FlappyGameStatusFacde

- objectManager: ObjectManager - levelManager: LevelManager

+ CREATOR: Creator<FlappyGameStatusFacade>

+ FlappyGameStatusFacade(name: String)

- FlappyGameStatusFacade(in Parcel)

+ setLevelManager(levelManager: LevelManager): void

+ setObjectManager(objectManager: ObjectManager): void

+ setGameDefault(): void + increaseGameStage(): void

+ setBgLight(): void + setBgDark(): void

+ getBg(): boolean

+ getStage(): int + getScore(): int

+ updateScore(): void

+ addBonusScore(bonusScore: int): void

+ getLifeCount(): int + reduceLifeCount(): void + getPlayed(): boolean

+ startUpdate(): void + finishUpdate(): void

+ getFish(): FlappyGameFish + getShrimp(): FlappyGameShrimp + getShark(): FlappyGameShark + getBonus(): FlappyGameBonus

+ describeContents(): int

+ writeToParcel(parcel: Parcel, i: int): void

LevelManager

- DEAFULT SCORE: int

- background: boolean

- played: int - stage: int - score: int - lifeCount: int

+ CREATOR: Creator<LevelManager>

+ LevelManager()

- LevelManger(in: Parcel)

~ setStageDefault(): void

~ increaseStage(): void ~ setBgLight(): void

~ setBqDark(): void

~ getBackground(): boolean

~ getStage(): int ~ getScore(): int

~ setScore(score: int): void

~ updateScore(): void

~ addBonusScore(bonusScore: int): void

~ getLifeCount(): int - setLifeCount(): void ~ reduceLifeCount(): void ~ getPlayed(): boolean

- setPlayed(played: boolean): void

~ startUpdate(): void ~ finishUpdate(): void + describeContents(): int

+ writeToParcel(parcel: Parcel, i: int): void

ObjectManager

- fish: FlappyGameFish - shrimp: FlappyGameShrimp - shark: FlappyGameShark - bonus: FlappyGameBonus

+ CREATOR: Creator<ObjectManager>

+ ObjectManger()

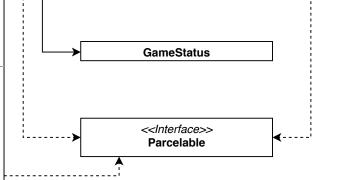
- ObjectManger(in: Parcel) ~ setObjectDefault(): void ~ increaseObjectDefault(): void

~ restartFish(): void

~ getFish(): FlappyGameFish ~ getShrimp(): FlappyGameShrimp ~ getShark(): FlappyGameShark ~ getBonus(): FlappyGameBonus

+ describeContents(): int

+ writeToParcel(parcel: Parcel, i: int): void



FlappyGameViewFacade

+ EXTRA_MESSAGE: String

- gameStatus: FlappyGameStatus

context: Contextactivity: Activity

bitmapManager: ViewBitmapManagerpaintManager: ViewPaintManager

+ FlappyGameViewFacade(context: Context, activity: Activity)

+ setBitmapManager(bitmapManager: ViewBitmapManager): void

+ setPaintManager(paintManager: ViewPaintManager): void

+ setUpView(): void

onDraw(canvas: Canvas): void

- gameOver(): void

- activateBonusGame(): void

+ onTouchEvent(event: MotionEvent): boolean

+ setGameStatus(gameStatus: FlappyGameStatusFacade): void

ViewBitmapManager

- gameStaus: FlappyGameStatusFacade

- canvas: Canvas

- bg: Bitmap

fish: Bitmapshrimp: Bitmap

- shark: Bitmap

- bonus: Bitmap

- life: Bitmap[]

+ ViewBitmapManager(gameStatus: FlappyGameStatusFacade)

~ setUpGame(resources: Resources): void

~ setCanvas(canvas: Canvas): void

- setUpBackground(resources: Resources): void

- setUpSprite(resources: Resources): void

- setUpLife(resources: Resources): void

~ drawBackground(): void

~ drawLife(): void

- setUpObjects(): void

~ drawBitmap(): boolean

~ drawBonusGameBitmap(): boolean

ViewPaintManager

- gameStaus: FlappyGameStatusFacade

canvas: Canvasscore: Paintlevel: Paint

+ ViewPaintManager(gameStatus: FlappyGameStatusFacade)

~ setUpGame(): void

~ setUpCanvas(canvas: Canvas): void

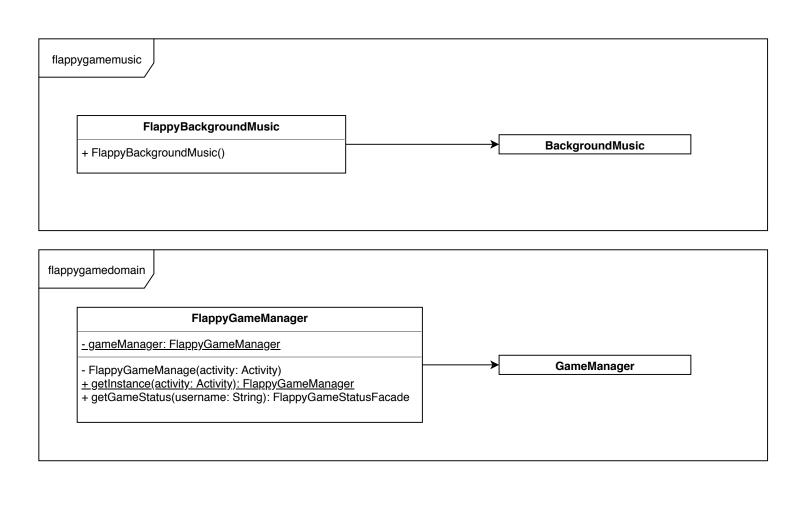
- setUpLevel(): void

- setUpScore(): void

~ drawScore(): void

~ drawLevel(): void

View



FlappyGameBonus

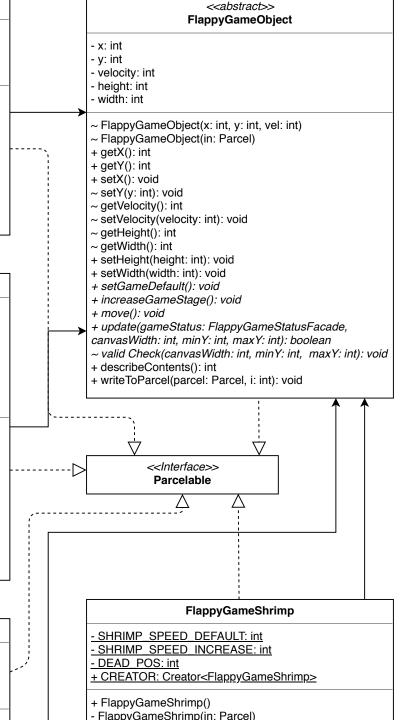
- BONUS SPEED DEFAULT: int
- BONUS SPEED INCREASE: int
- DEAD_POS: int
- + CREATOR: Creator<FlappyGameBonus>
- + FlappyGameBonus()
- FlappyGameBonus(in: Parcel)
- + setGameDefault(): void
- + increaseGameStage(): void
- + move(): void
- + update(gameStatus: FlappyGameStatusFacade, canvasWidth: int, minY: int, maxY: int): boolean
- ~ validCheck(canvasWidth: int, minY: int, maxY: int): void
- kill(): void
- collideCheck(gameStatus: FlappyGameStatus): boolean

FlappyGameFish

- FISH_X: int
- FISH_Y: int
- DEFAULT_DROP_SPEED: int
- STAGE INCREASE SPEED: double
- DEFAULT JUMP SPEED: int
- currDropSpeed: int
- currJumpSpeed: int
- + CREATOR: Creator<FlappyGameFish>
- + FlappyGameFish()
- FlappyGameFish(in: Parcel)
- + setGameDefault(): void
- + increaseGameStage(): void
- + move(): void
- + update(gameStatus: FlappyGameStatusFacade, canvasWidth: int, minY: int, maxY: int): boolean
- ~ validCheck(canvasWidth: int, minY: int, maxY: int): void
- + setFishJumpSpeed(): void
- setFishFallSpeed(): void
- + writeToParcel(parcel: Parcel, i: int): void

FlappyGameShark

- SHARK SPEED DEFAULT: int
- SHARK SPEED INCREASE: int
- DEAD_POS: int
- + CREATOR: Creator<FlappyGameShark>
- + FlappyGameShark()
- FlappyGameShark(in: Parcel)
- + setGameDefault(): void
- + increaseGameStage(): void
- + move(): void
- + update(gameStatus: FlappyGameStatusFacade, canvasWidth: int, minY: int, maxY: int): boolean
- ~ validCheck(canvasWidth: int, minY: int, maxY: int): void
- kill(): void
- collideCheck(gameStatus: FlappyGameStatus): boolean



+ setGameDefault(): void

+ move(): void

- kill(): void

+ increaseGameStage(): void

+ update(gameStatus: FlappyGameStatusFacade,

~ validCheck(canvasWidth: int, minY: int, maxY: int): void

- collideCheck(gameStatus: FlappyGameStatus): boolean

canvasWidth: int. minY: int. maxY: int): boolean

FlappyGameMenu

newGameBtn: ButtonresumeGameBtn: Button

- gameStatus: FlappyGameStatusFacade

- REQUEST CODE1: int - REQUEST CODE2: int - menuIntent: Intent + isPlaying: boolean

onCreate(savedInstanceState: Bundle): void

onResume(): void

onActivityResult(requestCode: int, resultCode: int, data:

Intent): void

setNewGameBtn(): voidsetResumeGameBtn(): void

- setQuitBtn(): void - setPlayMusicBtn(): void - setStopMusicBtn(): void + onClick(view: View): void + onBackPressed(): void # onPause(): void

FlappyMainActivity

gameView: FlappyGameViewFacadegameStatus: FlappyGameStatusFacade

timer: Timerhandler: Handler

- TIMER INTERVAL: long - REQUEST CODE3: int - dialog: BonusLevelDialog

onCreate(savedInstanceState: Bundle): void

onResume(): void
- startTimer(): void
- pauseTimer(): void
onPause(): void

onActivityResult(requestCode: int, resultCode: int, data:

Intent): void

+ activateBonusGame(): void

- openDialog(): void

+ bonusLevelResult(isWon: boolean, bonusScore): void

+ onCancel(): void

FlappyResultActivity

- gameStatus: FlappyGameStatusFacade

onCreate(savedInstanceState: Bundle): void
- setNextStageBtn(result: boolean): void
- setResultText(result: boolean): void
- setPlayAgainBtn(result: boolean): void

- setBackToMainBtn(): void

onPause(): void

+ onClick(view: View): void # onResume(): void

FlappySettingActivity

- gameStatus: FlappyGameStatusFacade

- REQUEST_CODE: int

onCreate(savedInstanceState: Bundle): void

setUpLightBgBtn(): voidsetUpDarkBgBtn(): voidstartGame(): void

onActivityResult(requestCode: int, resultCode: int, data:

Intent): void

+ onClick(view: View): void

onResume(): void

onPause(): void

