stage (Stage) queue (LoadQueue) Falcon9.png landBackground (Bitmap) landBackgroundSlice (Bitmap) Falcon9Fire.png oceanBackground (Bitmap) Falcon9Thruster.png oceanBackgroundSlice (Bitmap) Smoke.png smoke (Smoke) Ocean.png landingSite (Shape) OceanSlice.png gui (GUI) Land.png LandSlice.png Loading.png

Window

rocket (Rocket) legs (Sprite) body (Sprite) engine (Engine) leftThruster (Thruster) rightThruster (Thruster) endText (Text) physicsText (Text) helpText (Text) pausedText (Text) fuelBar (FillBar) mono Bar (FillBar)

rocket.altitude const THRUST = 35 const START_FUEL = 500 rocket.thrustLevel rocket.velocityX const START MONO = 100 rocket.velocityY const START_VX = 0 const START_VY = 10 rocket.fuel const START Y = -150 rocket.mono const PIXELS_PER_METER rocket.velocityA buildRocket(childInFront) var level buildBody() var gravity buildLegs() buildEngine() run Game(e) buildThrusters() pause() changeLevel() placeRocket() //random y-pos, angle resetGame() Event levelChanged getAltitude() Event gamePaused Event gameReset getVelocityY() setVelocityY() getVelocityX() setVelocityX() Sprite object getThrustLevel() setThrustLevel() SmokeSprite(x,y) increaseThrustLevel() fadeout(e) decreaseThrustLevel() removeSprite() getMono() setMono() decreaseMono() SpriteSheet thruster_sheet getFuel() SpriteSheet rocket sheet SpriteSheet fire_sheet setFuel() decreaseFuel() buildSpriteSheets() Event thrustLevelChanged

Event fuelLevelChanged Event monoLevelChanged Event outOfFuel Event outOfMono Shape border Event rocketCrashed Shape fill Event rocketLanded Text text Event rocketMoved FillBar(x,y,type,fillColor) setFill(percentage) setText(text) ngine class extends Sprite

Sprite object

Shape tinyFireTip

Shape smallFireTip

Shape largeFireTip

showTinyFire()

showSmallFire()

showLargeFire()

cutoutEngine()

showMediumFire()

Event engineFiring

Shape mediumFireTip

Text endText Sprite object Text physicsText Shape tip Text helpText var orientation Text pausedText FillBar fuelBar showThrust() FillBar monoBar cutoutThrust() Event leftThrusterFiring showPausedText() Event rightThrusterFiring hidePausedText() showEndText() hideEndText()

updateStats()

buildText(x,y, txt, style, color, alignment, visible, alpha)

```
calcNextRotation()
    calcNextPosition(wKeyDown, gravity)
        getStandardAngle(rotation)
        getXThrust()
        getYThrust()
            degreesToRadians(degrees)
            radiansToDegrees(radians)
    detectCollision(nextPt, landingSite)
renderRocketMovement()
const SPACEBAR = 32
const LEFT_ARROW = 37
const UP_ARROW = 38
const RIGHT_ARROW = 39
const DOWN_ARROW = 40
const A_KEY = 65
const D_KEY = 68
const S_KEY = 83
const W_KEY = 87
var wKeyDown
var dKeyDown
var aKeyDown
var up Arrow Down
var leftArrowDown
var dn Arrow Down
var spacebarDown
addKeyListeners()
detectKey(e)
removeKey(e)
Event wKeyDown
Event dKeyDown
Event a Key Down
Event upArrowDown
Event dnArrowDown
Event spacebar Down
Event leftArrowDown
```

updateRocketMovement()

