Team 15 - Java Game
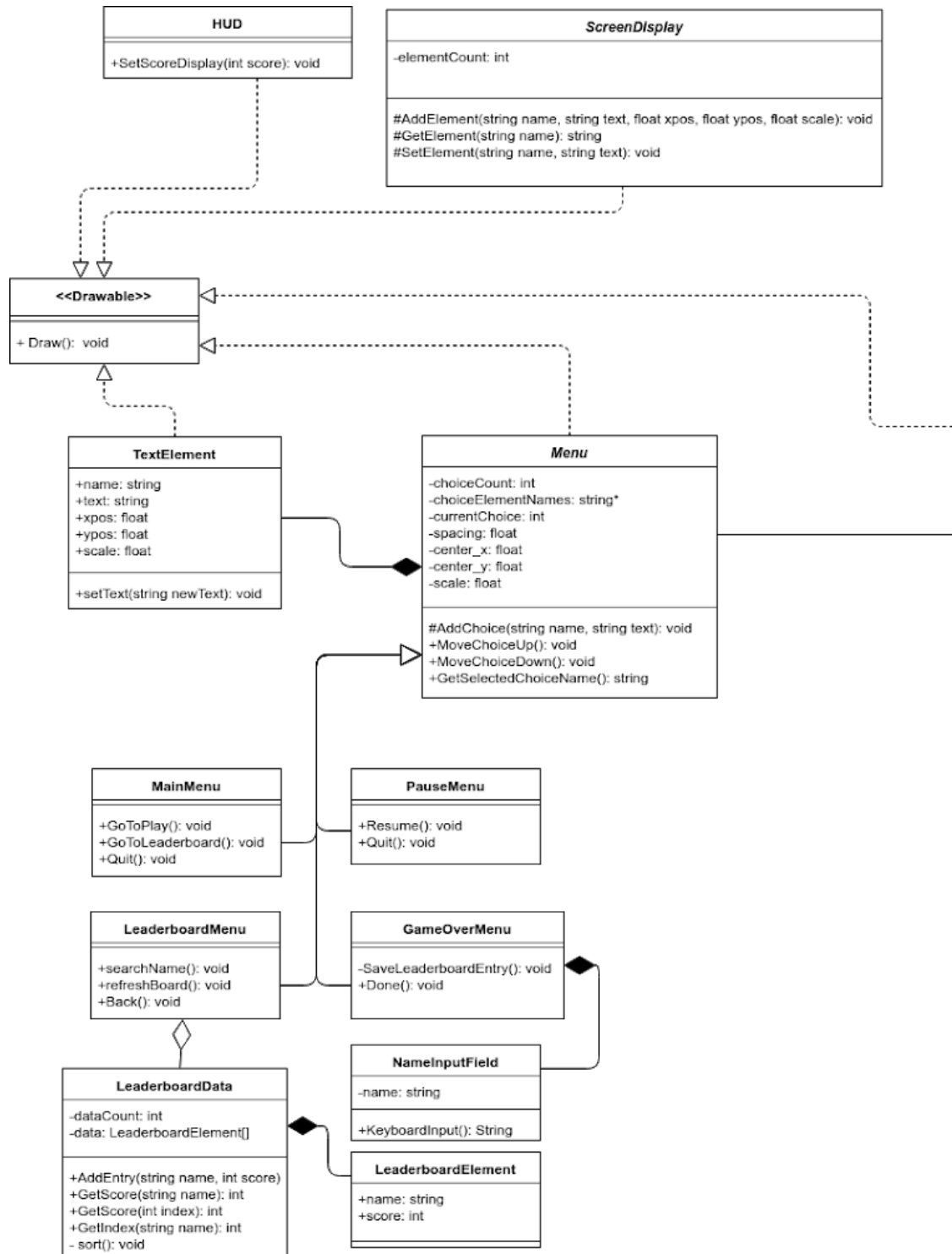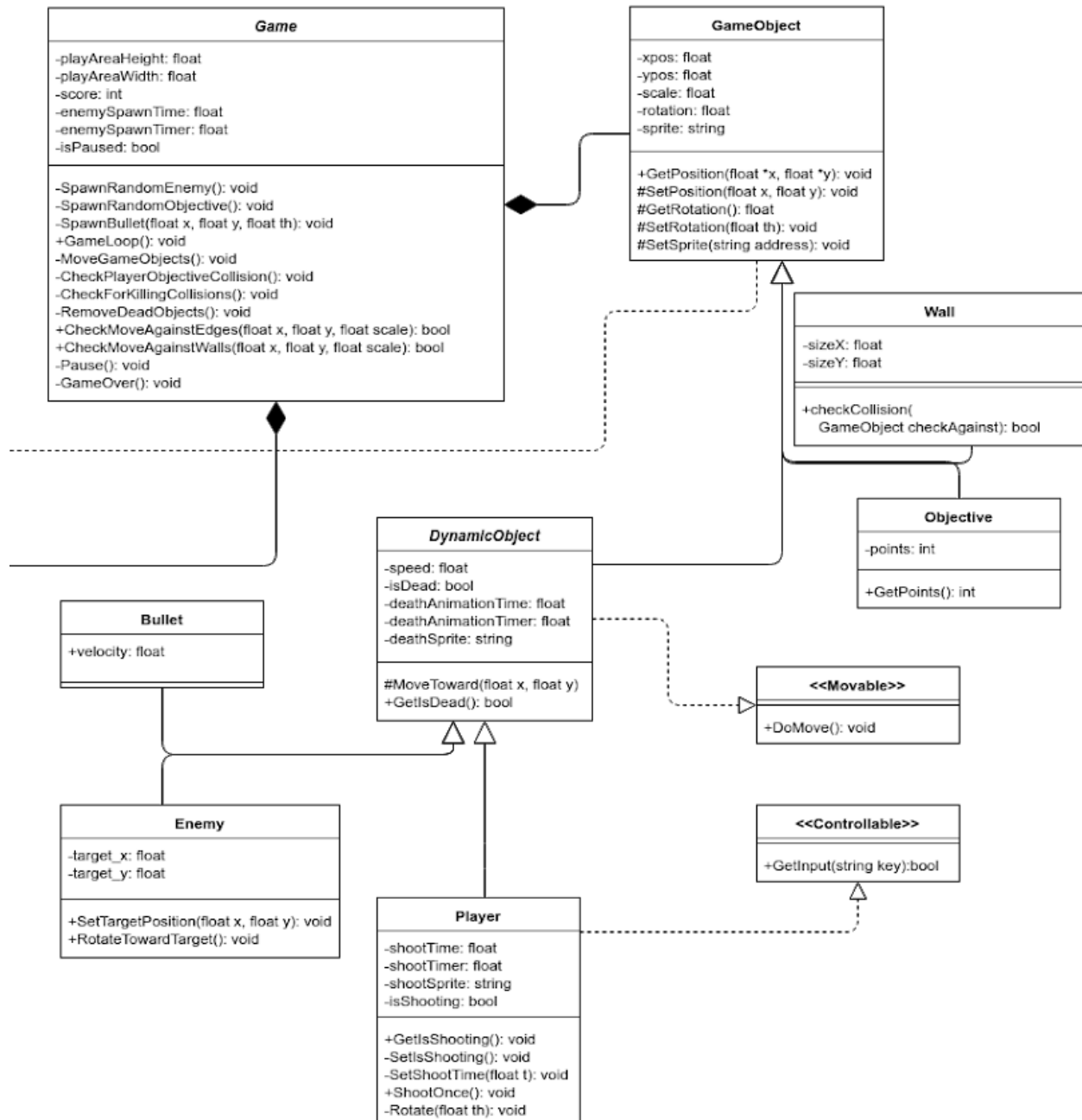
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Updated Previous Class Diagram:
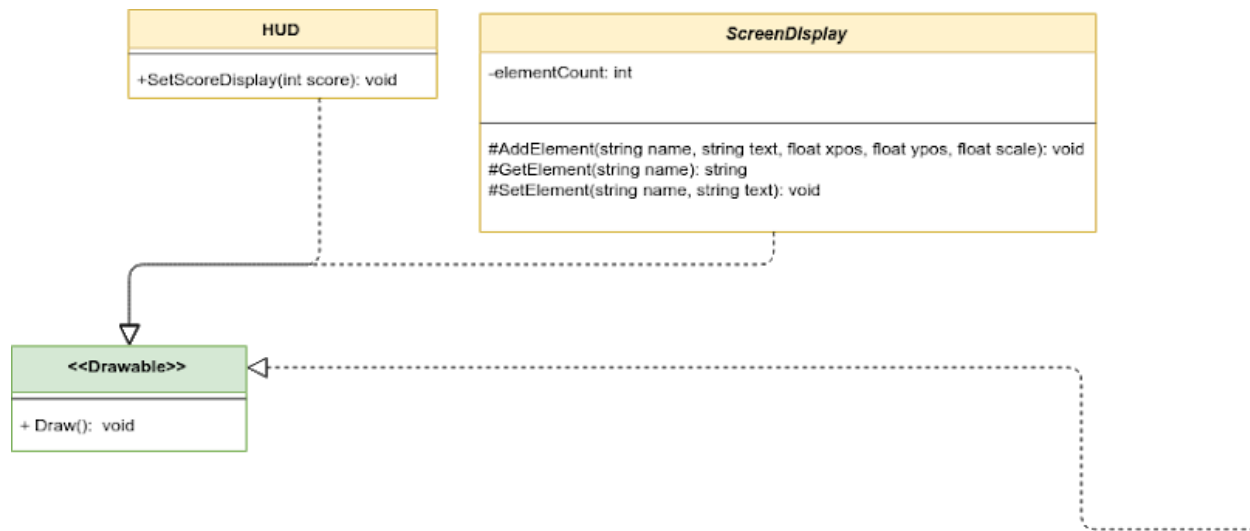
HUD

+SetScoreDisplay(int score): void

ScreenDisplay

-elementCount: int

#AddElement(string name, string text, float xpos, float ypos, float scale): void
#GetElement(string name): string
#SetElement(string name, string text): void

<<Drawable>>

+ Draw(): void

TextElement

+name: string
+text: string
+xpos: float
+ypos: float
+scale: float

+setText(string newText): void

Menu

-choiceCount: int
-choiceElementNames: string*
-currentChoice: int
-spacing: float
-center_x: float
-center_y: float
-scale: float

#AddChoice(string name, string text): void
+MoveChoiceUp(): void
+MoveChoiceDown(): void
+GetSelectedChoiceName(): string

MainMenu

+GoToPlay(): void
+GoToLeaderboard(): void
+Quit(): void

PauseMenu

+Resume(): void
+Quit(): void

LeaderboardMenu

+searchName(): void
+refreshBoard(): void
+Back(): void

GameOverMenu

-SaveLeaderboardEntry(): void
+Done(): void

LeaderboardData

-dataCount: int
-data: LeaderboardElement[]

+AddEntry(string name, int score): void
+GetScore(string name): int
+GetScore(int index): int
+GetIndex(string name): int
- sort(): void

NameInputField

-name: string

+KeyboardInput(): String

LeaderboardElement

+name: string
+score: int

Game
-playAreaHeight: float
-playAreaWidth: float
-score: int
-enemySpawnTime: float
-enemySpawnTimer: float
-isPaused: bool

-SpawnRandomEnemy(): void
-SpawnRandomObjective(): void
-SpawnBullet(float x, float y, float th): void
+GameLoop(): void
-MoveGameObjects(): void
-CheckPlayerObjectiveCollision(): void
-CheckForKillingCollisions(): void
-RemoveDeadObjects(): void
+CheckMoveAgainstEdges(float x, float y, float scale): bool
+CheckMoveAgainstWalls(float x, float y, float scale): bool
-Pause(): void
-GameOver(): void

GameObject
-xpos: float
-ypos: float
-scale: float
-rotation: float
-sprite: string

+GetPosition(float *x, float *y): void
#SetPosition(float x, float y): void
#GetRotation(): float
#SetRotation(float th): void
#SetSprite(string address): void

Wall
-sizeX: float
-sizeY: float

+checkCollision(
    GameObject checkAgainst): bool

Objective
-points: int

+GetPoints(): int

DynamicObject
-speed: float
-isDead: bool
-deathAnimationTime: float
-deathAnimationTimer: float
-deathSprite: string

#MoveToward(float x, float y)
+GetIsDead(): bool

Bullet
+velocity: float

<<Movable>>

+DoMove(): void

<<Controllable>>

+GetInput(string key):bool

Enemy
-target_x: float
-target_y: float

+SetTargetPosition(float x, float y): void
+RotateTowardTarget(): void

Player
-shootTime: float
-shootTimer: float
-shootSprite: string
-isShooting: bool

+GetIsShooting(): void
-SetIsShooting(): void
-SetShootTime(float t): void
+ShootOnce(): void
-Rotate(float th): void

*single image diagram can be found at
https://drive.google.com/file/d/1CLHY_TZK2KPSFxiV0nIrfOoSAh3tEiW-/view?usp=sharing

Progress Class Diagram:

HUD
+SetScoreDisplay(int score): void

ScreenDIsplay
–elementCount: int
#AddElement(string name, string text, float xpos, float ypos, float scale): void #GetElement(string name): string #SetElement(string name, string text): void

<<Drawable>>
+ Draw(): void

Goal In Progress
 - framework in place
 - function implementation not finished
 - still needs graphical / android studio integration

Goal Complete for checkpoint
 - important functions done
 - still needs graphical / android studio integration

One big change is that we are no longer using our class design for a menu system, as android studio will take care of that for us in a better way.

*single image diagram can be found at
https://drive.google.com/file/d/1KqsZ7foWcQTyZdSmyOTBANFSdwbi8DW3/view?usp=sharing

Summary:

Spent a lot of time learning android studio and making sure it would work with our project. Trying to improve our class diagram based off feedback from part two, and also fit them into a structure that works with our framework. Prioritized getting skeletons for all classes in place over fully implementing a few isolated classes.

Breakdown:

Ryan: Started writing java code for GameObject related classes as well as the Controllable and Movable interfaces.

David: Worked on learning android studio and how we can implement our ideas from early planning into working software using android studio as a framework. Created a basic functioning menu and buttons to navigate in the application.

Charlie: Worked on filling in checkpoint 2 feedback, was working on menu system classes before we decided to just use what android studio already has. Updated existing classes based on feedback from checkpoint (2)

William: Started writing the code for the Drawable interface as well as the Game, HUD, and ScreenDisplay classes

GitHub graph:

davidnyberg #1
7 commits 73 ++ 1 --

chda6313 #2
2 commits 22 ++ 4 --

ryancooper7 #3
2 commits 160 ++ 56 --

RyanD122 #4
1 commit 261 ++ 0 --
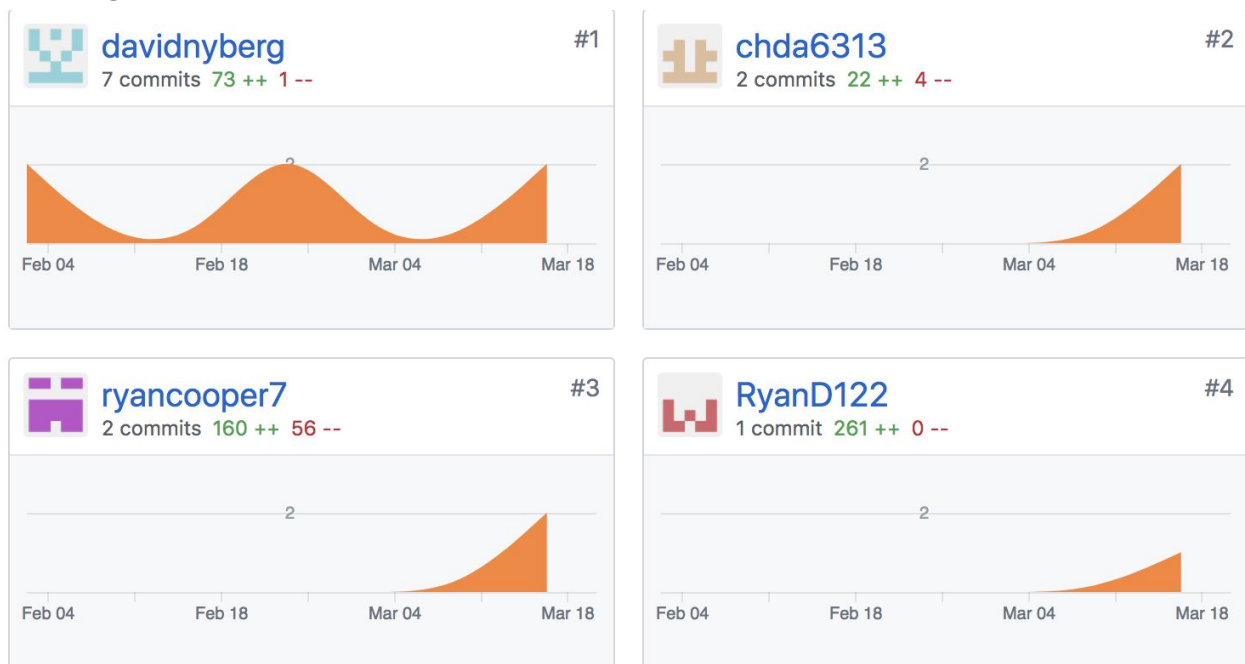
Remaining Effort: Our goal is still to develop a complete working project that runs on our android devices (or emulator for those of us without real devices) with smooth usability. We want to fully implement all of the features we stated in our requirements from earlier phases in development and either alter or add features that seem necessary. We still need to look into how to save our data locally on the app. We are not planning on creating a database, but rather just a saved file that can be read in to show the scores.

Next Iteration Goals:
- Have most if not all of our classes fully implemented and working in android studio so that we can have a working prototype.
- Begin working on creating graphics/sprites for use in the project.