

Appendix B - All Classes (Just Inheritance and Interfaces)

void setPrevX(float)float getPrevY()void setPrevY(float)

boolean checkCollision(CollidableEntity,CollidableEntity

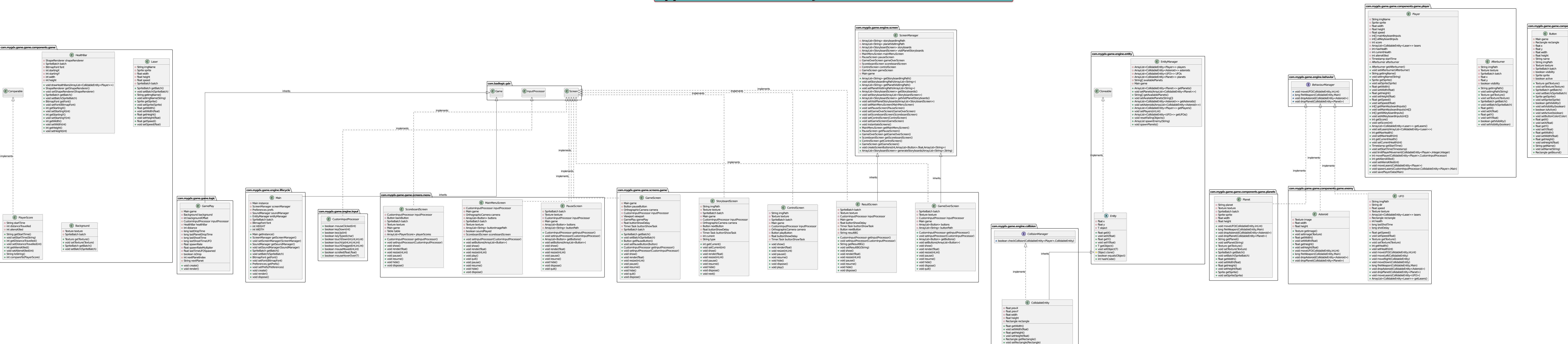
Music menuMusic
Music gameMusic
Music controlMusic
Music scoreMusic
Music pauseMusic
Music storyMusic
Sound buttonHover
Sound buttonClick
Sound laserPew
Sound enemyLaserPew
boolean isPlaying

void stopMusic()boolean isPlaying()void playButtonHover()

void playButtonClick()

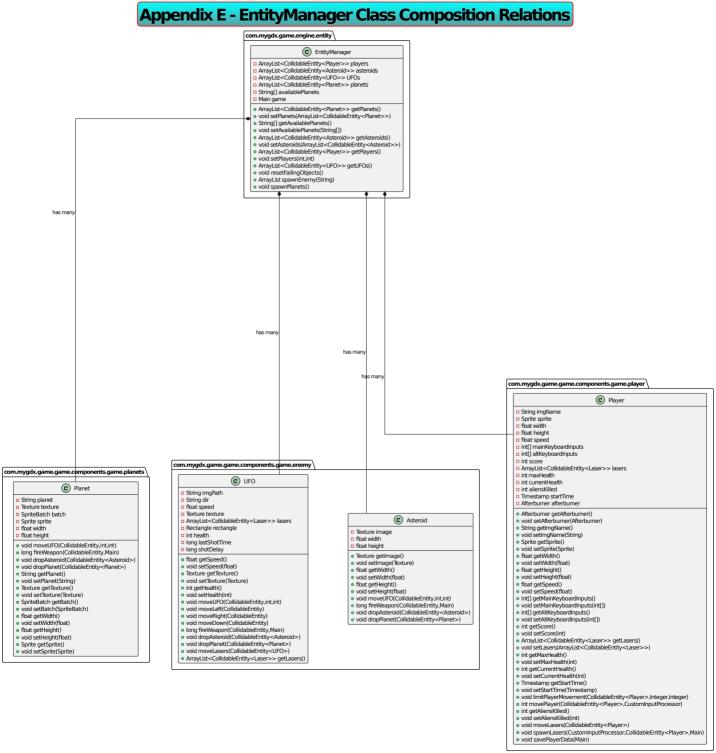
void playLaserSound()

void playEnemyLaserSound()



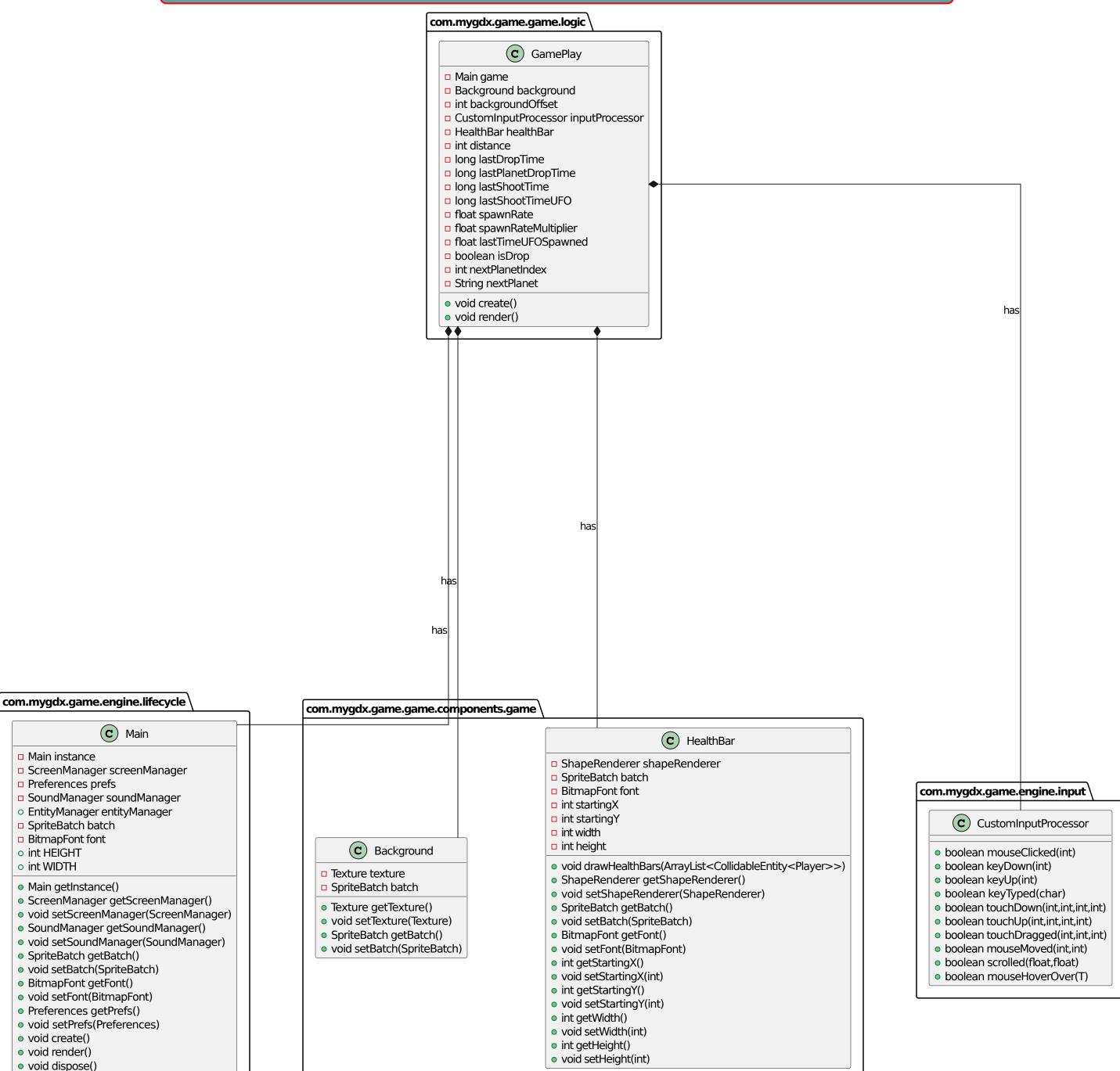
Appendix C - CollidableEntity Class Generic Typing Relations com.mygdx.game.engine.collision C CollidableEntity n float prevX float prev'r float width n float height □ Rectangle rectangle float getWidth() void setWidth(float) float getHeight() void setHeight(float) · Rectangle getRectangle() void setRectangle(Rectangle) float getPrevX() has generic typin unid catProvY(float) float getPrevY() has generic typir void setPrevY(float) boolean checkCollision(CollidableEntity,CollidableEntity) has generic typing has generic typing has generic typir com.mygdx.game.game.components.game.player (c) Player String imgName Sprite sprite n float width □ float height n float speed int[] mainKeyboardInputs int[] altKeyboardInputs o int score com.mygdx.game.game.components.game.enemy ArrayList<CollidableEntity<Laser>> lasers com.mygdx.game.game.components.game.planets n int maxHealth © UFO int currentHealth com.mygdx.game.game.components.gam C Planet nt aliensKilled String imgPath □ Timestamp startTime String planet a String dir Afterbumer afterbumer C Laser g finat sneed □ Texture texture Afterburner getAfterburner() SpriteBatch batch Texture texture String imgName C Asteroid Sprite sprite □ ArrayList<CollidableEntity<Laser>> lasers void setAfterburner(Afterburner) Sprite sprite float width Rectangle rectangle String getImgName() float width □ Texture image float height nt health void setImgName(String) float height □ long lastShotTime Sprite getSprite() float speed
SpriteBatch batch · void moveUFO(CollidableEntity,int,int) float height o long shotDelay void setSprite(Sprite) long fireWeapon(CollidableEntity,Main) Texture getImage() float getWidth() float getSpeed()
void setSpeed(float) SpriteBatch getBatch() void dropAsteroid(CollidableEntity<Asteroid> void setImage(Texture) void setWidth(float) void drooPlanet(CollidableEntity<Planet>) unid catRatch(SpriteRatch) float getWidth() float getHeight() String getImgName()
void setImgName(String) String getPlanet() Texture getTexture()
void setTexture(Texture) void setWidth(float) void setHeight(float) void setPlanet(String) float getHeight() float getSpeed() Texture getTexture() int getHealth() Sprite getSprite() void setHeight(float) void setSpeed(float) void setTexture(Texture) void setHealth(int) · void setSprite(Sprite) a unid movel IEO(CollidableEntity int int) int/1 getMainKevboardInputs() SpriteBatch getBatch() void moveUFO(CollidableEntity,int,int) float getWidth() long fireWeapon(CollidableEntity,Main) void setMainKeyboardInputs(int[1) void setBatch(SpriteBatch) · void moveLeft(CollidableEntity) void setWidth(float) void dropAsteroid(CollidableEntity<Asteroid>) int[] getAltKeyboardInputs() float getWidth() void moveRight(CollidableEntity) float getHeight() void dropPlanet(CollidableEntity<Planet>) void setAltKeyboardInputs(int[]) void setWidth(float) void moveDown(CollidableEntity) void setHeight(float) int getScore() long fireWeapon(CollidableEntity,Main) finat natHeinht() float getSpeed()
void setSpeed(float) void setScore(int) void setHeight(float) void dropAsteroid(CollidableEntity<Asteroid>) ArrayList<CollidableEntity<Laser>> getLasers() void dropPlanet(CollidableEntity<Planet>) Sprite getSprite() void setLasers(ArrayList<CollidableEntity<Laser>>) void moveLasers(CollidableEntity<UFO>) int getMaxHealth() ArrayList<CollidableEntity<Laser>> getLasers() void setMaxHealth(int) int getCurrentHealth() void setCurrentHealth(int) Timestamp getStartTime() void setStartTime(Timestamp) void limitPlayerMovement(CollidableEntity<Player>,Integer,Integer) int movePlayer(CollidableEntity<Player>,CustomInputProcessor) int getAliensKilled() void setAliensKilled(int) void scoulcristdicu(iii)
void moveLasers(CollidableEntity<Player>) void spawnLasers(CustomInputProcessor,CollidableEntity<Player>,Main) void savePlayerData(Main)

Appendix D - ControlScreen Class Composition Relations C ControlScreen String imgPath Texture texture Corito Dately hately n Main game CustominputProcessor inputProcessor OrthographicCamera camera Button playButton n float huttonShowDelay Timer. Task buttonShowTask o void show() unid render(finat) · void resize(int,int) void pause() void resume() void hide() void dispose() void play() har com.mygdx.game.game.components.ui C Button □ Main game Rectangle rectangle □ float x n float v n finat width float height String name String imgPath Texture texture com.mygdx.game.engine.input □ SoriteBatch hatch boolean visibility C CustominputProcessor Sprite sprite boolean active boolean mouseClicked(int) Texture getTexture() boolean kevDown(int) void setTexture(Texture) boolean keyUp(int) SoriteBatch getBatch() boolean keyTyped(char) void setBatch(SpriteBatch) boolean touchDown(int.int.int) Sprite getSprite() boolean touchUp(int.int.int.int) void setSprite(Sprite) boolean touchDragged(int,int,int) boolean getVisibility() boolean mouseMoved(int int) void setVisibility(boolean) boolean scrolled(float.float) boolean isActive() boolean mouseHoverOver(T) void setActive(boolean) void setButtonColor(Color) float getX() void setX(float) float getY() void setY(float) float getWidth() void setWidth(float) float getHeight() void setHeight(float) String getName() void setName(String) Rectangle getBound()

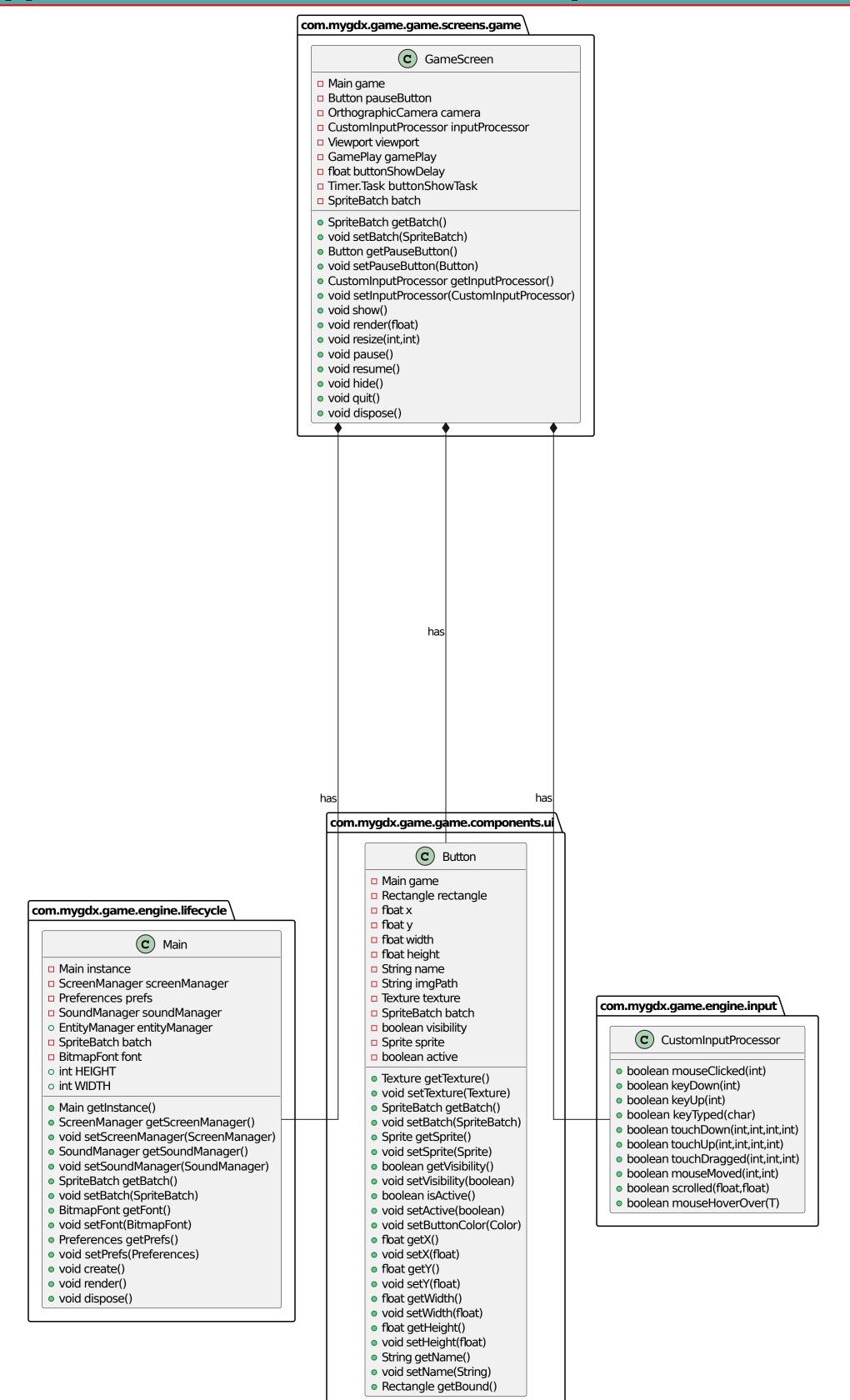


Appendix F - GameOverScreen Class Composition Relations (C) GameOverScreen SpriteBatch batch Texture texture CustomInputProcessor inputProcessor Main game ArrayList<Button> buttons ArrayList<String> buttonPath CustomInputProcessor getInputProcessor() void setInputProcessor(CustomInputProcessor) ArravList<Button> getButtons() void setButtons(ArrayList<Button>) · void show() void render(float) void resize(int.int) void nause() a unid recume/ void hide() · void dispose() void quit() com.mygdx.game.game.components.ui © Button Main game Rectangle rectangle com.mygdx.game.engine.lifecycle n float x float y (C) Main float width g float height Main instance String name ScreenManager screenManager String imgPath Preferences prefs n Tayture texture com.mygdx.game.engine.input SoundManager soundManager n SpriteRatch hatch EntityManager entityManager boolean visibility C CustomInputProcessor SpriteBatch batch Sprite sprite BitmapFont font boolean active boolean mouseClicked(int) o int HEIGHT Texture getTexture() boolean keyDown(int) o int WIDTH void setTexture(Texture) boolean keyUp(int) Main getInstance() SpriteBatch getBatch() boolean keyTyped(char) ScreenManager getScreenManager() void setBatch(SpriteBatch) boolean touchDown(int.int.int.int) void setScreenManager(ScreenManager) Snrite netSnrite() boolean touchUp(int,int,int,int) SoundManager getSoundManager() void setSprite(Sprite) boolean touchDragged(int,int,int) void setSoundManager(SoundManager) boolean getVisibility() boolean mouseMoved(int.int) SpriteBatch getBatch() void setVisibility(boolean) boolean scrolled(float,float) void setBatch(SpriteBatch) boolean isActive() boolean mouseHoverOver(T) BitmapFont getFont() void setActive(boolean) void setFont(RitmanFont) void setButtonColor(Color) Preferences getPrefs() float getX() void setX(flnat) void setPrefs(Preferences) void create() float getY() · void render() void setY(float) void dispose() float getWidth() void setWidth(float) float getHeight() void setHeight(float) String getName() void setName(String) • Rectangle getBound()

Appendix G - GamePlay Class Composition Relations



Appendix H - GameScreen Class Composition Relations



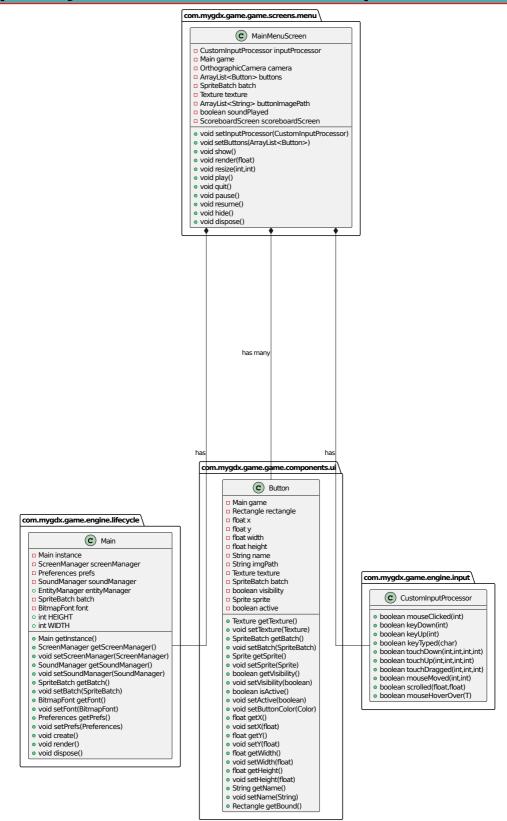
Appendix I - Main Class Composition Relations com.mygdx.game.engine.lifecycle (C) Main Main instance ScreenManager screenManager Preferences prefs SoundManager soundManager EntityManager entityManager SpriteBatch batch BitmapFont font o int HEIGHT o int WIDTH Main getInstance() ScreenManager getScreenManager() void setScreenManager(ScreenManager) SoundManager getSoundManager() void setSoundManager(SoundManager) SpriteBatch getBatch() void setBatch(SpriteBatch) BitmapFont getFont() void setFont(BitmapFont) Preferences getPrefs() void setPrefs(Preferences) void create() void render() void dispose() has has has com.mygdx.game.engine.screen (**c**) ScreenManager ArrayList<String> storyboardImgPath ArrayList<String> planetVisitImgPath ArrayList<StoryboardScreen> storyboards ArrayList<StoryboardScreen> visitPlanetStoryboards com.mygdx.game.engine.sound com.mygdx.game.engine.entity □ MainMenuScreen mainMenuScreen PauseScreen pauseScreen (C) SoundManager GameOverScreen gameOverScreen (c) EntityManager □ ScoreboardScreen scoreboardScreen Music menuMusic □ ControlScreen controlScreen ArrayList<CollidableEntity<Player>> players Music gameMusic □ ArrayList<CollidableEntity<Asteroid>> asteroids □ GameScreen gameScreen Music controlMusic Main game ArrayList<CollidableEntity<UFO>> UFOs Music scoreMusic □ ArrayList<CollidableEntity<Planet>> planets ArrayList<String> getStoryboardImgPath() Music pauseMusic String[] availablePlanets void setStoryboardImgPath(ArrayList<String>) Music storyMusic Main game ArrayList<String> getPlanetVisitImgPath() Sound buttonHover ArrayList<CollidableEntity<Planet>> getPlanets() void setPlanetVisitImgPath(ArrayList<String>) Sound buttonClick void setPlanets(ArrayList<CollidableEntity<Planet>>) ArrayList<StoryboardScreen> getStoryboards() Sound laserPew String[] getAvailablePlanets() void setStoryboards(ArrayList<StoryboardScreen>) □ Sound enemyLaserPew ArrayList<StoryboardScreen> getVisitPlanetStoryboards() void setAvailablePlanets(String[]) boolean isPlaying ArrayList<CollidableEntity<Asteroid>> getAsteroids() void setVisitPlanetStoryboards(ArrayList<StoryboardScreen>) void playMusic(ScreenType) void setAsteroids(ArrayList<CollidableEntity<Asteroid>>) void setMainMenuScreen(MainMenuScreen) void stopMusic() ArrayList<CollidableEntity<Player>> getPlayers() void setPauseScreen(PauseScreen) boolean isPlaying() void setPlayers(int,int) void setGameOverScreen(GameOverScreen) void playButtonHover() ArrayList<CollidableEntity<UFO>> getUFOs() void setScoreboardScreen(ScoreboardScreen) void playButtonClick() void resetFailingObjects() void setControlScreen(ControlScreen) void playLaserSound() ArrayList spawnEnemy(String) void setGameScreen(GameScreen) void playEnemyLaserSound() void spawnPlanets() void instantiateScreens() void dispose() MainMenuScreen getMainMenuScreen() PauseScreen getPauseScreen()

GameOverScreen getGameOverScreen()ScoreboardScreen getScoreboardScreen()

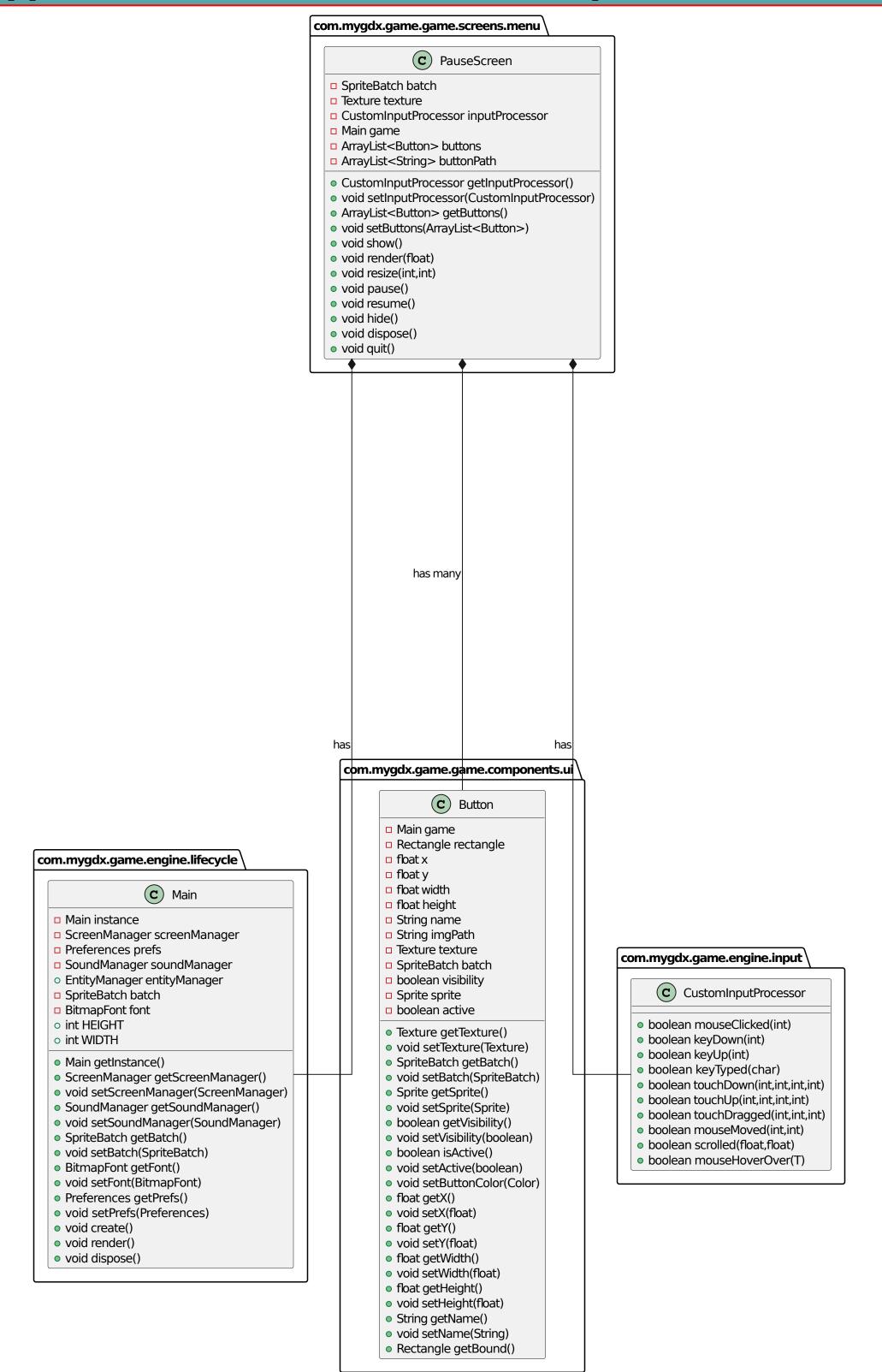
void createScreenButtons(int,ArrayList<Button>,float,ArrayList<String>)ArrayList<StoryboardScreen> generateStoryboards(ArrayList<String>,String)

ControlScreen getControlScreen()GameScreen getGameScreen()

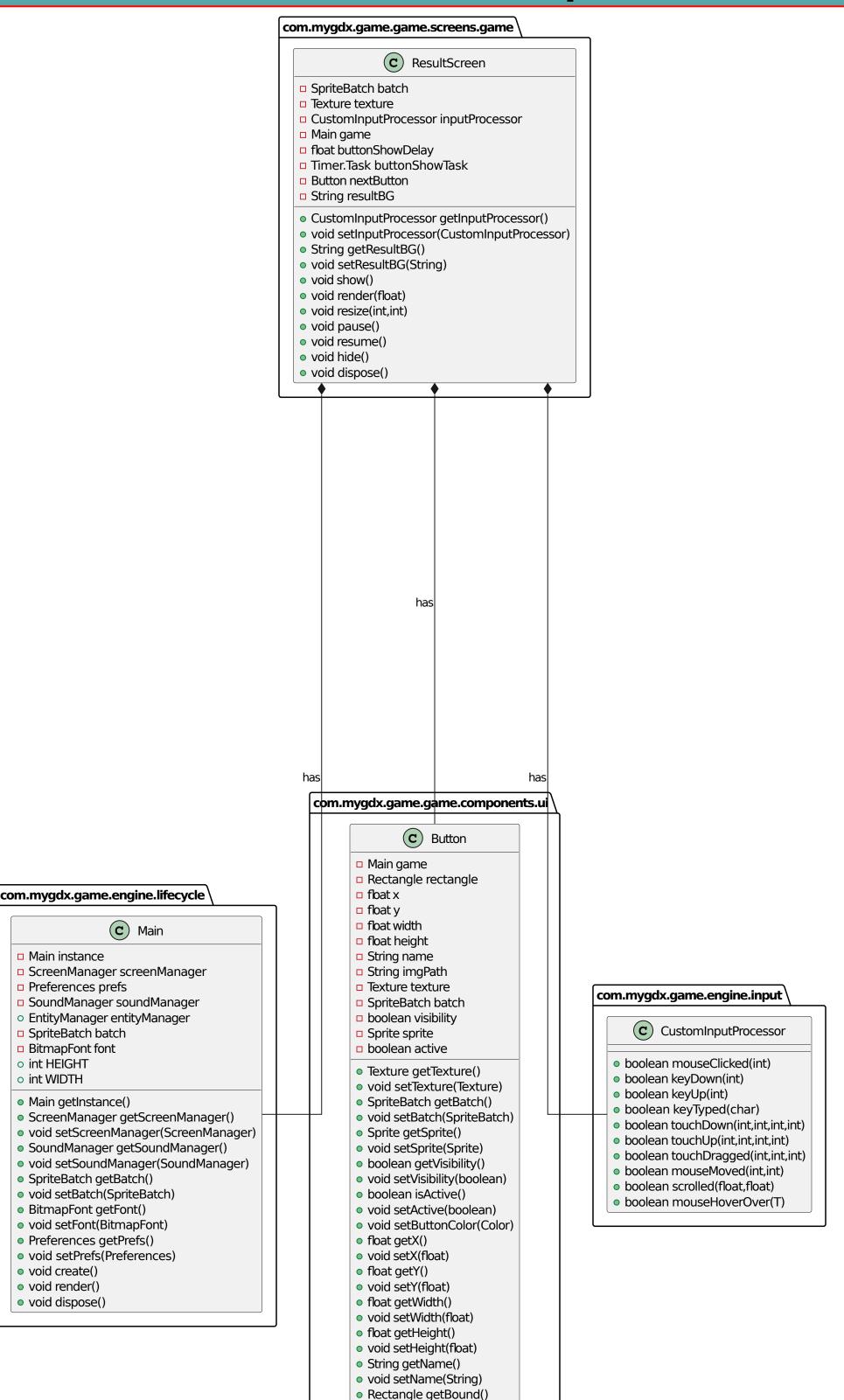
Appendix J - MainMenuScreen Class Composition Relations



Appendix K - PauseScreen Class Composition Relations



Appendix L - ResultScreen Class Composition Relations

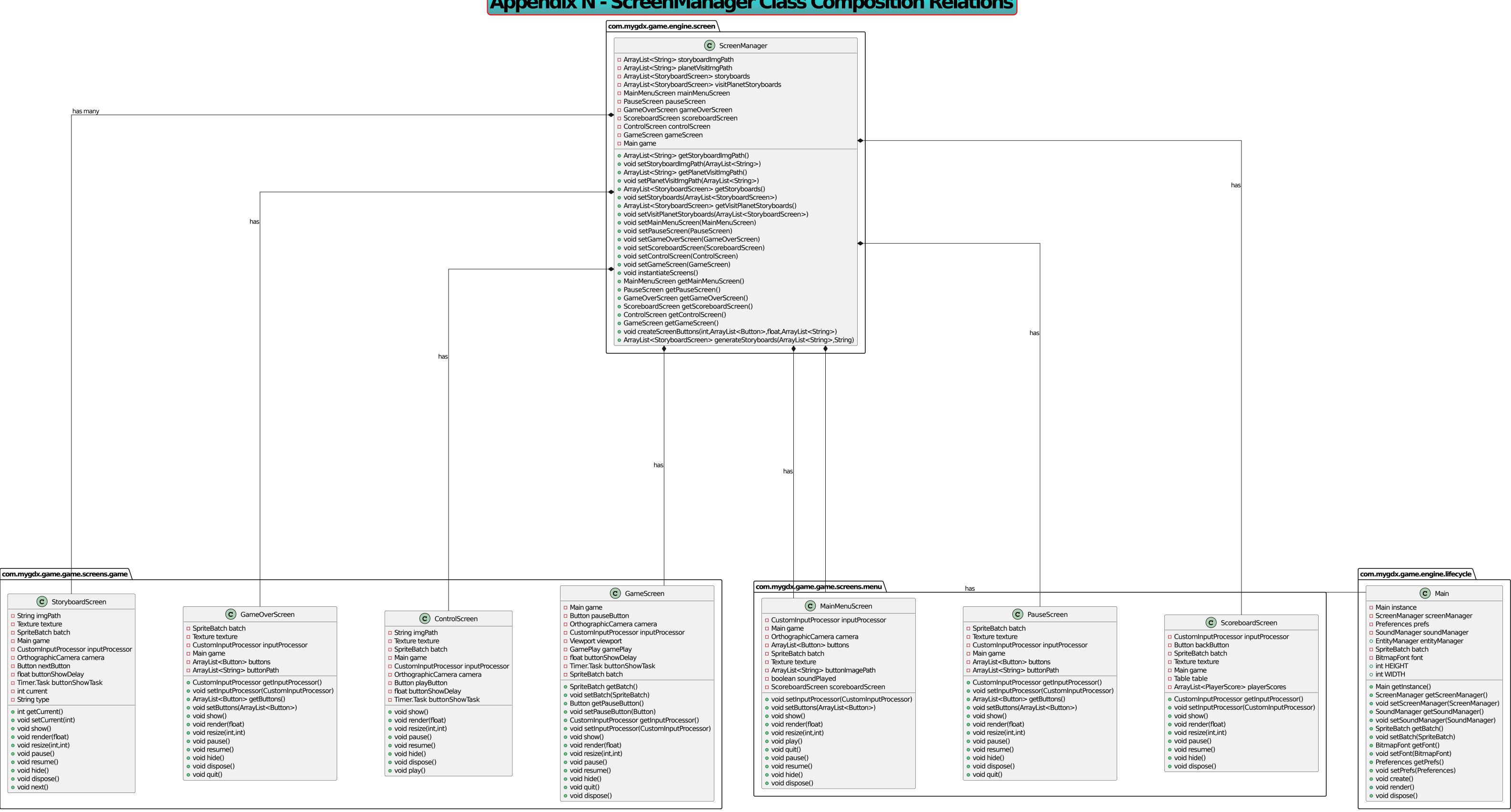


Appendix M - ScoreboardScreen Class Composition Relations

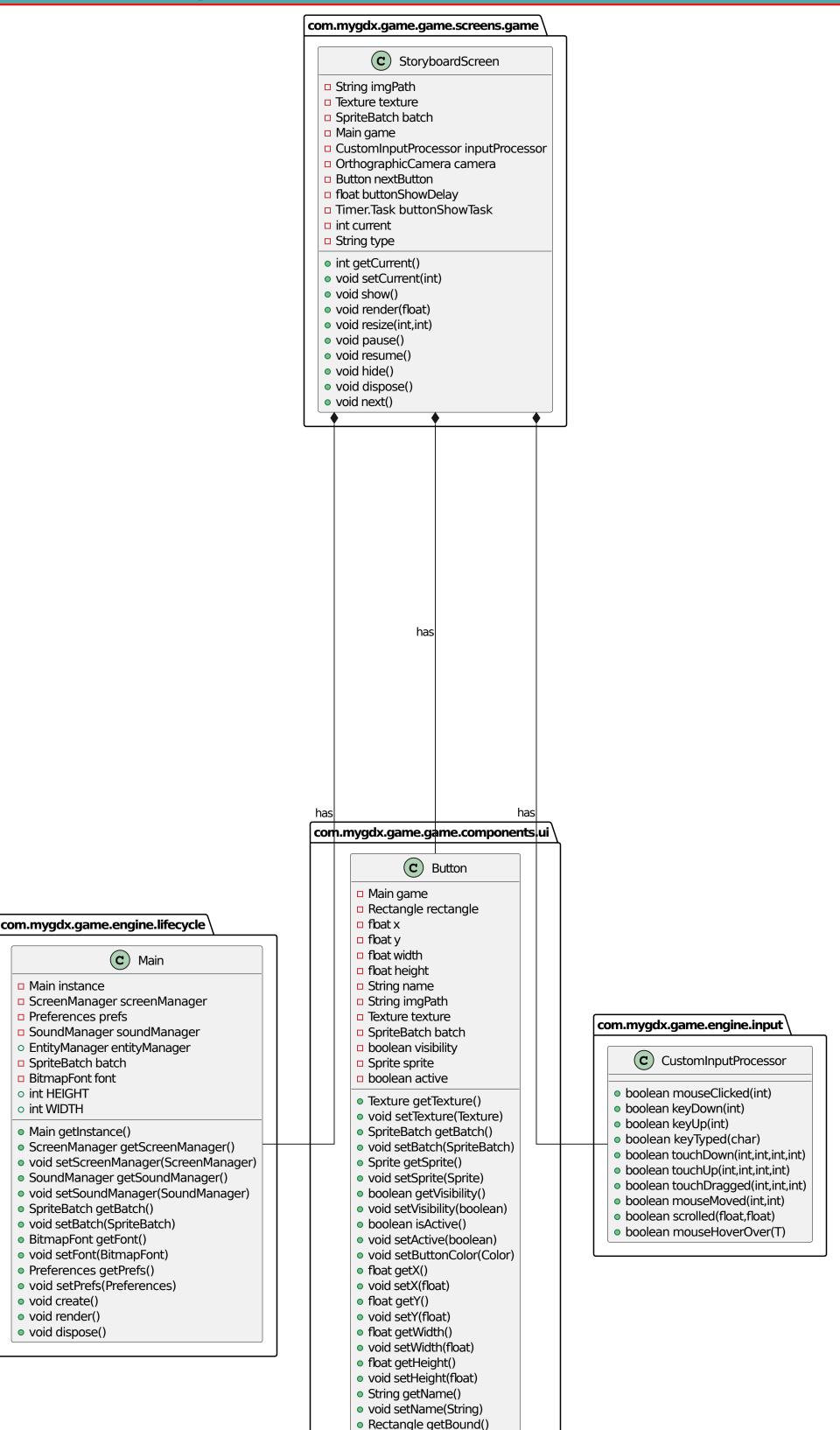


Rectangle getBound()

Appendix N - ScreenManager Class Composition Relations



Appendix O - StoryboardScreen Class Composition Relations



Main

Main instance

Preferences prefs

SpriteBatch batch

Main getInstance()

SpriteBatch getBatch()

BitmapFont getFont()

Preferences getPrefs()

void create()

void render()

void dispose()

void setBatch(SpriteBatch)

void setFont(BitmapFont)

void setPrefs(Preferences)

BitmapFont font

o int HEIGHT

o int WIDTH

□ SoundManager soundManager

EntityManager entityManager

Appendix P - UFO / Player Class Composition Relations

