

## Comments made on HW #2

```
L := ["bullets", "rice", "beans"]
flag := 0
every
{
  if !L == "beans" then flag := 1
}
```

But the "every" is not quite set up right

Read Rabin 3.2

## C++, Java, & scripting languages

### C++

- Strengths:
  - o performance,
  - o high level & object oriented
  - o backward compatible with C
  - o Lots of libraries to use
    - STL
    - Boost
    - SDL
- Weaknesses:
  - o Too low-level thought boost and STL help in this respect
  - o too complicated long learning curve
  - o lacking feature
  - o slow iteration (not slow looping cycle)

### Summary

- Use C++ when performance is crucial and avoid using it for GUI development you can do it but there are a lot more high level

### Java (C #)

- Easy to develop on many platforms except on console
- Good library support
- High level OO language
- Used in some Commercial games ( peggles, online poker game, Star wars galaxies)

### Scripting languages

- Ease of development and speed
- Iteration time
- Easier to keep the code and the rest of the game in sync
- Drawbacks
  - o Slow performance

- o Awkward interface with the rest of the game how easy is it to call from ruby to java and visa versa
- o Some developers have made their own scripting language
- o Popular scripting languages
  - └ Python
  - └ Ruby
  - └ Lua
  - └ Javascript
  - └ Etc.

How to choose a scripting language, well ask yourself these questions

- Do you need a scripting language?
- What features do you need?
- What kind of performance do you need?
- What debugging facilities does the language have?
- What platform are you going to run on?

Game engine

- Physics engines
- AI engines

What ratio is the system level vs scripting level

Sesrit (Tetris clone)

```

/&window := wOpen("label=sesrit","size=276,510", "posx=20")##opens window set
size, etc.
colors := table(&window)
every c := ("blue"|"yellow"|"cyan"|"green"|"red"|"white"|
           "red-yellow" | "purple-magenta" | "pink") do
  colors[c] := Clone("fg=" || c)

```

```

# Creates as many context as you want already set to some foreground color
# and the link the canvas to the context

```

```

# L appears to be a matrix of How does the following code compare with

```

```

L := list(30, list(10, "black")) ?

```

Here we only make one row of black

```

L := list(30)

```

```

  every !L := list(10, "black")

```

here we setting a correct 30 row by 10 colume grid.

```

procedure game_loop()
  game_status := 1
  repeat {
    while *Pending() > 0 do {
      case Event() of {
        Key_Left : move_piece(-1, 0)

```

```

Key_Right : move_piece(1, 0)
Key_Down  : rotate_piece(1, -1)
Key_Up    : rotate_piece(-1, 1)
" "       : while move_piece(0,1) # drop piece to bottom
"q"       : if &meta then exit()
"a"       : if &meta then about_sesrit()
"p"       : if (&meta & game_status = 1) then pause()
"n"       : if &meta then return

&lpress   : {
    if 15 <= &x <= 105 then { #it checks position of the blocks
        if 270 <= &y <= 290 then pause()
        else if 300 <= &y <= 320 then return
        else if 360 <= &y <= 380 then
            about_sesrit()
        }
    }
&lrelease :
    if ((15 <= &x <= 105) & (330 <= &y <= 350)) then
        exit()
}

}

if not move_piece(0,1) then {
    if (!activecells)[1] < 2 then {
        game_over()
        return
    }
    # if we couldn't drop the piece down, insert a new piece
}
# ... misc. step code

```

GUI

How does that affect the game?

Most games have their own custom GUI

Is there a default GUI console?

02/10/11

Recap on LOTR online

You can transfer a character from a different sever for a fee

If you missed the lotro session you can schedule a time he Docter J or hopefully meet one of his characters online on the Imladris sever. Things you should be asking when you play an MMO.

What different activities make up quest?

How big is the MMO world?

What are the economics of the game?

What kind of fun in your MMO or Lotro is the kind you like the most

And what else did you like or dislike about your MMO experiences?

Other MMO to look @

Xsyon MMO, STO, city of heroes

GUI in games

See unicon technical report 6 and chap. 18 in the unicon book

Rabin 3.3

Flash is a web development platform

Advantages of Flash

Used by most but not all

Fast learning curve

Action script is similar to ecma script

Flash use time line of frames and runs at a fixed rate

Code is placed within a particular frame

Flash uses Vector engine as opposed to raster

- An advantage of using the vector engine is that the game can be scaled to any size while still maintaining the good graphic quality
- The more complex vectors the slower flash performs, however the speed of technology today one would have to be very inefficient to slow it down on a modern machine

Action script similar to java script, so noticeable different are;

- Curly braces for code blocks { }
- Semicolon for statement lines endings
- "if" logic conditions
  - o Ex. if (condition, x=1) dosomething();
- Loops, which are accomplished with standard for, do or while
  - o Ex. for (j = 0; j < 100; j++)  
    {  
        *do something 100 times;*  
    }

## Variable types in ActionScript

### Standards

- = Number
- = String
- = Array
- = Boolean

### Flash Specific

- = Object
- = MovieClip
- = Color
- = Date
- = Camera
- = Microphone
- = Sound
- = TextField

### Flash summary

- Flash is a vector-based graphics engine
  - Supports lines, fills, gradients and bitmaps
- Flash has strong support for audio
  - MP3, ADPCM and RAW compression
- Flash uses a powerful scripting language called ActionScript to program the game
- ActionScript 2.0 has a powerful class structure, 3.0 more so
- Graphics and code are integrated into one unit in the Flash IDE
- The Draw API can be used to create graphics at runtime
- Flash can communicate with external servers to retrieve files and data

### Blasteroids clone of asteroids

Went over Blasteroids and how it implements its GUI