highscore display issue