

Thomas Loo Terminal App – T1A3

Coder Academy Assignment

Due date: 29 October 2023

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Rubric Checklist

CMP041-3.1 CMP1041-3.2	CMP1041-2.3 CMP1041-3.3	CMP1041-2.4 CMP1041-3.4	PRG1002-5.1	PRG1002-5.2	PRG1002-3.1, PRG1002-3.2, PRG1002-3.4, CMP1041-3.5, CMP1041-3.6
<ul style="list-style-type: none"> Handles InputError exception Handles KeyboardInterrupt exception <p>Exceptions:</p> <ul style="list-style-type: none"> Battle.battle_lobby() Menu.menu() Upgrades.show_upgrades() 	<p>Please see code:</p> <ul style="list-style-type: none"> classes.py 	<p>Loops:</p> <ul style="list-style-type: none"> Menu.menu() Dialogue.tournament_end() Menu.end_game_option() <p>Conditionals:</p> <ul style="list-style-type: none"> Menu.menu() Battle.battle_lobby() Battle.battle() Opponent(Player).__init__() Upgrades.show_upgrades() Upgrades.buy_upgrades() Dialogue.present_beyblade() Dialogue.end_game() 	<p>Imported packages:</p> <p>classes.py:</p> <ul style="list-style-type: none"> random colorama <p>functions.py:</p> <ul style="list-style-type: none"> time sys subprocess <p>art.py:</p> <ul style="list-style-type: none"> colorama 	<p>import random:</p> <ul style="list-style-type: none"> Used to generate random value for money target, stats, stats modifier, upgrade prices, upgrade stat increases, win and lose money <p>import time, sys, subprocess:</p> <ul style="list-style-type: none"> Used for the clear_screen() function which runs whenever new page is entered <p>import colorama:</p> <ul style="list-style-type: none"> Text in app extensively coloured 	<p>Please see code and run app</p> <p>CMP1041-3.5: Please note that Line 458 of class.py file exceeds 79 characters long due to variable name and nesting.</p> <p>Art.py contains ASCII art which exceeds 79 characters long</p>
CMP041-3.7	CMP041-3.7	CMP041-4.2	CMP041-4.3	CMP1041-4.4	PRG1002-4.2
Please see README.md	<p>Please see code:</p> <ul style="list-style-type: none"> test_buy_upgrades.py test_end_game.py <p>Please also see slide 18 and 19 of this presentation</p>	<p>Please see GitHub: https://github.com/NeggFriedRice/terminal_app</p>	Please see slides 22 to 37 of this presentation	Please see beyblade.sh	Please see code and slides 3 to 17 of this presentation

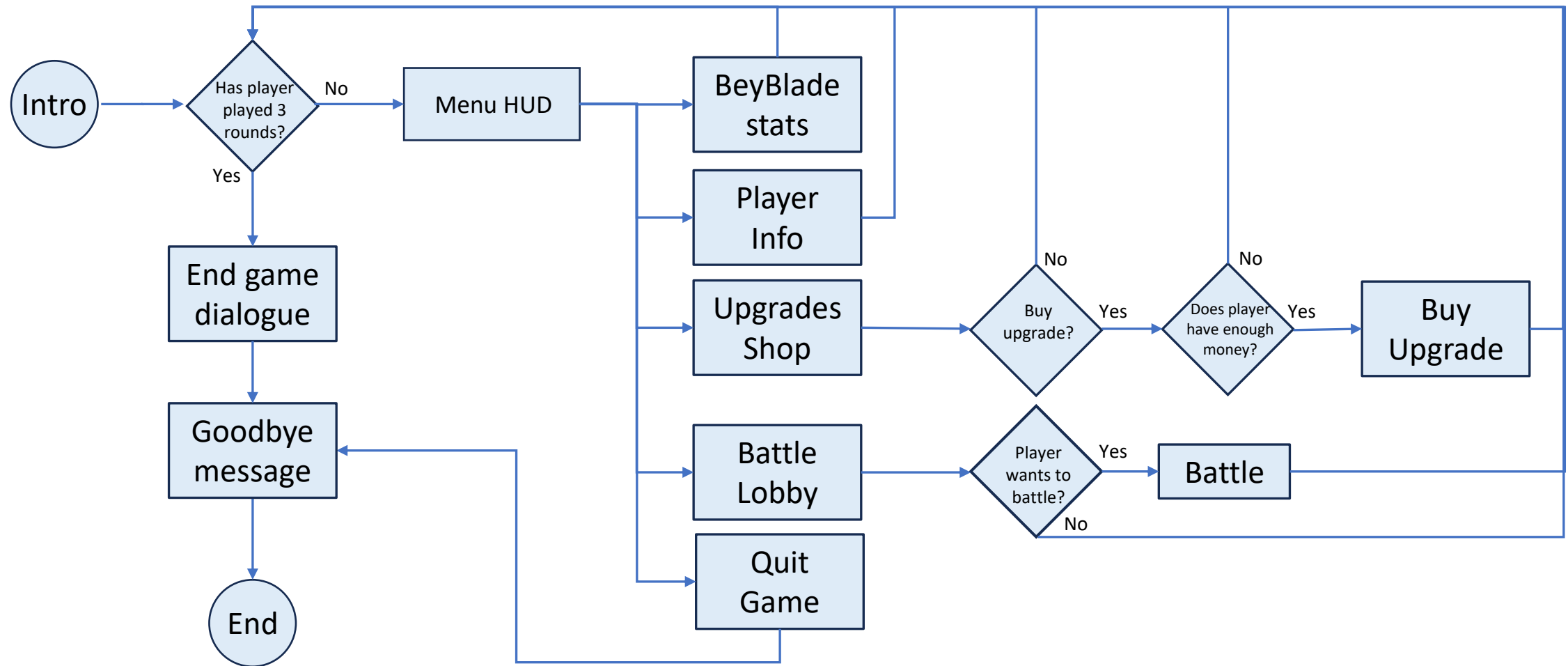
Introduction



- Terminal text-based game
- Game lore: BeyBlade battle tournament simulator set on an international stage that the player has flown in to compete in
- Players interact with game with keyboard input choices
- Player acquires BeyBlade with randomised stats
- BeyBlade stats can be upgraded at the upgrade store
- Player can battle a randomly generated opponent with their own respective BeyBlades
- Win condition: player must win 2 out of 3 rounds and have enough money left over to fly home



Game - Flowchart



Game – Intro dialogue



User input

Randomly generated money
target requirement so that
player can fly home

```
2023 BATTLE
BEYBLADE
BONANZA

Welcome to the 2023 Battle BeyBlade Bonanza!
Before we get started, could we please have your name for registration?
Coder

Thank you for registering Coder! We are so glad to have you here!

As per the tournament rules, you will be renting one of our Tournament BeyBlades!
What would you like to name your BeyBlade?
Academy

Here is your Tournament BeyBlade ~ Academy ~ with a total power of 375!
It appears that your BeyBlade favours STAMINA upgrades!

TOURNAMENT RULES:
- 3 round tournament
- To win you will need to win at least 2 out of 3 rounds AND
  Have 182 dollars left in the bank to fly home!

Goodluck!
```

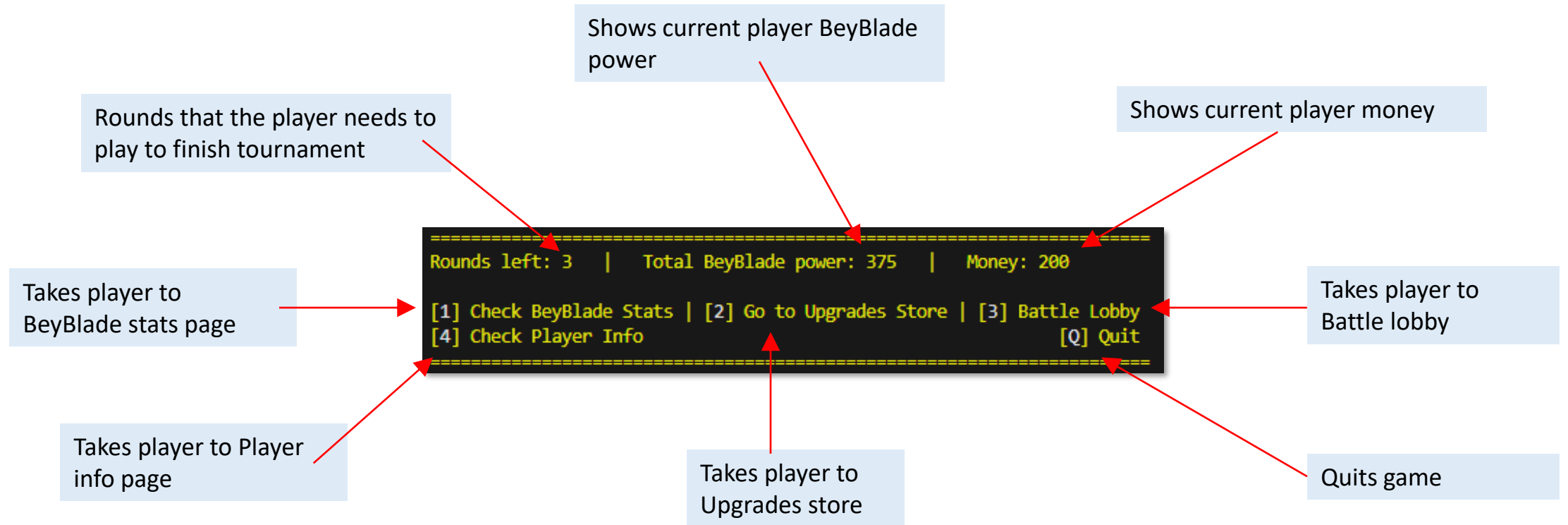
Player object created when running
the game

BeyBlade object created when Player
object created

BeyBlade has randomly generated
stats and stat modifiers. Will show
player the highest stat modifier to
hint which upgrades give the most
benefit



Game – Menu Heads-up Display



Game – BeyBlade Stats page



Shows name player has given to their BeyBlade during intro

Shows generated BeyBlade stats

Shows which stat upgrades will work best on this BeyBlade

```
STATS

Your BeyBlade stats:
Name: Academy
STRENGTH: 90
SPEED: 85
STAMINA: 90
Total power: 346

Your BeyBlade favours STRENGTH upgrades
(Your BeyBlade has hidden unique stat modifiers that we can't check!)

Go to the store to upgrade your stats!

=====
Rounds left: 3   |   Total BeyBlade power: 346   |   Money: 200

[1] Check BeyBlade Stats | [2] Go to Upgrades Store | [3] Battle Lobby
[4] Check Player Info    | [Q] Quit

=====
```



Game – Player Info page



Shows:

- Player name
- BeyBlade name
- Current money
- Target money to fly home
- Win counter



```
INFO

Player Information:
Name: Coder
BeyBlade: Academy
Money: 200
Money needed to get home: 216
Wins: 0

=====
Rounds left: 3 | Total BeyBlade power: 346 | Money: 200

[1] Check BeyBlade Stats | [2] Go to Upgrades Store | [3] Battle Lobby
[4] Check Player Info | [Q] Quit
=====
```



Game – Upgrades Store page

Gives user option to buy one stat upgrade from the store

Stat upgrade value is random

Prices are randomly generated upon refresh

```
UPGRADES

** Welcome to the UPGRADES shop! **

[A] Buy STRENGTH stat upgrade: 29 dollars
[B] Buy SPEED stat upgrade: 18 dollars
[C] Buy STAMINA stat upgrade: 26 dollars

=====
Rounds left: 3 | Total BeyBlade power: 346 | Money: 200
[1] Check BeyBlade Stats | [2] Go to Upgrades Store | [3] Battle Lobby
[4] Check Player Info | [Q] Quit
=====
```

Confirms to player which stat they bought

Upgrades BeyBlade stat

Subtracts money from player money

```
You bought a STRENGTH upgrade!

=====
Rounds left: 3 | Total BeyBlade power: 414 | Money: 171
[1] Check BeyBlade Stats | [2] Go to Upgrades Store | [3] Battle Lobby
[4] Check Player Info | [Q] Quit
=====
```

Only allows 1 shop visit per round

```
Sorry, the shop has closed for the day!
```



Game – Battle Lobby page

Shows player upcoming opponent and opposing BeyBlade's total power

Gives option to not battle and go to the store for upgrade (if not already visited)

Highest total power wins battle

Awards randomly generated money amount if player wins

If player leaves Battle Lobby and returns to Battle Lobby, they will still have to battle the same generated opponent before progressing

BATTLE

Your opponent is Ron Weasley. Their BeyBlade has a total power of 379.
Do you want to battle? (Y or N)

Randomly picked name from list of opponents

Opponent BeyBlade object created with randomly generated stats

Your opponent is Ron Weasley. Their BeyBlade has a total power of 356.
Do you want to battle? (Y or N)

y

===== BATTLING =====

Academy has won the battle!
You get \$43 for winning this round!

=====

Rounds left: 2 | Total BeyBlade power: 447 | Money: 218

[1] Check BeyBlade Stats | [2] Go to Upgrades Store | [3] Battle Lobby
[4] Check Player Info | [Q] Quit

=====

You have to beat Chris Phenalthamakhunam (Total power: 393) first before battling someone else!
Do you want to battle? (Y or N)



Game – Graceful exit



Code – Player, BeyBlade and Opponent) objects

```
# Player object
class Player:
    def __init__(self):
        self.name = ""
        self.beyblade = BeyBlade()
        self.money = 200
        self.playing = True
        self.win_counter = 0
        self.rounds_to_play = 3
        self.upgrades_count = 1
        self.opponents_count = 1
        self.shop_visit = 1
        self.money_target = 0

# Beyblade object
class BeyBlade:
    def __init__(self):
        self.name = ""
        self.strength = self.statRand()
        self.strength_modifier = self.modifierRand()
        self.speed = self.statRand()
        self.speed_modifier = self.modifierRand()
        self.stamina = self.statRand()
        self.stamina_modifier = self.modifierRand()
        self.total_stats = self.get_total_stats()
        self.stat_favour = ""
```

BeyBlade object

Stats + modifiers
+ stat favour

```
class Opponent(Player):
    name_list = [
        "Ash Ketchum",
        "Spock",
        "Taylor Swift",
        "Hagrid",
        "Ron Weasley",
        "John Howard",
        "Captain America",
        "Dwight Schrute",
        "Michael Scott",
        "Michael Cera",
        "Danny DeVito",
        "Edward Scissorhands",
        "Britney Spears",
        "Chris Phenalthamakhunam"
    ]

    def __init__(self, name, player):
        super().__init__()
        self.opponents_count -= 1
        self.name = name
        # Stat balancer as rounds progress to give opponent chance of higher
        # stats to nudge player into buying upgrade
        stats_list = [
            self.beyblade.strength,
            self.beyblade.speed,
            self.beyblade.stamina,
        ]

        if player.rounds_to_play == 2:
            self.beyblade.strength = max((max(stats_list) * (1 + (random.randint(
                15, 20) / 100))), 150)
        elif player.rounds_to_play == 1:
            self.beyblade.strength = max(((max(stats_list) * (1 + (random.randint(
                20, 30) / 100))))), 200)
```

List of names

Inherit from
Player class

Stat balancer

Code – Menu (1 of 2)

```
class Menu:
    def menu(self):
        while True:
            # menu function checks after each input if end game requirements satisfied (rounds_to_play == 0)
            if self.rounds_to_play == 0:
                Dialogue.end_game(self)
                break
            else:
                # If game is still in progress then HUD will show
                Menu.hud(self)
                try:
                    # Check player input and call function based on selection
                    choice = input("")
                    if choice not in "1234q":
                        raise InputError()
                    if choice == "1": # BeyBlade stats
                        Dialogue.beyblade_stats(self)
                    elif choice == "2": # Show upgrade store options
                        if self.shop_visit > 0:
                            Upgrades.show_upgrades(self)
                        else: # Only allow 1 shop visit per round, if no shop visits left show below message
                            clear_screen()
                            upgrades_banner()
                            delay_print(green + "Sorry, the shop has closed for the day!\n\n" + colres)
```

Check if end game has been reached yet

Display HUD

Exception handling

Show BeyBlade stats

Show Upgrade Store

Show message if player already visited store



Code – Menu (2 of 2)

```
elif choice == "3":
    clear_screen()
    battle_banner()
    if self.opponents_count > 0:
        # Create new opponent object if player enters the battle lobby
        opponent = Opponent(random.choice(Opponent.name_list), self)
        delay_print(green + "Your opponent is " + colres + white + bright + f"
{opponent.name}" + colres + green + ". Their BeyBlade has a total power of "
+ white + f"{opponent.beyblade.get_total_stats()}\n" + colres)
        # Subtract 1 from player opponent count; ensures player cannot refresh
        opponent until win/lose against current opponent
        self.opponents_count -= 1
        Battle.battle_lobby(self, opponent)
    else:
        delay_print(green + f"You have to beat " + white + f"{opponent.name} " +
green + "(Total power: " + white + f"{opponent.beyblade.get_total_stats()}"
+ green+ ") first before battling someone else!\n" + colres)
        Battle.battle_lobby(self, opponent)
# Show player stats
elif choice == "4":
    Dialogue.player_stats(self)
# Quit game function
elif choice.upper() == "Q":
    Dialogue.quit_game()
except InputError:
    clear_screen()
    print(green + "This is not a valid selection" + colres)
except KeyboardInterrupt:
    Dialogue.quit_game()
```

opponent_count check

Create Opponent object

Show battle_lobby
dialogue

If Opponent object already
created, show this
message

Show battle_lobby
dialogue

Show player stats

Quit game

Exceptions



Code – Battle mechanic



Code – Upgrade mechanic



Code – End game

Win and fly home
scenario

Win and can't fly
home scenario

Lose and can fly home
scenario

Lose and can't fly
home scenario

```
# End game dialogue
def end_game(self):
    clear_screen()
    finish_banner()
    delay_print(yellow + "=====\n\n" +
colres + green + "That's the end of the tournament!\n")
    # Display different message based on player end game stats
    if self.win_counter >= 2 and self.money >= self.money_target:
        trophy(self)
        delay_print(green + "Congratulations! You take home the trophy!\nHave a safe flight home!\n\n"
+ colres)
        Menu.end_game_option()
    elif self.win_counter >= 2:
        trophy(self)
        delay_print(green + "Congratulations! You get the trophy but you don't have enough money to fly
home!\nI've got an Auntie that runs a fish and chip shop in town if you need to make a bit of
money..?\n\n" + colres)
        Menu.end_game_option()
    elif self.money >= self.money_target:
        smiley()
        delay_print(green + "Unfortunately you didn't win the tournament this time :( \nHave a safe
flight home, we'll see you next time!\n\n" + colres)
        Menu.end_game_option()
    else:
        sad_smiley()
        delay_print(green + "Yikes, you didn't win the tournament and you don't have enough money to
get home.\nMy brother has 6 children, I heard he's looking for a babysitter...\n\n" + colres)
        Menu.end_game_option()
```



Testing (1 of 2)

```
from unittest.mock import MagicMock
from classes import *

#####

# OBJECTS SETUP: buy_upgrades function objects used for testing
# Mock BeyBlade object
mock_beyblade = MagicMock()
mock_beyblade.strength = 100

# Mock player object
mock_player = MagicMock()
mock_player.upgrades_count = 1
mock_player.shop_visit = 1
mock_player.money = 200
mock_player.beyblade = mock_beyblade
```

Running:

```
print(mock_player.__dict__)
print(mock_player.beyblade.__dict__)
```

You don't have enough money!

You bought a **STRENGTH** upgrade!

```
{'_mock_return_value': sentinel.DEFAULT, '_mock_parent': <MagicMock id='139979842920144'>, '_mock_name': 'beyblade', '_mock_new_name': 'beyblade', '_mock_new_parent': <MagicMock id='139979842920144'>, '_mock_sealed': False, '_spec_class': None, '_spec_set': None, '_spec_signature': None, '_mock_methods': None, '_spec_asyncs': [], '_mock_children': {}, '_mock_wraps': None, '_mock_delegate': None, '_mock_called': False, '_mock_call_args': None, '_mock_call_count': 0, '_mock_call_args_list': [], '_mock_mock_calls': [], 'method_calls': [], '_mock_unsafe': False, '_mock_side_effect': None, 'strength': 150}
{'_mock_return_value': sentinel.DEFAULT, '_mock_parent': None, '_mock_name': None, '_mock_new_name': '', '_mock_new_parent': None, '_mock_sealed': False, '_spec_class': None, '_spec_set': None, '_spec_signature': None, '_mock_methods': None, '_spec_asyncs': [], '_mock_children': {'beyblade': <MagicMock name='mock.beyblade' id='139979853856576'>}, '_mock_wraps': None, '_mock_delegate': None, '_mock_called': False, '_mock_call_args': None, '_mock_call_count': 0, '_mock_call_args_list': [], '_mock_mock_calls': [], '_mock_unsafe': False, '_mock_side_effect': None, 'upgrades_count': 0, 'shop_visit': 0, 'money': 100, 'beyblade': <MagicMock name='mock.beyblade' id='139979853856576'>}
```



Testing (2 of 2)

```
from unittest.mock import MagicMock
from art import *
from classes import *

#####
#####

# OBJECTS SETUP:
mock_beyblade = MagicMock()
mock_beyblade.name = "Mock_Beyblade"

# Mock player 1 object for Test 1 (Win tournament and fly home: Wins >= 2 and
player money >= player money target)
mock_player1 = MagicMock()
mock_player1.beyblade = mock_beyblade
mock_player1.name = "Mock Player 1"
mock_player1.money = 250
mock_player1.money_target = 201
mock_player1.win_counter = 2

# Mock player 2 object for Test 2 (Lose tournament and fly home: Wins < 2 and
player money >= player money target)
mock_player2 = MagicMock()
mock_player2.beyblade = mock_beyblade
mock_player2.name = "Mock Player 2"
mock_player2.money = 201
mock_player2.money_target = 200
mock_player2.win_counter = 1
```

```
# Mock player 3 object for Test 3 (Win tournament and can't fly home: Wins >= 2
and player money < player money target)
mock_player3 = MagicMock()
mock_player3.beyblade = mock_beyblade
mock_player3.name = "Mock Player 3"
mock_player3.money = 199
mock_player3.money_target = 200
mock_player3.win_counter = 2

# Mock player 4 object for Test 4 (Lose tournament and can't fly home: Wins < 2
and player money < player money target)
mock_player4 = MagicMock()
mock_player4.beyblade = mock_beyblade
mock_player4.name = "Mock Player 4"
mock_player4.money = 199
mock_player4.money_target = 200
mock_player4.win_counter = 1
```

That's the end of the tournament!



Mock Player 1 and Mock_Beyblade
2023 Champions

Congratulations! You take home the trophy!
Have a safe flight home!

That's the end of the tournament!



Mock Player 3 and Mock_Beyblade
2023 Champions

Congratulations! You get the trophy but you don't have enough money to fly home!
I've got an Auntie that runs a fish and chip shop in town if you need to make a bit of money..?

That's the end of the tournament!



Unfortunately you didn't win the tournament this time :(
Have a safe flight home, we'll see you next time!

That's the end of the tournament!



Yikes, you didn't win the tournament and you don't have enough money to get home.
My brother has 6 children, I heard he's looking for a babysitter...



Retrospective

Biggest challenges:

- Figuring out how to properly code with the object-oriented programming paradigm, more specifically how 'self' is used within methods
- Not adequately planning how many parts goes into a game, specifically, how many attributes need to be added to be able to create a functioning interactive text-based game

Key takeaways:

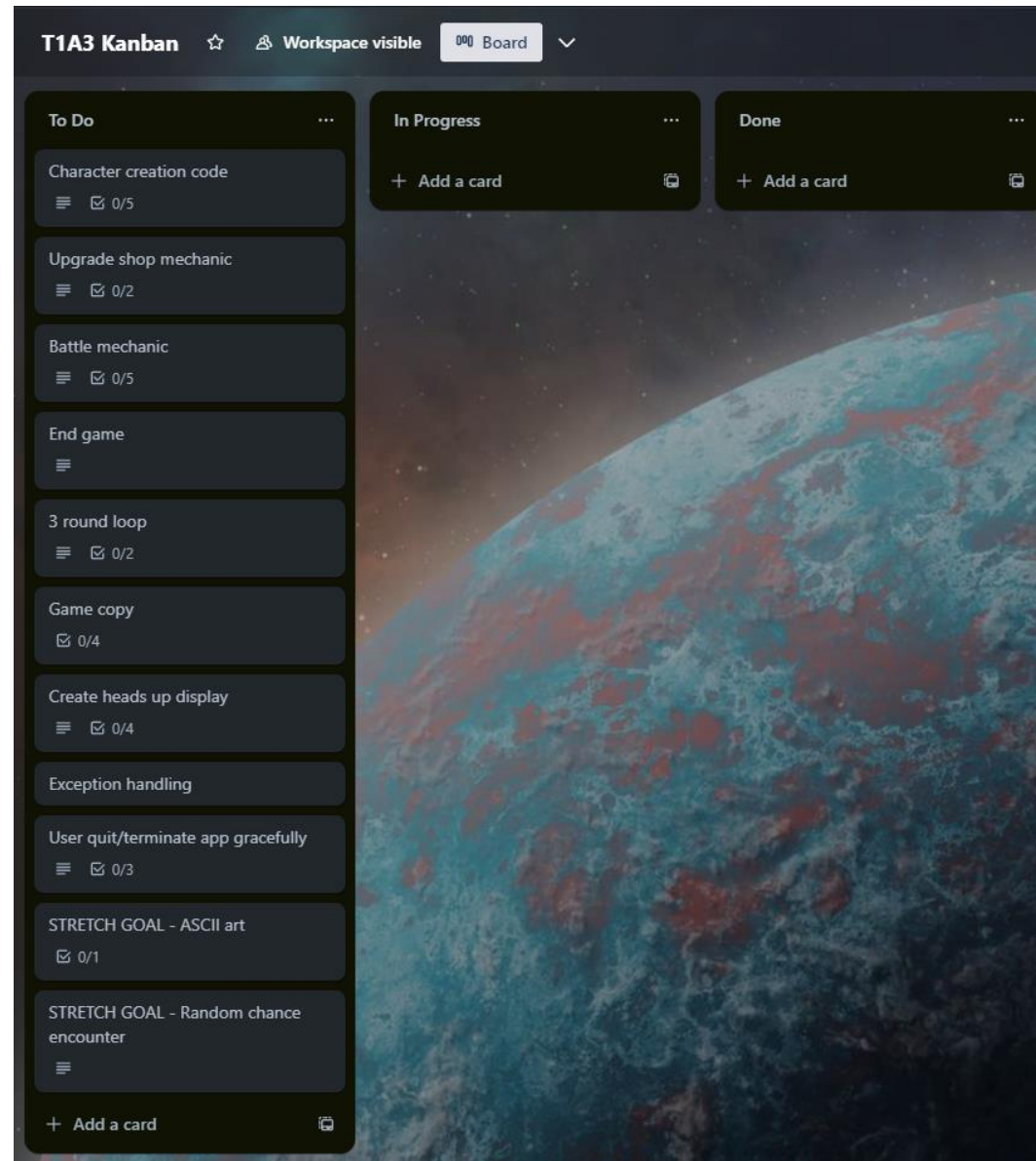
- I think I have a better grasp of OOP after tackling this challenge, which was a huge struggle in the lead up to this assignment. I'm proud of myself for being able to push through, learn and research and create a game that followed my development plan (albeit with a few more features than I had initially imagined)
- PEP8 styling is quite a bit more involved than I had thought

Favourite parts:

- I really enjoyed being able to use a `delay_print` function throughout the game to make it feel like you are actually playing some classic GameBoy game. It's a simple bit of code that I feel really makes the game feel like a game.
- I also really enjoyed creating a battle game where I could experiment with the BeyBlade's stats, and it was interesting to learn how much balancing I needed to do to make the game engaging and not too easy for the player to play




Build Process - Intro



Build Process - Cards




 **Character creation code**
in list [Done](#)


Labels

2 story points

+


Notifications

 Watch

 Description

Edit

As a player I want to be able to create a BeyBlade character to play in this game

 Checklist

Delete

0%

☐ Create BeyBlade object


☐ Give starting stats: name, strength, speed, stamina, money

☐ Add stat modifiers

☐ Randomise starting stats

☐ Decide on target money at end of 3 rounds for win requirement

☐ Randomise modifiers (hidden to user); give user hint (i.e. "Your BeyBlade seems to respond well to strength upgrades")


 **Upgrade shop mechanic**
in list [Done](#)


Labels

5 story points

+

Notifications

 Watch


 Description

Edit

As a player, I want to be able to upgrade the stats of my BeyBlade

Acceptance criteria:

- Present player with list of different upgrades
- Subtract cost of upgrade from player's money
- Upgrade selected stat for BeyBlade


 Checklist

Delete

0%

☐ Display types of upgrades and randomised cost

☐ Allow 1 upgrade per round (subtract from money)


 **Battle mechanic**
in list [To Do](#)


Labels

13 story points

+

Notifications

 Watch


 Description

Edit

As a player I want to be able to use my BeyBlade to battle another player

Acceptance criteria:

- Win or lose outcome
- Add or subtract from player's money on win or lose

 Checklist

Delete

0%

☐ Show current user BeyBlade stats

☐ Show opponent BeyBlade stats

☐ Ask user READY to commence battle


☐ Calculate total power output for each BeyBlade

☐ Show winner



Build Process - Cards





 **End game**
in list [To Do](#)

Labels

8 story points +

Notifications



👁 Watch

 **Description** 

As a player, after 3 rounds in the tournament, I want to end playing the game

Acceptance criteria:

- Show player end game dialogue, win or lose
- Present stats to user (output to txt file?)

 **Checklist** 


0%

☐ Show user win or lose based on win/lose criteria

☐ Show overall game stats (reveal stat modifiers)

☐ Output stats to output txt file

☐ STRETCH GOAL - Create tournament win certificate txt file



 **3 round loop**
in list [To Do](#)

Labels

2 story points +

Notifications



👁 Watch

 **Description** 

As a user, I want to play 3 rounds of the tournament against 3 different opponents

Acceptance criteria:


- Allow 3 rounds of play
- Inform player what number round they are playing

 **Checklist** 

0%

☐ Round counter

☐ Stop game at 3 rounds


 **Game dialogue**
in list [To Do](#)

Labels



5 story points +

Notifications

👁 Watch

 **Description**

Add a more detailed description...

 **Code checklist** 

0%

☐ Create introduction dialogue when user launches app

☐ Show user stats if requested


☐ Show opponent stats if requested

☐ Show upgrade shop items



Build Process - Cards




 **Create heads up display**
in list [To Do](#)


Labels

5 story points

+

Notifications


 Watch

 **Description** Edit

As a user, I want to be able to see my BeyBlade's stats, how much money I have, what round I'm up to, who my next opponent is.


Acceptance criteria:

- Show user stats, money, round, next opponent
 - Permanently or maybe as a side menu

 **Code checklist** Delete

0%

- ☐ Create heads up display that shows user BeyBlade stats
- ☐ Create heads up display that shows user current money
- ☐ Create heads up display that shows user the upgrade shop
- ☐ Create heads up display that shows user next opponent(?)


 **Exception handling**
in list [To Do](#)


Labels

5 story points


+

Notifications

 Watch


 **Description** Edit

As a user, if I input something that is not a choice, inform me that I have made a mistake

 **Checklist** Delete

0%

- ☐ Give user dialogue based on what type of exception has been triggered


 **User quit/terminate app gracefully**
in list [To Do](#)


Labels

2 story points

+

Notifications


 Watch

 **Description** Edit

As a user, I want to be able to quit out of the program at any point

Acceptance criteria:

- Whenever user types in keyword ("quit"), game exits with goodbye message

 **Checklist** Delete


0%

- ☐ Code that listens for "quit" keyword
- ☐ Goodbye message to user



Build Process - Cards




 **Add colour formatting**
in list [To Do](#)


Labels

2 story points

+


Notifications

 Watch

 Description

Edit

As a user, I want to see different coloured text so that I can be able to differentiate between my own user input and the game dialogue


 Checklist

Delete

0%

☐ Find appropriate colour module for import

☐ Format dialogue appropriate for user


 **Review code adheres to Pep8 code style**
in list [To Do](#)


Labels

5 story points

+


Notifications

 Watch

 Description

Edit

Ensure that code adheres to Pep8 code style


 **Testing**
in list [Done](#)


Labels

5 story points

+


Notifications

 Watch

 Description

Edit




Testing of functions

 Checklist

Delete

0%

☐ Manual testing of 2 main functions



Build Process – Day 1 (October 19)



The screenshot displays a Kanban board with three columns: 'To Do', 'In Progress', and 'Done'. The 'To Do' column contains a list of tasks, each with a title, a list icon, and a progress indicator (checkbox and count). The 'In Progress' and 'Done' columns are currently empty, each featuring an 'Add a card' button and a card icon.

Column	Task	Progress
To Do	Character creation code	0/5
	Upgrade shop mechanic	0/2
	Battle mechanic	0/5
	End game	
	3 round loop	0/2
	Game copy	0/4
	Create heads up display	0/4
	Exception handling	
	User quit/terminate app gracefully	0/3
	STRETCH GOAL - ASCII art	0/1
STRETCH GOAL - Random chance encounter		
In Progress	+ Add a card	
Done	+ Add a card	



Build Process – Day 2 (October 20)



To Do

Battle mechanic

0/5

End game

0/4

3 round loop

0/2

Game dialogue

0/4

Create heads up display

0/4

Exception handling

0/1

User quit/terminate app gracefully

0/2

STRETCH GOAL - ASCII art

0/1

STRETCH GOAL - Random chance encounter

Add colour formatting

0/2

+ Add a card

In Progress

Character creation code

4/6

Upgrade shop mechanic

0/2

+ Add a card

Done

+ Add a card

Character creation code

in list [In Progress](#)

Labels

2 story points

+

Notifications

Watch

Description

Edit

As a player I want to be able to create a BeyBlade character to play in this game

Checklist

Hide checked items

Delete

67%

☒ Create BeyBlade object

☒ Give starting stats: name, strength, speed, stamina, money

☒ Add stat modifiers

☒ Randomise starting stats (with ability to re-roll?) – cap stats at 200 points?

☐ Decide on target money at end of 3 rounds for win requirement

☐ Randomise modifiers (hidden to user); give user hint (i.e. "Your BeyBlade seems to respond well to strength upgrades")

User input

User input

```
tom@TomsPC:~/projects/Terminal_App$ /bin/python3 /home/tom/projects/Terminal_App/main.py
Welcome to the 2023 Battle BeyBlade Bonanza!
Before we get started, could we please have your name for registration?
TestPlayer1
Thank you for registering TestPlayer1! We are so glad to have you here!
As per the tournament rules, you will be renting one of our Tournament BeyBlades!
What would you like to name your BeyBlade?
TestBeyBlade1
Here is your Tournament BeyBlade ~ Testbeyblade1 ~ with a total power of 446!
It appears that your BeyBlade favours SPEED upgrades!
```


Build Process – Day 2 (October 20)



To Do

Battle mechanic
0/5

End game
0/4

3 round loop
0/2

Game dialogue
0/4

Exception handling
0/1

User quit/terminate app gracefully
0/2

STRETCH GOAL - ASCII art
0/1

STRETCH GOAL - Random chance encounter

Add colour formatting
0/2

+ Add a card

In Progress

Character creation code
4/6

Create heads up display
3/4

+ Add a card

Done

Upgrade shop mechanic
2/2

+ Add a card

Create heads up display
in list In Progress

Labels: 5 story points

Notifications: Watch

Description
As a user, I want to be able to see my BeyBlade's stats, how much money I have, what round I'm up to, who my next opponent is.
Acceptance criteria:

- Show user stats, money, round, next opponent
 - Permanently or maybe as a side menu

Code checklist
75%

- Create heads up display that shows user BeyBlade stats
- Create heads up display that shows user current money
- Create heads up display that shows user the upgrade shop
- Create heads up display that shows user next opponent(?)

Rounds left: 3 | Total BeyBlade power: 446 | Money: 200
[1] Check BeyBlade Stats | [2] Go to Upgrade Store | [3] Battle

Upgrade shop mechanic
in list Done

Labels: 5 story points

Notifications: Watch

Description
As a player, I want to be able to upgrade the stats of my BeyBlade
Acceptance criteria:

- Present player with list of different upgrades
- Subtract cost of upgrade from player's money
- Upgrade selected stat for BeyBlade

Checklist
100%

- Display types of upgrades and randomised cost
- Allow 1 upgrade per round (subtract from money)

2
** Welcome to the UPGRADES shop! **
[A] Buy Strength stat upgrade: 26 dollars
[B] Buy Speed stat upgrade: 23 dollars
[C] Buy Stamina stat upgrade: 14 dollars
You can only upgrade once before each battle!
Rounds left: 3 | Total BeyBlade power: 370 | Money: 200
[1] Check BeyBlade Stats | [2] Go to Upgrade Store | [3] Battle



Build Process – Day 3 (October 21)



The Kanban board displays tasks in three columns:

- To Do:**
 - End game (0/4)
 - 3 round loop (0/2)
 - Exception handling (0/1)
 - User quit/terminate app gracefully (0/2)
 - STRETCH GOAL - ASCII art (0/1)
 - STRETCH GOAL - Random chance encounter
 - Add colour formatting (0/2)
- In Progress:**
 - Character creation code (4/6)
 - Game dialogue (4/5)
- Done:**
 - Upgrade shop mechanic (2/2)
 - Create heads up display (4/4)
 - Battle mechanic (7/7)

Each card includes a title, progress indicator, and a '+ Add a card' button at the bottom.

Battle mechanic
in list [Done](#)

Labels: **13 story points** + Notifications: **Watch**

Description [Edit](#)

As a player I want to be able to use my BeyBlade to battle another player

Acceptance criteria:

- Win or lose outcome
- Add or subtract from player's money on win or lose

Checklist [Hide checked items](#) [Delete](#)

100%

- ☒ Show current user BeyBlade stats
- ☒ Show opponent BeyBlade stats
- ☒ Ask user READY to commence battle
- ☒ Calculate total power output for each BeyBlade
- ☒ Show winner
- ☒ Give out money to player for win; subtract money for loss
- ☒ Create opponent stat balancer as rounds progress to nudge player to upgrade stats

```
Your opponent is Ron Weasley. Their BeyBlade has a total power of 425.  
Do you want to battle? (Yes or No)
```

```
You have to beat Satoru Gojo (Total power: 486) first before battling someone else!  
Do you want to battle? (Yes or No)  
yes  
Max has won the battle!  
You won $37 for winning this round!
```



Build Process – Day 4 (October 22)



To Do

End game

0/4

Exception handling

0/1

User quit/terminate app gracefully

0/2

STRETCH GOAL - ASCII art

0/1

STRETCH GOAL - Random chance encounter

Add colour formatting

0/2

Review code adheres to Pep8 code style

+ Add a card

In Progress

Game dialogue

4/5

3 round loop

1/2

+ Add a card

Done

Character creation code

6/6

Upgrade shop mechanic

2/2

Create heads up display

4/4

Battle mechanic

7/7

+ Add a card

3 round loop

in list In Progress

Labels

2 story points

Notifications

Watch

Description

Edit

As a user, I want to play 3 rounds of the tournament against 3 different opponents

Acceptance criteria:

- Allow 3 rounds of play
- Inform player what number round they are playing

Checklist

Hide checked items

Delete

50%

Round counter

Stop game at 3 rounds

Rounds left: 3 | Total BeyBlade power: 339 | Money: 200

[1] Check BeyBlade Stats | [2] Go to Upgrade Store | [3] Battle

Rounds left: 2 | Total BeyBlade power: 339 | Money: 182

[1] Check BeyBlade Stats | [2] Go to Upgrade Store | [3] Battle

Rounds left: 1 | Total BeyBlade power: 408 | Money: 139

[1] Check BeyBlade Stats | [2] Go to Upgrade Store | [3] Battle



Build Process – Day 5 (October 23)



To Do

Exception handling
0/1

User quit/terminate app gracefully
0/2

STRETCH GOAL - ASCII art
0/1

STRETCH GOAL - Random chance encounter

Add colour formatting
0/2

Review code adheres to Pep8 code style

+ Add a card

In Progress

End game
1/4

+ Add a card

Done

Character creation code
6/6

Upgrade shop mechanic
2/2

Create heads up display
4/4

Battle mechanic
7/7

3 round loop
2/2

Game dialogue
5/5

+ Add a card

End game

in list In Progress

Labels
8 story points

Notifications
Watch

Description

As a player, after 3 rounds in the tournament, I want to end playing the game

Acceptance criteria:

- Show player end game dialogue, win or lose
- Present stats to user (output to txt file?)

Checklist

25%

☒ Show user win or lose based on win/lose criteria

☐ Show overall game stats (reveal stat modifiers)

☐ Output stats to output txt file

☐ STRETCH GOAL - Create tournament win certificate txt file

That's the end of the tournamen!
Unfortunately you didn't win the tournament this time :(
Have a safe flight home, we'll see you next time!

That's the end of the tournament!
You get the trophy but you don't have enough money to fly home!
I've got an Auntie that runs a fish and chip shop in town if you need to make a bit of money..?



Build Process – Day 5 (October 23)



To Do

User quit/terminate app gracefully
0/2

STRETCH GOAL - ASCII art
0/1

STRETCH GOAL - Random chance encounter

Review code adheres to Pep8 code style

Testing
0/1

+ Add a card

In Progress

End game
1/4

+ Add a card

Done

Character creation code
6/6

Upgrade shop mechanic
2/2

Create heads up display
4/4

Battle mechanic
7/7

3 round loop
2/2

Game dialogue
5/5

Exception handling
1/1

Add colour formatting
2/2

+ Add a card

Exception handling

in list Done

5 story points

Watch

Description

As a user, if I input something that is not a choice, inform me that I have made a mistake

Checklist

Give user dialogue based on what type of exception has been triggered

hello
This is not a valid selection
Rounds left: 3 | Total BeyBlade power: 383 | Money: 200
[1] Check BeyBlade Stats | [2] Go to Upgrade Store | [3] Battle

4
This is not a valid selection
Rounds left: 3 | Total BeyBlade power: 383 | Money: 200
[1] Check BeyBlade Stats | [2] Go to Upgrade Store | [3] Battle

Add colour formatting

in list Done

2 story points

Watch

Description

As a user, I want to see different coloured text so that I can be able to differentiate between my own user input and the game dialogue

Checklist

Find appropriate colour module for import

Format dialogue appropriate for user

** Welcome to the UPGRADES shop! **
[A] Buy STRENGTH stat upgrade: 23 dollars
[B] Buy SPEED stat upgrade: 24 dollars
[C] Buy STAMINA stat upgrade: 26 dollars
Rounds left: 3 | Total BeyBlade power: 378 | Money: 200
[1] Check BeyBlade Stats | [2] Go to Upgrades Store | [3] Battle Lobby
[4] Check Player Info [Q] Quit



Build Process – Day 5 (October 23)



To Do

STRETCH GOAL - Random chance encounter

Review code adheres to Pep8 code style

Testing 0/1

Help file 0/3

+ Add a card

In Progress

End game 1/4

+ Add a card

Done

Character creation code 6/6

Upgrade shop mechanic 2/2

Create heads up display 4/4

Battle mechanic 7/7

3 round loop 2/2

Game dialogue 5/5

Exception handling 1/1

Add colour formatting 2/2

User quit/terminate app gracefully 2/2

STRETCH GOAL - ASCII art 1/1

+ Add a card

User quit/terminate app gracefully

in list Done

2 story points

Watch

Description

As a user, I want to be able to quit out of the program at any point

Acceptance criteria:

Whenever user types in keyword ("quit"), game exits with goodbye message

Checklist

100%

Code that listens for "quit" keyword

Goodbye message to user

Hide checked items

Delete

Thanks for playing, see you next time!

STRETCH GOAL - ASCII art

in list Done

Watch

Description

Add a more detailed description...

Checklist

100%

Add ASCII art

Hide checked items

Delete

2023 BATTLE
BEYBLADE
BONANZA



Build Process – Day 5 (October 23)



To Do

STRETCH GOAL - Random chance encounter

Review code adheres to Pep8 code style

Help file

+ Add a card

In Progress

End game

Testing

+ Add a card

Done

Character creation code

Upgrade shop mechanic

Create heads up display

Battle mechanic

3 round loop

Game dialogue

Exception handling

Add colour formatting

User quit/terminate app gracefully

STRETCH GOAL - ASCII art

+ Add a card

Testing

in list [In Progress](#)

Labels

5 story points

Notifications

Watch

Description

Testing of functions

Checklist

0%

Manual testing of 2 main functions



Build Process – Day 5 (October 23)



To Do

- STRETCH GOAL - Random chance encounter
- Help file

In Progress

- End game
- Review code adheres to Pep8 code style

Done

- Character creation code
- Upgrade shop mechanic
- Create heads up display
- Battle mechanic
- 3 round loop
- Game dialogue
- Exception handling
- Add colour formatting
- User quit/terminate app gracefully
- STRETCH GOAL - ASCII art
- Testing

Review code adheres to Pep8 code style
in list [In Progress](#)

Labels: **5 story points** +

Notifications: **Watch**

Description Edit

Ensure that code adheres to Pep8 code style



Build Process – Day 6 (October 24)

