**Continuous Assignment 1 – Jamie O’Donovan – 121776739**

**Overview:**

Generate python classes that store data based on Magic: The Gathering cards, monsters, spells and planeswalkers. There will be some shard attributes between classes (name, mana cost, effect) and others which while having the same name will has different input than each other. Such as, most spells have quotes but planeswalkers and monsters rarely have quotes, a similar thing occurs for monsters as they only have effects some of the time while all spells and planeswalkers will have effects.

***Given how canvas handles the re upload of files and that I can’t submit a folder/zip of my assingment, final submitted files names may not match what is written below.***

**ca1\_monster.py:** contains parents’ classes for monsters

**ca1\_spell.py:** contains parents’ classes for spells

**ca1\_planeswalker.py:** contains parents’ classes for planeswalkers

**ca1\_functions.py:** contains any functions needed for things

**ca1\_test.py:** contains children for each parent as well as some testing for getting and setting the data of a child

**ca1\_monster.py:**

example input:

**class dmu107(Monster):**

**'''**

**Sheoldred, the Apocalypse**

**'''**

**def \_\_init\_\_(*self*, \*\**kwargs*:str) -> None:**

**super().\_\_init\_\_(str(*self*.\_\_class\_\_.\_\_name\_\_), \*\**kwargs*)**

**dmu107\_name = "Sheoldred, the Apocalypse"**

**dmu107\_type = {"type": ["Legendary Creature", "Phyrexian Praetor"]}**

**dmu107\_info = {"rarity": "Mythic Rare", "card\_num": 107, "set": "Dominaria United"}**

**dmu107\_stats = {"mana cost": "2BB", "power": 4, "toughness": 5}**

**dmu107\_effect = {"effect": ["Deathtouch", "Whenever you draw a card, you gain 2 life.", "Whenever an opponent draws a card, they lose 2 life."]}**

**dmu107\_quote = "\"Gix failed. I shall not.\""**

**sheoldred = dmu107(*name*=dmu107\_name, *type*=du107\_type, *info*=dmu107\_info, *stats*=dmu107\_stats, *effect*=dmu107\_effect, *quote*=dmu107\_quote)**

* Initialise class
* Create attributes
* Set attribute to class

**ca1\_spell.py**

example input:

**class knd101(Spell):**

**'''**

**Invoke Despair**

**'''**

**def \_\_init\_\_(*self*, \*\**kwargs*:str) -> None:**

**super().\_\_init\_\_(str(*self*.\_\_class\_\_.\_\_name\_\_), \*\**kwargs*)**

**knd101\_name = "Invoke Despair"**

**knd101\_type = {"type": ["Sorcery"]}**

**knd101\_info = {"rarity": "Rare", "card\_num": 101, "set": "Kamigawa: Neon Dynasty"}**

**knd101\_stats = {"mana cost": "1BBBB"}**

**knd101\_effect = {"effect": ["Target opponent sacrifices a creature. If they can't, they lose 2 life and you draw a card. Then repeat this process for an enchantment and a planeswalker."]}**

**knd101\_quote = "Although officials said it was a sewer failure, the people whispered that it was a warning of night's reach."**

**invoke = knd101(*name*=knd101\_name, *type*=knd101\_type, *info*=knd101\_info, *stats*=knd101\_stats, *effect*=knd101\_effect, *quote*=knd101\_quote)**

* Initialise class
* Create attributes
* Set attribute to class

**ca1\_planeswalker.py**

example input:

**class dmu97(Planeswalker):**

**'''**

**Liliana of the Veil**

**'''**

**def \_\_init\_\_(*self*, \*\**kwargs*:str) -> None:**

**super().\_\_init\_\_(str(*self*.\_\_class\_\_.\_\_name\_\_), \*\**kwargs*)**

**dmu97\_name = "Liliana of the Veil"**

**dmu97\_type = {"type": ["Legendary Planeswalker", "Lilana"]}**

**dmu97\_info = {"rarity": "Mythic Rare", "card\_num": 97, "set": "Dominaria United"}**

**dmu97\_stats = {"mana cost": "1BB", "health": 3}**

**dmu97\_effect = {"effect": ["+1: Each player discards a card.", "−2: Target player sacrifices a creature.", "−6: Separate all permanents target player controls into two piles. That player sacrifices all permanents in the pile of their choice."]}**

**dmu97\_quote = ""**

**liliana = dmu97(*name*=dmu97\_name, *type*=dmu97\_type, *info*=dmu97\_info, *stats*=dmu97\_stats, *effect*=dmu97\_effect, *quote*=dmu97\_quote)**

* Initialise class
* Create attributes
* Set attribute to class
* **Miscellaneous data output and data manipulation:**

**print(liliana.planeswalker\_type)**

**print(liliana.planeswalker\_name)**

**print(liliana.planeswalker\_stats)**

**print(liliana.planeswalker\_effect)**

**print(liliana.planeswalker\_quote)**

**print(liliana)**

***# given how cards interact with each other most attributes can be changed via card effects***

**sheoldred.set\_monster\_stats({"power": 8})**

**print(sheoldred.monster\_stats["power"])**

**invoke.set\_spell\_stats({"mana cost": "3BBBB"})**

**print(invoke.spell\_stats["mana cost"])**

**liliana.set\_planeswalker\_stats({"health": 6})**

**print(liliana.planeswalker\_stats["health"])**

**sheoldred.set\_monster\_stats({"toughness": 10})**

**print(sheoldred.monster\_stats["toughness"])**

**sheoldred.set\_monster\_type({"type": "Elf Warrior?"})**

**print(sheoldred.monster\_type["type"])**

**hand = sheoldred.monster\_name, invoke.spell\_name, liliana.planeswalker\_name, sheoldred.monster\_name, invoke.spell\_name**

**print(hand)**