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Software Development I

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7 April 2017

Project 2 UML Diagrams

*Brick Breakout*

**UML Diagrams included:**

Structure.java

Paddle.java

Main.java

Item.java

Constants.java

Brick.java

Board.java

Ball.java

**Structure Class UML Diagram:**

|  |
| --- |
| Structure |
| -x: int  -y: int  -width: int  -height: int  -color: Color |
| +Structure(int, int, int, int, Color)  +draw(Graphics): void  +setX(int): void  +setY(int): void  +setWidth(int): void  +setHeight(int): void  +setColor(Color): coid  +getX(): int  +getY(): int  +getWidth(): int  +getHeight(): int  +getColor(): Color |

**Paddle Class UML Diagram:**

|  |
| --- |
| Paddle |
| -xSpeed: int |
| +Paddle(int, int, int, int, Color)  +draw(Graphics): void  +reset(): void  +hitPaddle(int, int): boolean  +caughtItem(Item): boolean |

**Main Class UML Diagram:**

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| --- |
| Main |
| -frame: JFrame  -pane: Container  -dim: Dimension |
| +Main()  +main(String[]): void |

**Item Class UML Diagram:**

|  |
| --- |
| Item |
| -type: int |
| +Item(int, int, int, int, Color, int)  +draw(Graphics): void  +drop(): void  +resizePaddle(Paddle): void  +setType(int): void  +getType(): int |

**Constants Interface UML Diagram:**

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| --- |
| Constants |
| +WINDOW\_WIDTH: int  +WINDOW\_HEIGHT: int  +MAX\_LIVES: int  +MIN\_LIVES: int  +BALL\_WIDTH: int  +BALL\_HEIGHT: int  +BALL\_RIGHT\_BOUND: int  +BALL\_X\_START: int  +BALL\_Y\_START: int  +PADDLE\_WIDTH: int  +PADDLE\_HEIGHT: int  +PADDLE\_RIGHT\_BOUND: int  +PADDLE\_X\_START: int  +PADDLE\_Y\_START: int  +PADDLE\_MIN: int  +PADDLE\_MAX: int  +BRICK\_WIDTH: int  +BRICK\_HEIGHT: int  +MAX\_BRICKS: int  +NO\_BRICKS: int  +BLUE\_BRICK\_ONE: Color  +BLUE\_BRICK\_TWO: Color  +BLUE\_BRICK\_THREE: Color  +RED\_BRICK\_ONE: Color  +RED\_BRICK\_TWO: Color  +RED\_BRICK\_THREE: Color  +PURPLE\_BRICK\_ONE: Color  +PURPLE\_BRICK\_TWO: Color  +PURPLE\_BRICK\_THREE: Color  +YELLOW\_BRICK\_ONE: Color  +YELLOW\_BRICK\_TWO: Color  +YELLOW\_BRICK\_THREE: Color  +PINK\_BRICK\_ONE: Color  +PINK\_BRICK\_TWO: Color  +PINK\_BRICK\_THREE: Color  +GRAY\_BRICK\_ONE: Color  +GRAY\_BRICK\_TWO: Color  +GRAY\_BRICK\_THREE: Color  +GREEN\_BRICK\_ONE: Color  +GREEN\_BRICK\_TWO: Color  +GREEN\_BRICK\_THREE: Color  +ITEM\_WIDTH: int  +ITEM\_HEIGHT: int  +ITEM\_BIGGER: int  +ITEM\_SMALLER: int  +ITEM\_EMPTY: int |

**Brick Class UML Diagram:**

|  |
| --- |
| Brick |
| -lives: int  -hits: int  -destroyed: Boolean  -itemColor: Color  -blueColors: Color[]  -redColors: Color[]  -purpleColors: Color[]  -yellowColors: Color[]  -pinkColors: Color[]  -grayColors: Color[]  -greenColors: Color[]  -colors: Color[][] |
| +Brick(int, int, int, int, Color, int, int)  +draw(Graphics): void  +addHit(): void  +nextColor(): void  +hitBottom(int, int): boolean  +hitTop(int, int): boolean  +hitLeft(int, int): boolean  +hitRight(int, int): boolean  +setLives(int): void  +setHits(int): void  +setDestroyed(boolean): void  +getLives(): int  +getHits(): int  +isDestroyed(): boolean |

**Board Class UML Diagram:**

|  |
| --- |
| Board |
| -score: int  -lives: int  -bricksLeft: int  -waitTime: int  -xSpeed: int  -withSound: int  -level: int  -playerName: String  -game: Thread  -songOne: String  -songTwo: String  -songThree: String  -songFour: String  -songFive: String  -songSix: String  -songSeven: String  -songEight: String  -songNine: String  -songTen: String  -trackList: String[]  -audio: AudioInputStream  -clip: Clip  -isPaused: AtomicBoolean  -blueColors: Color[]  -redColors: Color[]  -purpleColors: Color[]  -yellowColors: Color[]  -pinkColors: Color[]  -grayColors: Color[]  -greenColors: Color[]  -colors: Color[][] |
| +Board(int, int)  +makeBricks(): void  +start(): void  +stop(): void  +destroy(): void  +run(): void  +addItem(Item): void  +dropItems(): void  +checkItemList(): void  +checkLives(): void  +checkPaddle(int, int): void  +checkWall(int, int): void  +checkBricks(int, int): void  +checkIfOut(int): void  +playMusic(String[], int, int): void  +paintComponent(Graphics): void  +makeTable(): void  +writeFakeScores(): void  +playerInfo(): String  +linesInFile(File): int  +saveGame(): void  +sortTable(): void  +makeNewScoreTable(): void  +printScores(Graphics): void |

**Ball Class UML Diagram:**

|  |
| --- |
| Ball |
| -onScreen: boolean  -xDir: int  -yDir: int |
| +Ball(int, int, int, int, Color)  +draw(Graphics): void  +move(): void  +reset(): void  +setXDir(int): void  +setYDir(int): void  +setOnScreen(boolean): void  +getXDir(): int  +getYDir(): int  +isOnScreen(): boolean |