MathsDemo Reference Document

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# Main Loop

The

## Classes

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## Functions

### Main

int main()

Entry point of the program. Creates and runs an Application2D object.

# Application2D

class Application2D : public aie::Application

A Bootstrap application running the games in the demo

## Functions

### Startup

virtual bool startup()

Creates font, renderer, and each of the games, then sets current game as m\_tankGame and calls its startup function.

### Shutdown

virtual void shutdown()

Destroys font, renderer, and games.

### Update

virtual void update(float deltaTime)

This function will be repeatedly called until the application is quit.

Checks user input for commands to quit the application, switch game modes, or reset the program. If switching modes, m\_game is set to that game and its startup function is called. On a reset, all games are recreated and the game is set back to m\_tankGame.

Then, the current game’s update function is called.

### Draw

virtual void draw()

This function will be repeatedly called until the application is quit.

The function clears the screen, calls the current game’s draw function, then prints the current frames per second to the top left of the screen.

## Members

**m\_2dRenderer:** A Renderer2D for drawing sprites to the screen

**m\_font:** Font used for writing framerate information

**m\_game:** GameMode currently being played

**m\_tankGame:** TankGame

**m\_armGame:** RobotArmGame

**m\_3dGame:** Game3D

**m\_cameraX, m\_cameraY:** Camera position

# Scene Hierarchy and Collision

## Classes

**Collider 3**

# Collider

class Collider

## Member Functions

## Derived Classes

# AABox

# CircleCollider

# OBox

# SceneObject

# Tank Game

# Robot Arm Game

# 3D Game