XNA and C#

XNA – Why?

- Project management – Visual Studio 2010
- Framework
- Libraries
- Content resource management
- Input handling
- 2D sprite handling
- 3D

Framework

- Your game derives from a class Game
- Initialization:
    - Constructor, Initialize and LoadContent methods
- Game loop
    - Manages time
    - Update
        - Poll the input devices that interest you
        - Update your game state
    - Draw
        - Display whatever the user should see
- [Create a default game.]

Content resource management

- Sprites are loaded from image files
- What *kind* of file?
- XNA allows a wide variety of graphic file types.
  - .bmp, .dds, .dib, .hdr, .jpg, .pfm, .png, .ppm, and .tga
  - (not .xcf, gimp's default type)
  - You don't have to know the internal file formats.
  - All can be loaded with the same function call.
- [Load sprites of different file types.]

Drawing: Sprites

- Draw method
  - 7 (?) Overloads
  - Allows you to:
    - Position the sprite on the screen
    - Resize
    - Rotate
    - Color
    - Display only part
    - Specify layering
- [Display the sprites we loaded]

Update

- Get input
  - KeyboardState
    - KeyState
  - MouseState
- Update the “state” of your game objects
- [Move the sprites around]

XNA Class Summary

- Texture2D
- Keyboard, KeyboardState, Keys
- Mouse, MouseState
- Content
  - Load<>
- SpriteBatch
  - Draw, Drawstring
- SpriteFont
  - Methods: MeasureString
- Vector2
  - Fields / properties: X, Y, Zero,
- MathHelper