A sketchy introduction to Pygame

# Purpose of this document

We should know how to create graphics, windows, read files etc with pygame.

# Introduction

Use *pygame.init()* to initialize the library.

Pygame Modules Overview

* **cdrom**: manage cdrom devices and audio playback
* **cursors**: load cursor images, includes standard cursors
* **display**: control the display window or screen
* **draw**: draw simple shapes onto a Surface
* **event**: manage events and the event queue
* **font**: create and render Truetype fonts
* **image**: save and load images
* **joystick**: manage joystick devices
* **key**: manage the keyboard
* **mixer**: loading Sound objects and controlling playback.
* **mouse**: manage the mouse
* **movie**: playback of mpeg movies
* **sndarray**: manipulate sounds with Numeric
* **surfarray**: manipulate images with Numeric
* **time**: control timing
* **transform**: scale, rotate, and flip images

# Creating Window

Simplest way to create a window:

|  |
| --- |
| # (WIDTH, HEIGHT) is a tuple of two numbers.  screen = pygame.display.set\_mode((WIDTH, HEIGHT)) |

Everything about displaying window and screen is in *pygame.display* module. To render the screen, uses *screen.fill(BGCOLOR)* to fill the default background and uses *pygame.display.flip()* update the screen. *BGCOLOR* is a tuple of RGB values, i.e. black color (0,0,0).

|  |
| --- |
| pygame.init();  screen = pygame.display.set\_mode((WIDTH, HEIGHT))  while 1:  ### EVENT ###  ### UPDATE ###  ### RENDER ###  screen.fill(BGCOLOR)  pygame.display.flip() |

# Handling Events

An example of polling events and execute its function:

|  |
| --- |
| for event in pygame.event.get():  if event.type == pygame.KEYDOWN:  if event.key == K\_ESCAPE:  sys.exit(0)  elif event.type == pygame.QUIT: # the button of closing window  sys.exit(0) |

*pygame.event* is the module that handles the events for us, including user inputs such as keyboard and mouse.

# Drawing an object

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# Display texts

# Play a sound file

Will be introduce later when needed.

# References

<http://www.pygame.org/docs/tut/intro/intro.html>

<http://www.pygame.org/docs/ref/display.html>

<http://www.pygame.org/docs/ref/event.html>