

Milestone 4

▼ Description

This project creates a database of the relationships of entities in the game Genshin Impact. Through this project, players will be able to get detailed information about the data within the game such as enemies and their locations without having to figure it out through gameplay.

Final Schema:

There are only 2 changes made to the relationships in the final schema. In previous milestone, there were missing primary keys from the weak entities as part of a foreign key for the relationships statement. **SubRegion** is a weak entity of **Region**, so **MaterialsFoundAt** would need to also include **Region** primary key, **RegionName**, as part as of its foreign key. Similarly, **Artifact** is a weak entity of **ArtifactSet**, hence **SetName** is added to the final schema.

- MaterialsFoundAt(**SubRegionName**, **MaterialName**) → MaterialsFoundAt(**SubRegionName**, **RegionName**, **MaterialName**)
- Enhances(**StatID**, **ArtifactName**) → Enhances(**StatID**, **ArtifactName**, **SetName**)

▼ Schema & Screenshots

	BOSSNAME	ARTIFACTSETNAME
1	Andrius	Gladiator's Finale
2	Andrius	Wanderer's Troupe
3	Cryo Regisvine	Wanderer's Troupe
4	Electro Hypostasis	Gladiator's Finale
5	Tartaglia	Gladiator's Finale

BossDrops(BossName, ArtifactSetName)

	NAME	REQUIREDRESIN	PHASES	ELEMENTALTYPE
1	Andrius	0	2	Cryo
2	Tartaglia	40	3	Hydro
3	Electro Hypostasis	40	1	Electro
4	Cryo Regisvine	40	1	Cryo
5	Aeonblight Drake	40	1	Cryo

Boss(Name, RequiredResin, Phases, ElementalType)

	CHARACTERNAME	ARTIFACTSETNAME	RANK
1	Ganyu	Wanderer's Troupe	1
2	Ganyu	Blizzard Strayer	2
3	Wanderer	Desert Pavillion Chronicle	1
4	Wanderer	Gladiator's Finale	2
5	Kazuha	Desert Pavillion Chronicle	1

CharacterArtifacts(CharacterName, ArtifactSetName, Rank)

	CHARACTERNAME	WEAPONNAME	RANK
1	Wanderer	Tulaytullah's Remembrance	1
2	Ganyu	Amos' Bows	1
3	Ganyu	Prototype Crescent	2
4	Noelle	Wolf's Gravestone	2
5	Childe	Prototype Crescent	2
6	Kazuha	Freedom-Sworn	1
7	Yae Miko	Tulaytullah's Remembrance	1

CharacterCanWield(CharacterName, WeaponName, Rank)

	CHAR1	CHAR2	BATTLE	CONTRACT	FRIEND
1	Childe	Noelle	<null>	Owe Money	TRUE
2	Yae Miko	Kazuha	Vision Hunt Decree	<null>	FALSE
3	Ganyu	Childe	Liyue Archon War	<null>	FALSE
4	Wanderer	Childe	<null>	<null>	FALSE
5	Wanderer	Yae Miko	Dendro Archon Conflict	<null>	TRUE

CharacterInteractions(Char1, Char2Battle, Contract, Friend)

	NAME	ELEMENTALTYPE	GENDER	WEAPONTYPE	TIER	DESCRIPTION	STATID	REGIONNAME
1	Yae Miko	Electro	Female	Catalyst	5	Lady Guji of the Grand Narukami Shrine. Also se...	12	Inazuma
2	Kazuha	Anemo	Male	Sword	5	A wandering samurai from Inazuma who is currentl...	13	Inazuma
3	Ganyu	Cryo	Female	Bow	5	The secretary at Yuehai Pavilion. The blood of t...	2	Liyue
4	Wanderer	Anemo	Male	Catalyst	5	A wayfaring figure whose identity is a mystery. ...	3	Sumeru
5	Noelle	Geo	Female	Claymore	4	A maid who faithfully serves the Knights of Favo...	14	Mondstadt
6	Childe	Hydro	Male	Sword	5	Childe Tartaglia, Eleventh of the Fatui Harbinge...	22	Liyue

Character(Name, ElementalType, Gender, WeaponType, Tier, Description, StatID, RegionName)

	CONSUMABLENAME	STATID
1	Almond Tofu	16
2	Baklava	1
3	Bamboo Shoot Soup	17
4	Bamboo Shoot Soup	18
5	Pile 'Em Up	1
6	Pure Water	15

ConsumableBoosts(ConsumableName, StatID)

	NAME	RECIPE
1	Pile 'Em Up	ATK
2	Pure Water	ATK
3	Almond Tofu	ATK
4	Baklava	ATK
5	Bamboo Shoot Soup	Recovery

Consumable(Name, Recipe)

	NAME	DESCRIPTION	LORE	STATID
1	Andrius	Andrius, also known as Lupus Bo...	Long in the past, Andrius' powers were given to him by an ancient god. It is...	10
2	Tartaglia	Tartaglia uses the tall male mo...	Tartaglia, also known by his codename "Childe," is a playable Hydro character.	9
3	Electro Hypostasis	The Electro Hypostasis is a Nor...	Elemental hypostases are the highest forms of elemental structures, usually ...	8
4	Cryo Regisvine	Elemental hypostases are the hi...	A monster formed from a vine that was imbued with the essence of biting fro...	7
5	Aeonblight Drake	The Aeonblight Drake is a Norma...	This dragon-shaped combat machine is a being that inspires fear, much like t...	5
6	Pyro Hilichurl Shooter	The primitive wandering inhabit...	<null>	11

Enemies(Name, Description, Lore, StatID)

	ENEMYNAME	MATERIALNAME
1	Aeonblight Drake	Shivada Jade Gemstone
2	Pyro Hilichurl Shooter	Damaged Mask
3	Pyro Hilichurl Shooter	Sharp Arrowhead
4	Pyro Hilichurl Shooter	Weathered Arrowhead
5	Tartaglia	Shadow of the Warrior

EnemyDrops(EnemyName, MaterialName)

	ENEMYNAME	REGIONNAME
1	Aeonblight Drake	Sumeru
2	Andrius	Mondstadt
3	Cryo Regisvine	Mondstadt
4	Electro Hypostasis	Mondstadt
5	Pyro Hilichurl Shooter	Liyue
6	Pyro Hilichurl Shooter	Mondstadt
7	Pyro Hilichurl Shooter	Sumeru
8	Tartaglia	Liyue

EnemyFoundAt(EnemyName, RegionName)

	STATID	ARTIFACTNAME	SETNAME
1	19	Troupe's Dawnlight	Wanderer's Troupe
2	20	Concert's Final Hour	Wanderer's Troupe
3	1	Troupe's Dawnlight	Wanderer's Troupe
4	2	Icebreaker's Resolve	Blizzard Strayer
5	2	Gladiator's Intoxication	Gladiator's Finale
6	2	Berserker's Battle Mask	Berserker

Enhances(StatID, ArtifactName SetName)

	SUBREGIONNAME	REGIONNAME	MATERIALNAME
1	Qiongji Estuary	Liyue	Cor Lapis
2	Narukami Island	Inazuma	Amakumo Fruit
3	Wolvendom	Mondstadt	Calla Lily
4	Fontaine Research Institute of Kinetic Energy Engineering Region	Fontaine	Beryl Conch
5	Narukami Island	Inazuma	Crystal Marrow

MaterialsFoundAt(SubRegionName, RegionNameMaterialName)

	NAME	DESCRIPTION
1	Amakumo Fruit	The fruit of the Amakumo Grass, which grows on Seirai Island. You can hear ...
2	Beryl Conch	A conch-like structure that gives off a faint glow. Despite the name, it is...
3	Calla Lily	A flower that grows near water sources. When cooked, the petals have a chun...
4	Cor Lapis	A precious crystal of condensed pure Geo element that usually grows along w...
5	Crystal Marrow	A crystal that contains a sliver of Tatarigami power. Adding this material ...
6	Pile 'Em Up	A rich, meaty dish. Originally a Mondstadt dish made of steaks, potatoes, a...
7	Pure Water	It is said to be the legacy of a genius potioneer. It can draw out the pure...
8	Almond Tofu	A dessert made out of almond. It has a silky-smooth texture with a long-las...
9	Baklava	A traditional Sumeru dessert. This puff pastry contains chopped nuts and ha...
10	Bamboo Shoot Soup	A soup dish that's been stewed for a good long while. The meat and ham have...
11	Sharp Arrowhead	A well-made arrowhead. Sharp enough to penetrate armor with the ease of a r...
12	Weathered Arrowhead	An old arrowhead coated in blood. The arrowhead has long since lost its sha...
13	Damaged Mask	A broken bone mask that once belonged to some hilichurl. Now more broken tha...
14	Shivada Jade Gemstone	Character Ascension material.'sorry... to also have you shoulder the grieva...
15	Shadow of the Warrior	A fragment of power that you obtained from defeating Childe, who had unleas...
16	Echo of Scorching Might	A long time ago, the people of the Lord of Deserts carved these imperial in...
17	Mora	Common currency. The one language everybody speaks.
18	Brilliant Diamond Silver	Character Ascension material.'Welcome to this world.'
19	Brilliant Diamond Fragment	Character Ascension material.'Welcome to this world.'
20	Brilliant Diamond Chunk	Character Ascension material.'Welcome to this world.'
21	Shackles of the Dandelion Gladiator	Venessa was not truly bound by her chains. If she had so wished, no ordina...
22	Dream of the Dandelion Gladiator	Venessa may have been freed from slavery, but she then found herself subje...
23	Echo of the Scorching Might	A long time ago, the people of the Lord of Deserts carved these imperial in...

Material(Name, Description)

	NAME	LORE
1	Mondstadt	A city of freedom that lies in the northeast of Teyvat. From amongst mountai...
2	Liyue	A bountiful harbor that lies in the east of Teyvat. Mountains stand tall and...
3	Inazuma	An Isolated Archipelago Far East of Teyvat overcome endless thunderstorms an...
4	Sumeru	The city of scholars located in the west-central part of Teyvat. A fantasti...
5	Fontaine	A terrestrial sea in the center of Teyvat. Following the direction of pure c...

Region(Name, Lore)

	CHARACTERNAME	ASCENSIONMATERIALNAME	QUANTITY
1	Ganyu	Echo of Scorching Might	6
2	Ganyu	Dream of the Dandelion Gladiator	7
3	Kazuha	Brilliant Diamond Chunk	3
4	Wanderer	Echo of Scorching Might	5
5	Noelle	Brilliant Diamond Fragment	6
6	Yae Miko	Brilliant Diamond Chunk	4
7	Childe	Brilliant Diamond Fragment	4

RequiredMaterialForCharacter(CharacterName, AscensionMaterialName, Quantity)

	WEAPONNAME	ASCENSIONMATERIAL	QUANTITY
1	Tulaytullah's Remembrance	Echo of Scorching Might	5
2	Amos' Bows	Shackles of the Dandelion Gladiator	14
3	Amos' Bows	Dream of the Dandelion Gladiator	6
4	Freedom-Sworn	Shackles of the Dandelion Gladiator	14
5	Freedom-Sworn	Dream of the Dandelion Gladiator	6

RequiredMaterialForWeapon(WeaponName, AscensionMaterial, Quantity)

	ID	CRTRATE	CRITDMG	DEFENSE	ATTACKDMG	HP
1	1	0.15	<null>	<null>	<null>	<null>
2	2	<null>	0.5	169	90	2632
3	3	0	<null>	163.13	88.04	2731
4	4	<null>	<null>	<null>	30	<null>
5	5	<null>	<null>	505	183	1313
6	6	<null>	<null>	505	152	1248
7	7	<null>	<null>	505	127	510
8	8	<null>	<null>	505	152	510
9	9	<null>	<null>	505	152	437
10	10	<null>	<null>	505	183	1313
11	11	<null>	<null>	505	34	58
12	12	0.05	0.5	44.27	26.44	807
13	13	0.05	0.5	63	23	1039
14	14	0.05	0.5	67	16	1012
15	15	0.1	<null>	<null>	<null>	320
16	16	<null>	<null>	<null>	<null>	81
17	17	<null>	<null>	<null>	<null>	0.28
18	18	<null>	<null>	<null>	<null>	620
19	19	<null>	<null>	<null>	<null>	645
20	20	<null>	<null>	0.087	0.07	0.07
21	21	<null>	<null>	<null>	47	<null>
22	22	0.05	0.5	63	23	1020

Stat(ID, CritRate, CritDMG, Defense, AttackDMG, HP)

	RNAME	SUBNAME	SUBLORE	ZONETYPE
1	Mondstadt	Wolvendom	A deep, dark woodland, where the silence sends chills down the spine. A wolf...	<null>
2	Liyue	Qiongji Estuary	Qiongji Estuary has 4 notable sub areas which are Guili Plains, Luhua Pool, ...	<null>
3	Inazuma	Narukami Island	A sight witnessed by all inbound travelers to Inazuma. The Grand Narukami Sh...	<null>
4	Sumeru	Vanarana	No matter how dark the sky and land may get, as long as your spirit emits wa...	<null>
5	Fontaine	Fontaine Research Institute of Kinetic ...	It was largely destroyed in an explosion long ago. The explosion left behind...	<null>

Subregion(RName, SubName, SubLore, ZoneType)

	NAME	TIER	LORE	DMG	ABILITY	WEAPONTYPE
1	Amos' Bows	5	An extremely ancient bow that...	<null>	46 Increases Normal Attack and Aim...	Bow
2	Tulaytullah's Rem...	5	Normal Attack SPD is increase...	<null>	48 A bell crafted of deep sapphire...	Catalyst
3	Wolf's Gravestone	5	Increases ATK by 20%. On hit,...	<null>	46 A longsword used by the Wolf Kn...	Claymore
4	Prototype Crescent	4	Aimed Shot hits on weak point...	<null>	41 A prototype longbow discovered ...	Bow
5	Freedom-Sworn	5	Increases DMG by 10%. When ch...	<null>	46 A straight sword, azure as anti...	Sword

Weapon(Name, Tier, Lore, SetName, DMG, Ability, WeaponType)

	SETNAME	"4PieceBonus"	"2PieceBonus"	TIER
1	Blizzard Strayer	When a character attacks an enemy affected by Cryo, their C...	Cryo DMG Bonus +15%	5
2	Desert Pavillion Chronicle	When Charged Attacks hit opponents, the equipping character...	Anemo DMG Bonus +15%	5
3	Gladiator's Finale	If the wielder of this artifact set uses a Sword, Claymore ...	ATK +18%	5
4	Wanderer's Troupe	Increases Charged Attack DMG by 35% if the character uses a...	Increases Elemental Mastery by 80.	5
5	Berserker	When HP is below 70%, CRIT Rate increases by an additional ...	CRIT Rate +12%	5

ArtifactSet(SetName, 4PieceBonus, 2PieceBonus, Tier)

	SETNAME	NAME	ARTIFACTTYPE	DESCRIPTION
1	Wanderer's Troupe	Troupe's Dawnlight	Flower of Life	A small flower-shaped insignia. There seems to be music coming from it. A...
2	Wanderer's Troupe	Concert's Final Hour	Sands of Eon	The troupe's hourglass, which is also a harp. The tune becomes deeper wit...
3	Blizzard Strayer	Icebreaker's Resolve	Plume of Death	A feather of a bird of prey that did not originally belong in the winter ...
4	Berserker	Berserker's Battle Mask	Circlet of Logos	Bathed in the flames that devoured his homeland, the berserker's face was...
5	Gladiator's Finale	Gladiator's Intoxication	Goblet of Eonothem	A lavish goblet made of gold. It was a gift from the champion gladiator's...

Artifact(SetName, Name, ArtifactType, Description)

	NAME	TIER	ASCENSIONTYPE
1	Brilliant Diamond Silver	2	Character
2	Brilliant Diamond Fragment	3	Character
3	Brilliant Diamond Chunk	4	Character
4	Shackles of the Dandelion Gladiator	4	Weapon
5	Dream of the Dandelion Gladiator	5	Weapon
6	Echo of Scorching Might	2	Weapon

AscensionMaterial(Name, Tier, AscensionType)

BATTLE	REGION
1 Enkanomiya clash with the Dragonheir of the Depths	Inazuma
2 Fall of Decarabian's Mondstadt	Mondstadt
3 Guili Assembly	Liyue
4 Dendro Archon Conflict	Sumeru
5 Vision Hunt Decree	Inazuma
6 Liyue Archon War	Liyue

BattleInRegion(Battle, Region)

▼ Sample Query Screenshots

INSERT (search.php line 263-288)

BEFORE

Retrieved data from Material Table:

Name	Tier	Ascension Type
Brilliant Diamond Chunk	4	Character
Brilliant Diamond Fragment	3	Character
Brilliant Diamond Sliver	2	Character
Dream of the Dandelion Gladiator	5	Weapon
Echo of Scorching Might	2	Weapon
Shackles of the Dandelion Gladiator	4	Weapon

DURING

Insert Values into AscensionMaterial

Name:

Tier: ▲ ▼

Type:

AFTER

Successful query

Name	Tier	Ascention	Type
Shivada Jade Gemstone	1		Character
Brilliant Diamond Sliver	2		Character
Brilliant Diamond Fragment	3		Character
Brilliant Diamond Chunk	4		Character
Shackles of the Dandelion Gladiator	4		Weapon
Dream of the Dandelion Gladiator	5		Weapon
Echo of Scorching Might	2		Weapon

DELETE (search.php line 422-442)

BEFORE

(Materials)

Retrieved data from Material Table:

Name	Description
Almond Tofu	A dessert made out of almond. It has a silky-smooth texture with a long-lasting aroma of almond. It's named tofu only because of its tofu-like shape.
Amakumo Fruit	The fruit of the Amakumo Grass, which grows on Seirai Island. You can hear it crackling with a tiny current if you hold it up to your ear.
Baklava	A traditional Sumenu dessert. This puff pastry contains chopped nuts and has been baked after having butter drizzled atop it ??? and not forgetting some syrup once it comes out of the oven. Some researchers will specially order this veritable 'fortress of sweetness' to replenish their energies before an exam. This is also why this dish has great pride of place as the Akademy's favorite dessert.
Bamboo Shoot	A soup dish that's been stewed for a good long while. The meat and ham have been diced into small pieces, and the soup has been kept on low heat till it turned milky white. The process has brought out the distinct flavors of both kinds of meat, making for an especially tasty soup.
Beryl Conch	A conch-like structure that gives off a faint glow. Despite the name, it is not a shell but something condensed from pure elemental energy.
Brilliant Diamond Chunk	Character Ascension material 'Welcome to this world.'
Brilliant Diamond Fragment	Character Ascension material 'Welcome to this world.'
Brilliant Diamond Sliver	Character Ascension material 'Welcome to this world.'
Calla Lily	A flower that grows near water sources. When cooked, the petals have a chunky texture, yet are sweet and a little bitter.
Cor Lapis	A precious crystal of condensed pure Geo element that usually grows along with other minerals. It's also commonly called 'Cor Petrae.'

(Consumable)

Retrieved data from Consumable Table:

Name	Recipe
Almond Tofu	ATK
Baklava	ATK
Bamboo Shoot Soup	Recovery
Pile 'Em Up	ATK
Pure Water	ATK

DURING

Delete a material

Name:

AFTER

Successful query	
Retrieved data from Material table:	
Name	Description
Amakumo Fruit	The fruit of the Amakumo Grass, which grows on Seirai Island. You can hear it crackling with a tiny current if you hold it up to your ear.
Beryl Conch	A conch-like structure that gives off a faint glow. Despite the name, it is not a shell but something condensed from pure elemental energy.
Calla Lily	A flower that grows near water sources. When cooked, the petals have a chunky texture, yet are sweet and a little bitter.
Cor Lapis	A precious crystal of condensed pure Geo element that usually grows along with other minerals. It's also commonly called 'Cor Petrac.'
Crystal Marrow	A crystal that contains a sliver of Tatarigami power. Adding this material during smelting will greatly increase the strength and toughness of metals.
Pile 'Em Up	A rich, meaty dish. Originally a Mondstadt dish made of steaks, potatoes, and cheese, it has since become synonymous with Ludi Harpastum.
Pure Water	It is said to be the legacy of a genius potioneer. It can draw out the purest strength from within one's body.
Baklava	A traditional Sumera dessert. This puff pastry contains chopped nuts and has been baked after having butter drizzled atop it ??? and not forgetting some syrup once it comes out of the oven. Some researchers will specially order this veritable 'fortress of sweetness' to replenish their energies before an exam. This is also why this dish has great pride of place as the Akademy's favorite dessert.
Bamboo Shoot Soup	A soup dish that's been stewed for a good long while. The meat and ham have been diced into small pieces, and the soup has been kept on low heat till it turned milky white. The process has brought out the distinct flavors of both kinds of meat, making for an especially tasty soup.
Sharp Arrowhead	A well-made arrowhead. Sharp enough to penetrate armor with the ease of a rock through the surface of water.
Weathered Arrowhead	An old arrowhead coated in blood. The arrowhead has long since lost its sharpness and thus its use as a weapon. However it represents the pride of a hunter and acts as both an amulet and a medall.
Damaged Mask	A broken bone mask that once belonged to some hilichurl. Now more broken than complete, it can no longer perform its primary function.
Shivada Jade	Character Ascension material 'sorry.. to also have you shoulder the grievances of the world since you could endure my bitter cold, you must have the desire to burn?' Then, burn away the old world for me.'
Gemstone	A fragment of power that you received from defeating Cyilde, who had unleashed the might of his Delusion. It is the product of a will to fight that has been honed over countless slaughters. If humans do indeed have destinies, then his must surely have been twisted by such deeds. Why else, then, would he always be at the heart of every conflict?
Shadow of the Wind	A long time ago, the people of the Lord of Deserts carved these imperial insignias based on robust beetles to memorialize the bright sun that marked the shifting of day and night, as well as the infinity of such times. Though the name of that Lord is no longer mentioned, these imperial insignias have been preserved through time, each bearing a faint ambiance of those past glories. These insignias travel with the descendants of the Eremitre Tribe, silently telling the tales of their then-Lord.
Echo of Scorching Might	Common currency. The one language everybody speaks.
Mora	Character Ascension material 'Welcome to this world!'
Brilliant Diamond Silver	Character Ascension material 'Welcome to this world!'
Brilliant Diamond Fragment	Character Ascension material 'Welcome to this world!'
Brilliant Diamond Chunk	Character Ascension material 'Welcome to this world!'
Spindles of the Dandelion Gladiator	Venessa was not truly bound by her chains. If she had so wished, no ordinary physical constraints forged in Mondstadt could have held her, for the land there yielded no ore of exceptional quality, nor did it possess the divine flame of her ancestral home. She was only bound by her responsibility to take care of her tribespeople.
Dream of the Dandelion Gladiator	Venessa may have been freed from slavery, but she then found herself subject to many other, even greater forms of bondage. What began as a duty to her tribespeople extended to all of Mondstadt, then to the concept of freedom itself, and beyond a point even to the whole world. What she really hoped for, in truth, was that the world might grow stronger.
Echo of the Scorching Might	A long time ago, the people of the Lord of Deserts carved these imperial insignias based on robust beetles to memorialize the bright sun that marked the shifting of day and night, as well as the infinity of such times. Though the name of that Lord is no longer mentioned, these imperial insignias have been preserved through time, each bearing a faint ambiance of those past glories. These insignias travel with the descendants of the Eremitre Tribe, silently telling the tales of their then-Lord.

Retrieved data from Consumable table:
Name Recipe

(Consumable)

Retrieved data from Consumable Table:

Name	Recipe
Baklava	ATK
Bamboo Shoot Soup	Recovery
Pile 'Em Up	ATK
Pure Water	ATK

UPDATE (search.php line 567-587)

BEFORE

Retrieved data from Artifact Stats Table:

Stat ID	Artifact Name	Artifact Set Name
1	Troupe's Dawnlight	Wanderer's Troupe
2	Berserker's Battle Mask	Berserker
2	Gladiator's Intoxication	Gladiator's Finale
2	Icebreaker's Resolve	Blizzard Strayer
19	Troupe's Dawnlight	Wanderer's Troupe
20	Concert's Final Hour	Wanderer's Troupe

DURING

Update some artifact stat ID

Stat ID:

Artifact:

AFTER

Successful query

Stat ID	Artifact Name
19	Troupe's Dawnlight
18	Concert's Final Hour
1	Troupe's Dawnlight
2	Icebreaker's Resolve
2	Gladiator's Intoxication
2	Berserker's Battle Mask

SELECTION (search.php line 338-356)

BEFORE

Retrieved data from Character Table:

Name	Elemental Type	Gender	Weapon Type	Tier	Description	Stat ID	Region Name
Childe	Hydro	Male	Sword	5	Childe Tartaglia, Eleventh of the Fatui Harbingers. He draws power from the ominous Delusion he possesses and fights using martial arts that he learned in the land of darkness. He is a pure warrior with an insatiable lust for battle.	22	Liyue
Ganyu	Cryo	Female	Bow	5	The secretary at Yuehai Pavilion. The blood of the qilin, an illuminated beast, flows within her veins.	2	Liyue
Kazuha	Anemo	Male	Sword	5	A wandering samurai from Inazuma who is currently with Liyue's Crux Fleet. A gentle and carefree soul whose heart hides a great many burdens from the past.	13	Inazuma
Noelle	Geo	Female	Claymore	4	A maid who faithfully serves the Knights of Favonius. She dreams of joining their ranks someday.	14	Mondstadt
Wanderer	Anemo	Male	Catalyst	5	A wayfaring figure whose identity is a mystery. He dresses like a mountain ascetic, but he certainly does not act the part.	3	Sumeru
Yae Miko	Electro	Female	Catalyst	5	Lady Guiji of the Grand Narukami Shrine. Also serves as the editor-in-chief of Yae Publishing House. Unimaginable intelligence and cunning are hidden under her beautiful appearance.	12	Inazuma

DURING

Selection: Find character by elemental type

Type: Hydro

Submit

AFTER

Retrieved data from Character table:

Name	ElementalType	Gender	WeaponType	Tier	Description	StatID	RegionName
Childe	Hydro	Male	Sword	5	Childe Tartaglia, Eleventh of the Fatui Harbingers. He draws power from the ominous Delusion he possesses and fights using martial arts that he learned in the land of darkness. He is a pure warrior with an insatiable lust for battle.	22	Liyue

PROJECTION (search.php line 310-316)

BEFORE

Retrieved data from Character Table:

Name	Elemental Type	Gender	Weapon Type	Tier	Description	Stat ID	Region Name
Childe	Hydro	Male	Sword	5	Childe Tartaglia, Eleventh of the Fatui Harbingers. He draws power from the ominous Delusion he possesses and fights using martial arts that he learned in the land of darkness. He is a pure warrior with an insatiable lust for battle.	22	Liyue
Ganyu	Cryo	Female	Bow	5	The secretary at Yuehai Pavilion. The blood of the qilin, an illuminated beast, flows within her veins.	2	Liyue
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Noelle	Geo	Female	Claymore	4	A maid who faithfully serves the Knights of Favonius. She dreams of joining their ranks someday.	14	Mondstadt
Wanderer	Anemo	Male	Catalyst	5	A wayfaring figure whose identity is a mystery. He dresses like a mountain ascetic, but he certainly does not act the part.	3	Sumeru
Yae Miko	Electro	Female	Catalyst	5	Lady Guiji of the Grand Narukami Shrine. Also serves as the editor-in-chief of Yae Publishing House. Unimaginable intelligence and cunning are hidden under her beautiful appearance.	12	Inazuma

DURING

Projection: Get a Character's Basic Information

AFTER

Retrieved data from Character table:

Name	Elemental Type
Yae Miko	Electro
Kazuha	Anemo
Ganyu	Cryo
Wanderer	Anemo
Noelle	Geo
Childe	Hydro

JOIN (search.php line 480-500)

BEFORE

(enemies)

Name	Description	Lore	Stat ID
Aeonblight Drake	The Aeonblight Drake is a Normal Boss challenge found in Devantaka Mountain, Ardravi Valley, Sumeru.	This dragon-shaped combat machine is a being that inspires fear, much like the lord who once ruled these vast lands. This mysterious, tireless mechanical monstrosity seems to be proof that the now-destroyed realm had reached heights that mortals should never have.	5
Andrius	Andrius, also known as Lupus Boreas, was a powerful god in Mondstadt best known for his war against Decarabian, God of Storms, during the Archon War. Towards the end of the era, Andrius chose to let his physical body die, leaving behind his spirit to watch over the land of Mondstadt.	Long in the past, Andrius' powers were given to him by an ancient god. It is currently unknown who this god was, but this put Andrius on the level of a god himself. Sometime during the Archon War, hostility arose between Andrius and Decarabian. Andrius declared war on Decarabian while Decarabian enclosed his capital city ??? the area now known as Stormterror's Lair ??? within a storm wall, thus starting the era known as the Age of Kings. They were collectively known as Kings of Ice and Frost and reached a stalemate: Andrius failed to land even a scratch on the Lord of the Tower, while Decarabian was unable to capture of ??? and instead concentrated on defeating Andrius. However, Andrius's people grew dissatisfied with his rule. 200 years ago, they rose up against him with the help of Bahamut, ministering to Decarabian's death. During the Archon War, Andrius decided that he was unworthy of becoming the Archon due to his perceived lack of love for humanity that an Archon ought to have. Realizing his blizzards could only take lives and not nourish them, he chose to pass on, letting his power flow into the land to nurture it and its people. It is unclear when exactly this occurred relative to Decarabian's death, but it was likely around the same time or right beforehand. Upon the death of his physical body, part of Andrius' spirit and power took on its current icy form. However, this form is incapable of harnessing his full abilities. Around 1000 years ago, after Venessa's rebellion against the Mondstadt Aristocracy, Andrius officially became one of the Four Winds of Mondstadt, while the Knight of Boreas ??? a position that currently holds an unknown relationship to him ??? joined the newly established Knights of Favona. Today, the Temple of the Wolf located near the Thousand Winds Temple was used to worship him, but it has long been abandoned, while Andrius' spirit dwells on the other side of Mondstadt. Andrius will eventually become the leader of a group of wolves in Wolvendon, while continuing to accept abandoned infants into his pack. Sometime before the start of the game, he found and took in Razor, The Knights of Favona's current Grand Master. Varka, is also the current Knight of Boreas. Before he went on his expedition, he would occasionally visit Wolvendon; however, his relationship to Andrius is currently unclear.	10
Cryo Regivines	Elemental hypostases are the highest forms of elemental structures, usually formed either at a location bursting with elemental energy or at a clogged ley line. Elemental hypostases have developed defensive mechanisms based on their elemental attributes	A monster formed from a vine that was imbued with the essence of biting frost within the ley lines. Some studies suggest that plants are like the organs of the world, harmonizing the turbulent elemental energies of the ley lines. Concrete examples of this phenomena are Mist Flowers, Whopperflowers, and the like, which brim over with elemental energy. In certain circumstances, certain plants will turn into creatures of monstrous size and intent ??? such as the Cryo Regivines ??? in the course of many years.	7
Electro Hypostasis	The Electro Hypostasis is a Normal Boss challenge found in Cape Oath, Galesong Hill, Mondstadt.	Elemental hypostases are the highest forms of elemental structures, usually formed either at a location bursting with elemental energy or at a clogged ley line. Elemental hypostases have developed defensive mechanisms based on their elemental attributes	8
Pyro Hilichurl Shooter	The primitive wandering inhabitants of Teyvat's wildernesses. These archers wield simple crossbows, and their arrowheads are coated with a thin layer of flammable material that can set their targets on fire. El Musk of the previous generation believed that this is an innovation by brighter hilichurls who wished to cook their game after hunting it.		11
Tartaglia	Tartaglia uses the tall male model. He has short ginger hair and dull blue eyes. He wears a red Fatui mask pulled off to the left side of his head, and a beaded earring with a red crystal on his left ear. A few lighter blond streaks can be seen in his hair, with the remainder on the left side of his head. He wears his mask of Gluttony during the first phase of his Golden House battle. After the first phase, Tartaglia's clothes turn from gray to black, he wears his mask on his face, and his Hydro Vision appears to be supplanted by his Electro Delusion. After the second phase, he undergoes a full outfit change and becomes larger, and his Vision appears in the empty slot on his right chest while his Delusion moves to the center of his belt. Both his Vision and Delusion also obtain more prominent black and silver casings.	Tartaglia, also known by his codename "Childe," is a playable Hydro character in Genshin Impact. He is the Eleventh of the Eleven Fatui Harbingers. Wherever he goes, danger follows, and Childe is always eager for a challenge, making him extremely dangerous despite being the youngest member.	9

(region)

Retrieved data from Region Table:

Name	Lore
Fontaine	A terrestrial sea in the center of Teyvat. Following the direction of pure currents, crossing wilderness, the depths of the forests and vastness of the sea of sand, arriving at the origin of all the waters of the continent. At the top of the waterfall, in the depths of the capital atop the terrestrial sea... a story that has never been heard, a legend that has been forgotten, like a lost kingdom sunken beneath the waves, yearning for a bard to sing its drowned songs.
Inazuma	An Isolated Archipelago Far East of Teyvat overcome endless thunderstorms and set foot on the islands of red maple and cherry blossoms. On winding shores and towering cliffs, and in forests and mountains full of secrets, witness the Eternity pursued by Her Excellency, the Almighty Narukami Ogosho.
Liyue	A bountiful harbor that lies in the east of Teyvat. Mountains stand tall and proud alongside the stone forest, that, together with the open plains and lively rivers, make up Liyue's bountiful landscape, which shows its unique beauty through each of the four seasons. Just how many gifts from the Geo God lie in wait amongst the rocks of Liyue's mountains?
Mondstadt	A city of freedom that lies in the northeast of Teyvat. From amongst mountains and wide-open plains, carefree breezes carry the scent of dandelions ??? a gift from the Anemo God, Barbatus ??? across Cider Lake to Mondstadt, which sits on an island in the middle of the lake.
Sumeru	The city of scholars located in the west-central part of Teyvat. A fantastical nation of both lush rainforest and barren desert, where countless fruits of wisdom grow and are buried. Whether Travelers travel from afar through the forest to reach the academy city or delve deep into the desert to discover the historical ruins of the red desert, a wealth of valuable knowledge awaits them here.

(stat)

Retrieved data from Stat Table:

ID	Crit Rate	Crit DMG	Defense	Attack DMG	HP
1	.15				
2		.5	169	90	2632
3	0		163.13	88.04	2731
4				30	
5			505	183	1313
6			505	152	1248
7			505	127	510
8			505	152	510
9			505	152	437
10			505	183	1313

DURING

Join Enemies, Region, EnemyFoundAt, Stat

Display statistics of every enemies in a region

Location:

AFTER

Retrieved data from Enemies, Region, EnemyFoundAt, Stat table:

Enemy	DEF	ATK	HP
Tartaglia	505	152	437
Pyro Hilichurl Shooter	505	34	58

AGGREGATION WITH GROUP BY (search.php line 390-400)

BEFORE

Retrieved data from Character Table:

Name	Elemental Type	Gender	Weapon Type	Tier	Description	Stat ID	Region Name
Childe	Hydro	Male	Sword	5	Childe Tartaglia. Eleventh of the Fatui Harbingers. He draws power from the ominous Delusion he possesses and fights using martial arts that he learned in the land of darkness. He is a pure warrior with an insatiable lust for battle.	22	Liyue
Ganyu	Cryo	Female	Bow	5	The secretary at Yuehai Pavilion. The blood of the qilin, an illuminated beast, flows within her veins.	2	Liyue
Kazuhira	Anemo	Male	Sword	5	A wandering samurai from Inazuma who is currently with Liyue's Crux Fleet. A gentle and carefree soul whose heart hides a great many burdens from the past.	13	Inazuma
Noelle	Geo	Female	Claymore	4	A maid who faithfully serves the Knights of Favonius. She dreams of joining their ranks someday.	14	Mondstadt
Wanderer	Anemo	Male	Catalyst	5	A wayfaring figure whose identity is a mystery. He dresses like a mountain ascetic, but he certainly does not act the part.	3	Sumeru
Yae Miko	Electro	Female	Catalyst	5	Lady Guiji of the Grand Nanakami Shrine. Also serves as the editor-in-chief of Yae Publishing House. Unimaginable intelligence and cunning are hidden under her beautiful appearance.	12	Inazuma

DURING

Aggregation (Group By): Count Elemental Types

AFTER

Retrieved data from Character table:

Element	Number of element types
Cryo	1
Anemo	2
Geo	1
Electro	1
Hydro	1

AGGREGATION WITH HAVING (search.php line 526-546)

BEFORE

Retrieved data from Weapon Materials Table:

Weapon Name	Ascension Material	Quantity
Amos' Bows	Dream of the Dandelion Gladiator	6
Amos' Bows	Shackles of the Dandelion Gladiator	14
Freedom-Sworn	Dream of the Dandelion Gladiator	6
Freedom-Sworn	Shackles of the Dandelion Gladiator	14
Tulaytullah's Remembrance	Echo of Scorching Might	5

DURING

Aggregation (Having)

Find materials needed by more than 1 character to ascend over some quantity

Quantity:

AFTER

Material
Echo of Scorching Might
Brilliant Diamond Fragment
Brilliant Diamond Chunk

NESTED AGGREGATION WITH GROUP BY (search.php line 644-655)

BEFORE

Retrieved data from Weapon Table:

Name	Tier	Lore	Set Name	DMG	Ability	Weapon Type
Amos' Bows	5	An extremely ancient bow that has retained its power despite its original master being long gone. It draws power from everyone and everything in the world, and the further away you are from that which your heart desires, the more powerful it is.	46		Increases Normal Attack and Aimed Shot DMG by 18%. Increases DMG by 12% for every 0.1s that an arrow is in flight. Stacks up to 5 times on each arrow.	Bow
Freedom-Sworn	5	Increases DMG by 10%. When characters with Freedom-Sworn trigger Elemental Reactions, they gain a Sigil of Rebellion (once every 0.5s). This triggers even if they aren't on the field. When you reach 2 Sigils, they will be consumed which grants nearby party members 20% ATK and 16% Normal, Charged, and Plunging Attack DMG for 12s. Once triggered, you gain no Sigils for 20s. The same buffs from the Millennial Movement series does not stack.	46		A straight sword, azure as antideluvian song, and as keen as the oaths of freedom taken in the Land of Wind.	Sword
Prototype Crescent	4	Aimed Shot hits on weak points increase Movement SPD by 10% and ATK by 36% for 10s.	41		A prototype longbow discovered in the Blackcliff Forge. The arrow fired from this bow glimmers like a ray of moonlight.	Bow
Tulaytullah's Remembrance	5	Normal Attack SPD is increased by 10%. After the wielder unleashes an Elemental Skill, Normal Attack DMG will increase by 4.8% every second for 14s. After hitting an opponent with a Normal Attack during this duration, Normal Attack DMG will be increased by 9.6%. This increase can be triggered once every 0.3s. The maximum Normal Attack DMG increase per single duration of the overall effect is 48%.	48		A bell crafted of deep sapphire and sterling silver. Its echoes are crisp as they are distant.	Catalyst
Wolf's Gravestone	5	Increases ATK by 20%. On hit, attacks against enemies with less than 30% HP increases all party members' ATK by 40% for 12s. Can only occur once every 30s.	46		A longsword used by the Wolf Knight. Originally just a heavy sheet of iron given to the knight by a blacksmith from the city, it became endowed with legendary power owing to his friendship with the wolves.	Claymore

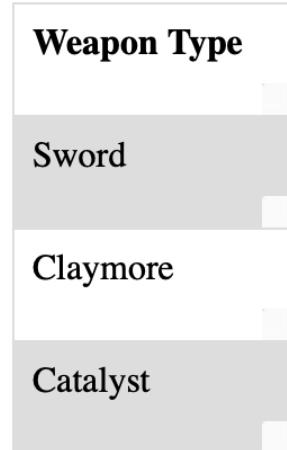
DURING

Nested Aggregation (Having)

Find weapon type, such that weapons of such type have higher mean attack stats than overall mean

AFTER

Retrieved data from Weapon table:



DIVISION (search.php line 607-624)

BEFORE

Retrieved data from Enemies Table:

Name	Description	Lore	Stat ID
Aeonblight Drake	The Aeonblight Drake is a Normal Boss challenge found in Devantaka Mountain, Ardavi Valley, Sumera.	This dragon-shaped combat machine is a being that inspires fear, much like a lord who once ruled these vast lands. This mysterious, tireless mechanical monstrosity seems to be proof that the now-destroyed realm had reached heights that mortals should never have.	5
Andrius	Andrius, also known as Lupus Boras, was a powerful god in Mondstadt best known for his war against Decarabian, the God of Storms, during the Archon War. Towards the end of the era, Andrius chose to let his physical body die, leaving behind his spirit to watch over the land of Mondstadt.	Long in the past, Andrius' powers were given to him by an ancient god. It is currently unknown who this god was, but this put Andrius on the level of a god himself. Sometimes as Andrius walked a Ley ??? he would stop and stand there, thus standing there as the Archon of the Four Winds, collecting known as King of Ice and Fire and created a stone: Andrius failed to even scratch on the stone, while Decarabian was able to scratch it. Andrius' people grew discontent with his rule. 2600 years ago, they rose up against him with the help of Barbatos, culminating in Decarabian's death. At some point during the Archon War, Andrius decided that he was unworthy of becoming the Anemo Archon due to his perceived lack of love for humanity that an Archon ought to have. Realizing his blizzards could only take lives and not nourish them, he chose to pass on, letting his power flow into the land to nurture it and its people. It is unclear when exactly this occurred relative to the Archon War, but it is likely shortly after the war ended. However, Andrius' spirit still remains in the stone, unable to leave it and unable to return to his original form. However, this form is incapable of expressing his full abilities. Around 1000 years ago, after Venessus's rebellion against the Mondstadt Aristocracy, Andrius officially became one of the Four Winds of Mondstadt, while the Knight of Boras ??? a position that currently holds an unknown relationship to him ??? joined the newly established Knights of Favous. In the past, the Temple of the Wolf located near the Thousand Winds Temple was used to worship him, but it has long been abandoned, while Andrius' spirit dwells on the other side of Mondstadt. Andrius would eventually become the leader of a group of wolves in Wolvendon, while continuing to accept abandoned infants into his pack. Sometime before the start of the game, he found and took in Razer. The Knights of Favous' current Grand Master, Varka, is also the current Knight of Boreas. Before he went on his expedition, he would occasionally visit Wolvendon; however, his relationship to Andrius is currently unclear.	10
Cryo Hypostasis	Elemental hypostases are the highest forms of elemental structures, usually formed either at a location bursting with elemental energy or at a clogged ley line. Elemental hypostases have developed defensive mechanisms based on their elemental attributes	A monstrosity formed from a vine that was infused with the essence of binding frost within the ley lines. Some studies suggest that Plants are like the organs of the world, harmonizing the turbulent elemental energies of the ley lines. Concrete examples of this phenomena are Mist Flowers, Whopperflowers, and the like, which brim over with elemental energy. In certain circumstances, certain plants will turn into creatures of monstrous size and intent ??? such as the Cryo Regnivines ??? in the course of many years.	7
Electro Hypostasis	The Electro Hypostasis is a Normal Boss challenge found in Cape Oath, Galesong Hill, Mondstadt.	Elemental hypostases are the highest forms of elemental structures, usually formed either at a location bursting with elemental energy or at a clogged ley line. Elemental hypostases have developed defensive mechanisms based on their elemental attributes	8
Pyro Hilichurl Shooter	The primitive weapon of the Pyro Hilichurl Shooter is the Pyro Staff. These weapons have solid silver heads, bows, and their arrowheads are coated with a thin layer of flammable material that can set their targets on fire. El Musk of the previous generation believed that this is an innovation by brighter hilichurls who wished to cook their game after hunting it.	The primitive weapon of the Pyro Hilichurl Shooter is the Pyro Staff. These weapons have solid silver heads, bows, and their arrowheads are coated with a thin layer of flammable material that can set their targets on fire. El Musk of the previous generation believed that this is an innovation by brighter hilichurls who wished to cook their game after hunting it.	11
Tartaglia	Tartaglia uses the tall male model. He has short ginger hair and dull blue eyes. He wears a red Fatui mask pulled off to the left, revealing his right eye and ear. He wears a red crystal on his left ear. A few lighter blue streaks can be seen in his hair, with one prominent one on the left side of his bangs. Tartaglia wears his Blades of Glory outfit during the first phase of his Golden House battle. After the first phase, Tartaglia's Vision Delusion goes to black. His tears are on his face, and his Vision Delusion appears to be supplanted by his Electro Delusion. After the second phase, he undergoes a full outfit change and becomes larger, and his Vision reappears in the empty slot on his right chest while his Delusion moves to the center of his belt. Both his Vision and Delusion also obtain more prominent black and white colors.	Tartaglia, also known by his codename "Childe," is a playable Hydro character in Genshin Impact. He is the Eleventh of the Eleven Fatui Harbingers. Wherever he goes, danger follows, and Childe is always eager for a challenge, making him extremely dangerous despite being the youngest member.	9

DURING

Division

Find the name of Enemies that are in every region

AFTER

Retrieved data from Enemies table:

Enemy Name
Pyro Hilichurl Shooter