

Of Mages and Magic

1 Mage Stats

There are four basic stats which your mage *must* have. These are:

health Describes how much damage your mage can take before passing out

attack Describes how good your mage is at dealing damage to an enemy mage. Mages with high attack deal greater damage

defense Describes how resistant your mage is to damage. Mages with high defence take less damage when hit

speed determines when your mage gets to take their turn. Mages with higher speeds will go first. Faster mages are also harder to hit, so a mage with high speed will be good at dodging enemy attacks

You have 100 stat points which you can share between these four stats. The total value of *health* + *attack* + *speed* + *defence* must not be greater than 100. Otherwise, the game engine will reduce your stats until they are valid.

To assign your AI's stats, you can enter them in the `__init__` function. For example, a relatively balanced mage design might look a bit like the code shown below.






```
class Mage:
    def __init__(self):
        self.health = 50
        self.attack = 20
        self.defense = 20
        self.speed = 10
```

2 Elements

In *Of Mages and Magic* your AI can choose to have one of five elements – Fire, Ice, Water, Earth or Thunder. Your choice cannot change during a fight, so a well balanced team should aim to have one AI for each element. Of course, if you want to just make every AI a Fire element, that's OK too!

Each element will do double damage to two other elements and only half damage to two others. When your AI is choosing which enemy to attack, a good strategy would be to try and identify enemies who are weak against your element and target them.

The element match ups are shown in the table below

	Element Name	Does Double Damage To	Does Half Damage To
	Fire	Ice, Thunder	Earth, Water, Fire
	Ice	Water, Earth	Fire, Thunder, Ice
	Water	Fire, Earth	Ice, Thunder, Water
	Earth	Fire, Thunder	Ice, Water, Earth
	Thunder	Water, Ice	Earth, Fire, Thunder

To give your AI an element, simply create an element variable inside your Mage's `__init__` function. For example, if we wanted our mage to be an Ice mage, we would write the element as shown below.

```
class Mage:
    def __init__(self):
        self.element = "Ice"
```

3 Spells

Every mage can learn up to four spells. It's up to you to choose what spells you want your AI to know. Your AI can only learn moves that are the same type as itself. So if your AI is an Ice type, skip down to the section called "Ice Spells" below.

Right now we only have two of each type for you to choose from, but we'll soon introduce several more. In order to give your AI a spell, you enter it into the `__init__` function. Setting spells is a little different to setting other attributes because a mage can have more than one spell, so you should put square brackets around the spells that your AI knows.

```
class Mage:
    def __init__(self):
        self.spells = [ "Ice Breaker", "Glacier" ]
```

Fire Spells

Name	Power	Accuracy	Critical Hit Probability	Description
Fireball	50	100	8	Attacks a single enemy with a fireball
Flame Wave	20	100	8	Hits all members of the enemy team with a wave of fire

Ice Spells

Name	Power	Accuracy	Critical Hit Probability	Description
Ice Breaker	50	100	8	Attacks a single enemy with a chunk of ice
Glacier	20	100	8	Hits all members of the enemy team with a sheet of ice

Water Spells

Name	Power	Accuracy	Critical Hit Probability	Description
Water Jet	50	100	8	Attacks a single enemy with a stream of water
Tidal Wave	20	100	8	Hits all members of the enemy team with a huge swell of water

Earth Spells

Name	Power	Accuracy	Critical Hit Probability	Description
Rock Smash	50	100	8	Showers a single enemy with a hail of rocks
Landslide	20	100	8	Buries a group of enemies under a pile of rubble

Thunder Spells

Name	Power	Accuracy	Critical Hit Probability	Description
Jolt	50	100	8	Shocks a single enemy with a bolt of electricity
Storm	20	100	8	Hits all members of the enemy team with a thunder storm