

**FlappyGameStatusFacade**

- 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  
 ~ setBgDark(): 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

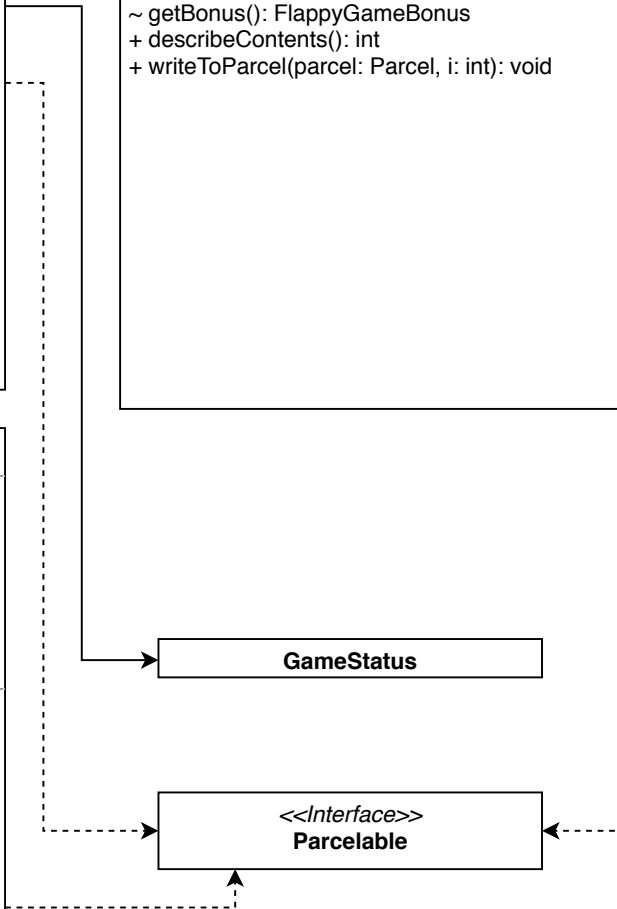
**ObjectManager**

- 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

**GameStatus**

**<<Interface>>**  
**Parcelable**



**FlappyGameViewFacade**

+ EXTRA MESSAGE: String  
- gameStatus: FlappyGameStatus  
- context: Context  
- activity: Activity  
- bitmapManager: ViewBitmapManager  
- paintManager: 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

**View****ViewBitmapManager**

- gameStatus: FlappyGameStatusFacade  
- canvas: Canvas  
- bg: Bitmap  
- fish: Bitmap  
- shrimp: 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**

- gameStatus: FlappyGameStatusFacade  
- canvas: Canvas  
- score: Paint  
- level: Paint

+ ViewPaintManager(gameStatus: FlappyGameStatusFacade)  
~ setUpGame(): void  
~ setUpCanvas(canvas: Canvas): void  
- setUpLevel(): void  
- setUpScore(): void  
~ drawScore(): void  
~ drawLevel(): void

